AMERICAN ACADEMY OF FORENSIC SCIENCES

February 22-27

Transformation: Embracing Change

ADVANCE PROGRAM

Las Vegas, Nevada

8th Annual Scientific Meeting
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</table>
REGISTRATION INFORMATION

The pre-registration deadline is January 27, 2016. Forms must be received by this date to qualify for the pre-registration rate and to register for Special Functions. Registration forms received after January 27, 2016, will be processed as on-site registrations.

Three Ways to Register

- Register online at www.aafs.org through the AAFS Account Portal.
- Scan & email your registration form (both pages) to tmccray@aafs.org.
- Mail your registration form, along with a check, money order, or purchase order to:
  AAFS
  410 North 21st Street
  Colorado Springs, CO 80904
  (Checks must be drawn on a U.S. bank in U.S. funds, made payable to AAFS.)
- Faxed registration forms are not accepted.

Registration Confirmation

- When you register online, you will receive an email confirmation immediately.
- When you email or mail your registration form to AAFS, a confirmation email will be sent once your registration form is processed.
- Bring a copy of your confirmation letter to the registration desk for meeting check-in.

Questions

If you have any questions or need assistance with registration, contact the AAFS Office at (719) 636-1100 or email Tracie McCray (tmccray@aafs.org).
PRE-REGISTRATION SAVINGS

The benefits of pre-registration cannot be emphasized enough!

30% savings for AAFS members!

This is the only chance to register for Special Functions (breakfasts, luncheons, workshops, and special sessions)!

Your pre-registration form must be received by Wednesday, January 27, 2016.

REGISTRATION FEES*

<table>
<thead>
<tr>
<th>Registration Type</th>
<th>Discount Rate</th>
<th>On-Site Registration</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. AAFS Members &amp; Trainee Affiliates, Applicants**</td>
<td>$295</td>
<td>$420</td>
</tr>
<tr>
<td>2. AAFS Student Affiliates</td>
<td>$100</td>
<td>$125</td>
</tr>
<tr>
<td>3. AAFS Retired Fellows</td>
<td>$ 0</td>
<td>$ 0</td>
</tr>
<tr>
<td>4. Non-Members</td>
<td>$450</td>
<td>$520</td>
</tr>
<tr>
<td>5. Non-Member Trainees**</td>
<td>$295</td>
<td>$420</td>
</tr>
<tr>
<td>(Must provide letter from employer verifying trainee status.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Non-Member Full-Time Students**</td>
<td>$100</td>
<td>$125</td>
</tr>
<tr>
<td>7. IAI Members** and AFTE Members**</td>
<td>$295</td>
<td>$420</td>
</tr>
<tr>
<td>8. Daily Registrants</td>
<td>$145/day</td>
<td>$160/day</td>
</tr>
</tbody>
</table>

*Includes admittance into AAFS sessions starting with the Tuesday evening Welcoming Reception through the Saturday morning Scientific Sessions (excludes all sessions found in section “SPECIAL FUNCTIONS” of the registration form).

**Registration Requirement:

- AAFS Applicants must have a complete application on file by the January 27, 2016, pre-registration deadline.
- Non-Member Trainees must submit a letter from employer verifying trainee status to tmccray@aafs.org.
- Full-Time Students must provide a copy of spring 2016 class schedule verifying full-time status to tmccray@aafs.org.
- IAI and AFTE Members must provide proof of current membership to tmccray@aafs.org.

PRE-REGISTRATION DEADLINE

The deadline for pre-registration is January 27, 2016. Registration forms must be received by this date. Pre-registration forms received after January 27, 2016, will be processed as on-site registrations and will cancel all Special Function selections (e.g., Breakfast and Luncheon Seminars, Workshops, and Special Sessions). Don’t delay; register today via online, mail, or scan and email your pre-registration form as soon as possible to ensure your full participation and reduced registration fees. Faxed registration forms are not accepted.

REFUNDS

All requests for refunds must be made in writing via email (tmccray@aafs.org) or mail to the AAFS headquarters. Canceled registration fees will be refunded as follows:

- Prior to December 1: Full refund less $25 charge
- December 1-31: 75% refund
- January 1-31: 60% refund
- February 1-5: 50% refund

No refunds after February 5, 2016.

MEETING SITE

The 2016 AAFS Annual Scientific Meeting will be held at the Rio All-Suite Hotel & Casino in Las Vegas, NV.

GUEST REGISTRATION

Non-forensic scientist guest registration includes a name badge only and is not eligible for Continuing Education credit, Workshop, Special Session registration, or Certificates of Attendance; however, Breakfast Seminar and Luncheon Seminar tickets may be purchased by the pre-registration deadline. Guest registration is only available to those paying the full meeting registration fee (excludes Student registrants, Daily registrants, and Exhibit Hall Only registrants).
American Academy of Forensic Sciences • Pre-Registration Form
68th Annual Scientific Meeting • February 22–27, 2016 • Las Vegas, NV
Pre-Registration Deadline – January 27, 2016

Three Ways to Register:
Register online at www.aafs.org
Scan & email your registration form (both pages) to tmccray@aafs.org
Mail your form with check, money order, or purchase order to:
AAFS
410 North 21st Street
Colorado Springs, CO 80904

Registration forms must be received by Wednesday, January 27, to be eligible to register for the 2016 Special Functions and to qualify for the discounted registration rate.
On January 28, 2016, the on-site rates become effective and registration for 2016 Special Functions will be voided.

Registration questions may be directed to Tracie McCray (tmccray@aafs.org or 719.636.1100).

Faxed registration forms are not accepted.

REGISTRANT INFORMATION
Salutation (Dr./Mr./Ms.): First Name: Last Name: Highest Degree:
Mailing Address: City: State/Province: ZIP/Postal Code: Country:

BAGE INFORMATION
Full Badge Name: Badge Agency/School:
Badge City: Badge State/Province: Badge Country:

ADDITIONAL INFORMATION
Email: Cell Phone:
Hotel: First AAFS Meeting? ☐ Yes ☐ No
Vocational Status: ☐ Professional ☐ Student ☐ Academic ☐ Decision Maker ☐ Purchasing Agent ☐ Other
Attendee Gender: ☐ Male ☐ Female
Would you like to receive pre-meeting exhibitor mailings? ☐ Yes ☐ No
Emergency Contact Name: Emergency Contact Phone:

Non-forensic scientist guest registration includes a name badge only and is not eligible for Continuing Education credit, Workshop/Special Session Registration, or Certificates of Attendance; however, Breakfast and Luncheon Seminar tickets may be purchased by the Pre-Registration deadline. Guest registration is only available to those paying the full meeting registration fee (excludes Student, Daily, and Exhibit Hall Only registrants.)

Attending Guest: ☐ Yes ☐ No Guest Name:

ADA ACCOMMODATIONS
Please list any special dietary needs:
Please list ADA accommodation requests:

Please note: This ADA Accommodations request refers to meeting/session accommodations (e.g., wheelchair access, assisted listening devices, etc.). ADA accommodations related to hotel room reservations should be directed to the hotel when making reservations. ADA Accommodations are required by the Pre-Registration deadline (January 27, 2016). Requests received after this date may not be processed or fulfilled in time.

CONTINUING EDUCATION CREDIT
☐ $100 Administrative Fee

Registrants must pick up a CE Credit Request Form at the registration counter and submit by the deadline for credit/certificate. AAFS is an accredited provider by the Accreditation Council for Continuing Medical Education (ACCME), Academy of General Dentistry (AGD), and American Association of Clinical Chemistry (AACC). In addition, credits for continuing legal education and general continuing education are offered.

REGISTRATION FEES
Includes admittance into AAFS sessions starting with the Tuesday evening Welcoming Reception through the Saturday morning Scientific Sessions (excludes all Special Functions). A complimentary beverage ticket is included with all registrations except Student, Daily, and Workshop Only.

<table>
<thead>
<tr>
<th>Category</th>
<th>Pre-Registration (through January 27)</th>
<th>On-Site Registration (effective January 28)</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ AAFS Members, Trainee Affiliates, Applicants*</td>
<td>$295</td>
<td>$420</td>
</tr>
<tr>
<td>☐ AAFS Student Affiliates</td>
<td>$100</td>
<td>$125</td>
</tr>
<tr>
<td>☐ AAFS Retired Fellows</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>☐ Non-Members</td>
<td>$450</td>
<td>$520</td>
</tr>
<tr>
<td>☐ Non-Member Trainees*</td>
<td>$295</td>
<td>$420</td>
</tr>
<tr>
<td>☐ Non-Member Full-Time Students*</td>
<td>$100</td>
<td>$125</td>
</tr>
<tr>
<td>☐ IAI Members* ☐ AFTE Members*</td>
<td>$295</td>
<td>$420</td>
</tr>
<tr>
<td>☐ Daily: ☐ Wed ☐ Thurs ☐ Fri ☐ Sat</td>
<td>$145/DAY</td>
<td>$160/DAY</td>
</tr>
<tr>
<td>☐ Workshop Only</td>
<td>See Special Functions (next page)</td>
<td>Not Available</td>
</tr>
</tbody>
</table>

*Must provide/submit additional documentation by the January 27, 2016, Pre-Registration deadline (see below):
☐ Applicants – Completed AAFS membership application with file with Academy Office.
☐ Non-Member Trainees – Letter from employer verifying trainee status.
☐ Non-Member Full-Time Students – Proof of full-time status.
☐ IAI & AFTE Members – Proof of current membership.

Refund Policy: All requests for refunds must be submitted via mail or email (tmccray@aafs.org). Phone and faxed requests are not accepted. Cancelled registration fees will be refunded accordingly: Dec 1-31 at 75%; Jan 1-31 at 60%; Feb 1-5 at 50%; no refunds after February 5.
## SPECIAL FUNCTIONS

The following sessions are priced separately and are not included in the Registration Fees. Special Functions fill quickly due to limited seating. Registration for all Special Functions officially closes as of the **January 27, 2016**, Pre-Registration deadline. **AAFS has a firm policy that non-registered attendance or auditing is not permitted in these sessions. (AAFS Policy and Procedure Manual 3.1.3.3.)**

### Breakfast Seminars

<table>
<thead>
<tr>
<th>Day</th>
<th>Time</th>
<th>Panel</th>
<th>Title</th>
<th>Fee</th>
<th>Qty</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mon</td>
<td>7:00-8:30</td>
<td>B1</td>
<td>Death in a Bathhtub: The Defense of Drew Peterson</td>
<td>$50</td>
<td></td>
<td>$50</td>
</tr>
<tr>
<td>Wed</td>
<td>7:00-8:30</td>
<td>B2</td>
<td>Death From a Distance: The Etiology of Serial Sniper Homicides</td>
<td>$50</td>
<td></td>
<td>$50</td>
</tr>
<tr>
<td>Thu</td>
<td>7:00-8:30</td>
<td>B3</td>
<td>A Primer on the Structure and Activity of the NIST’s Organization of Scientific Area Committees (OSAC)</td>
<td>$50</td>
<td></td>
<td>$50</td>
</tr>
<tr>
<td>Fri</td>
<td>7:00-8:30</td>
<td>B4</td>
<td>One Night in August: The I-35W Bridge Collapse in Minneapolis</td>
<td>$50</td>
<td></td>
<td>$50</td>
</tr>
<tr>
<td>Fri</td>
<td>7:00-8:30</td>
<td>B5</td>
<td>Back to the Future – A Journey Across Timelines and Possible Realities for the Future of Forensic Sciences</td>
<td>$50</td>
<td></td>
<td>$50</td>
</tr>
<tr>
<td>Fri</td>
<td>7:00-8:30</td>
<td>B6</td>
<td>Thomas Krauss Memorial Bitemark Breakfast – Forensic Anthropology: Science Into Fiction</td>
<td>$50</td>
<td></td>
<td>$50</td>
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</table>

### Luncheon Seminars

<table>
<thead>
<tr>
<th>Day</th>
<th>Time</th>
<th>Panel</th>
<th>Title</th>
<th>Fee</th>
<th>Qty</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thur</td>
<td>12:00-1:30</td>
<td>L1</td>
<td>Working Stiff: Forensic Training &amp; Public Relations in a Digital Age</td>
<td>$55</td>
<td></td>
<td>$50</td>
</tr>
<tr>
<td>Fri</td>
<td>12:00-1:30</td>
<td>L2</td>
<td>Operation Lima Sea – Unidentified Remains of a Human Torso in Queensland, Australia</td>
<td>$55</td>
<td></td>
<td>$55</td>
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</tbody>
</table>

### Section Luncheons (Section Business Meetings begin following the Luncheon – see Advance Program for times)

<table>
<thead>
<tr>
<th>Day</th>
<th>Time</th>
<th>Panel</th>
<th>Title</th>
<th>Fee</th>
<th>Qty</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wed</td>
<td>12:00-1:00</td>
<td>L3</td>
<td>Criminalistics Section Luncheon (section members only)</td>
<td>$10</td>
<td></td>
<td>$10</td>
</tr>
<tr>
<td>Wed</td>
<td>12:00-1:15</td>
<td>L4</td>
<td>Digital &amp; Multimedia Sciences Section Luncheon</td>
<td>$55</td>
<td></td>
<td>$55</td>
</tr>
<tr>
<td>Wed</td>
<td>12:00-1:45</td>
<td>L5</td>
<td>General Section Luncheon</td>
<td>$55</td>
<td></td>
<td>$55</td>
</tr>
<tr>
<td>Wed</td>
<td>12:00-2:00</td>
<td>L6</td>
<td>Jurisprudence Section Luncheon</td>
<td>$55</td>
<td></td>
<td>$55</td>
</tr>
<tr>
<td>Wed</td>
<td>12:00-2:15</td>
<td>L7</td>
<td>Pathology/Biology Section Luncheon</td>
<td>$55</td>
<td></td>
<td>$55</td>
</tr>
<tr>
<td>Wed</td>
<td>12:00-2:30</td>
<td>L8</td>
<td>Psychiatry &amp; Behavioral Science Section Luncheon (section members only)</td>
<td>$10</td>
<td></td>
<td>$10</td>
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<tr>
<td>Wed</td>
<td>12:00-3:00</td>
<td>L9</td>
<td>Toxicology Section Luncheon</td>
<td>$55</td>
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</table>

### Special Sessions

<table>
<thead>
<tr>
<th>Day</th>
<th>Time</th>
<th>Panel</th>
<th>Title</th>
<th>Fee</th>
<th>Qty</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tue</td>
<td>8:30-12:45</td>
<td>S1</td>
<td>Interdisciplinary Symposium: Innovative Science – How Advances in Technology Transform Forensic Science</td>
<td>$75</td>
<td></td>
<td>$75</td>
</tr>
<tr>
<td>Tue</td>
<td>8:30-5:00</td>
<td>S2</td>
<td>Young Forensic Scientists Forum – Viva La Forensics</td>
<td>$100</td>
<td></td>
<td>$100</td>
</tr>
</tbody>
</table>

### Workshops

<table>
<thead>
<tr>
<th>Day</th>
<th>Time</th>
<th>Panel</th>
<th>Title</th>
<th>Fee</th>
<th>Qty</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mon</td>
<td>8:30-12:00</td>
<td>W1</td>
<td>Information Does Exist Beyond the First Page of Your Google® Search!</td>
<td>$100</td>
<td></td>
<td>$150</td>
</tr>
<tr>
<td>Mon</td>
<td>8:30-12:00</td>
<td>W2</td>
<td>Advanced Mass Spectrometry (MS) Techniques for Forensic Analysis: What Does the Future Hold?</td>
<td>$100</td>
<td></td>
<td>$125</td>
</tr>
<tr>
<td>Mon</td>
<td>8:30-12:30</td>
<td>W3</td>
<td>How and Why You Can and Should Integrate Adv Imaging Techniques Into Your Daily Autopsy Practice</td>
<td>$100</td>
<td></td>
<td>$125</td>
</tr>
<tr>
<td>Mon</td>
<td>8:30-12:30</td>
<td>W4</td>
<td>A Cloud Descends on the Courtroom: The Impact of Cloud Computing on Evidence in the Courtroom</td>
<td>$100</td>
<td></td>
<td>$125</td>
</tr>
<tr>
<td>Mon</td>
<td>8:30-12:30</td>
<td>W5</td>
<td>UVI Dental Identification Module (UDIM) – A Hands-On Workshop</td>
<td>$150</td>
<td></td>
<td>$175</td>
</tr>
<tr>
<td>Mon</td>
<td>8:30-4:30</td>
<td>W6</td>
<td>Frequency Occurrence in Handwriting and Hand Printing Characteristics</td>
<td>$250</td>
<td></td>
<td>$300</td>
</tr>
<tr>
<td>Mon</td>
<td>8:30-4:45</td>
<td>W7</td>
<td>Extreme Violence – Military vs. Civilian Crime Scene Investigation (CSI) Cases</td>
<td>$200</td>
<td></td>
<td>$250</td>
</tr>
<tr>
<td>Mon</td>
<td>8:30-5:00</td>
<td>W8</td>
<td>From the Ashes – Transforming the Response to Mass Disasters</td>
<td>$200</td>
<td></td>
<td>$250</td>
</tr>
<tr>
<td>Mon</td>
<td>8:30-5:00</td>
<td>W9</td>
<td>Strategies for Scientific Problem-Solving With Physical Evidence</td>
<td>$200</td>
<td></td>
<td>$250</td>
</tr>
<tr>
<td>Mon</td>
<td>8:30-5:00</td>
<td>W10</td>
<td>Practical Homicide Investigation®: Child Victims, Child Offenders, and Equivocal Death Investigations</td>
<td>$200</td>
<td></td>
<td>$250</td>
</tr>
<tr>
<td>Mon</td>
<td>1:00-5:00</td>
<td>W11</td>
<td>Child Homicides: The Critical Role of Interdisciplinary Expert Collaboration</td>
<td>$100</td>
<td></td>
<td>$125</td>
</tr>
<tr>
<td>Mon</td>
<td>1:00-5:00</td>
<td>W12</td>
<td>Development of a Reasonable Minimum Documentation Standard for Latent Prints</td>
<td>$125</td>
<td></td>
<td>$150</td>
</tr>
<tr>
<td>Mon</td>
<td>1:30-5:00</td>
<td>W14</td>
<td>Vaping: What You Didn’t Know About Electronic Cigarettes – And Why You Should Care</td>
<td>$125</td>
<td></td>
<td>$150</td>
</tr>
<tr>
<td>Mon</td>
<td>1:30-5:00</td>
<td>W15</td>
<td>Addressing Damaged Mobile Devices for Data Acquisition</td>
<td>$150</td>
<td></td>
<td>$175</td>
</tr>
<tr>
<td>Tue</td>
<td>8:30-12:00</td>
<td>W16</td>
<td>The American Academy of Forensic Sciences (AAFS) Humanitarian and Human Rights Resource Center</td>
<td>$100</td>
<td></td>
<td>$125</td>
</tr>
<tr>
<td>Tue</td>
<td>8:30-12:00</td>
<td>W17</td>
<td>Postmortem Monocular Indirect Ophthalmoscopy (PMIO)</td>
<td>$150</td>
<td></td>
<td>$175</td>
</tr>
<tr>
<td>Tue</td>
<td>8:30-12:15</td>
<td>W18</td>
<td>Improving Your Image: How to Get the Best Out of Your Expensive X-Ray Equipment</td>
<td>$100</td>
<td></td>
<td>$125</td>
</tr>
<tr>
<td>Tue</td>
<td>8:30-12:30</td>
<td>W19</td>
<td>Diversity and Inclusion at the Forensic Science Workplace</td>
<td>$100</td>
<td></td>
<td>$125</td>
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<td>Tue</td>
<td>8:30-1:00</td>
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<td>On the Leading Edge of Forensic Science</td>
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<td>W21</td>
<td>Crime Assessment: Solving Crime Beyond Profiling</td>
<td>$200</td>
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<td>Developing a Professional Code of Ethics in Digital Forensics</td>
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<td>Considerations for Implementing Next Generation Sequencing (NGS) Technologies Into a Forensic Lab</td>
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<td>Elder Abuse and Neglect: What’s Happening to Grandma?</td>
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<td>$125</td>
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</table>

### Special Functions Sub-Total: $
ABOUT THE AAFS

For sixty-eight years, the American Academy of Forensic Sciences (AAFS) has served a distinguished and diverse membership. Its over 7,000 members are divided into eleven sections spanning the forensic enterprise. Included among the Academy’s members are physicians, attorneys, dentists, toxicologists, anthropologists, document examiners, digital evidence experts, psychiatrists, engineers, physicists, chemists, criminalists, educators, and others. Representing all 50 United States, Canada, and 68 other countries worldwide, they actively practice forensic science and, in many cases, teach and conduct research in the field as well. Each section provides opportunities for professional development, personal contacts, awards, and recognition. Many sections publish periodic newsletters and mailings which keep their members abreast of activities and developments in their fields.

As a professional society dedicated to the application of science to the law, the AAFS is committed to the promotion of education and the elevation of accuracy, precision, and specificity in the forensic sciences. It does so via the *Journal of Forensic Sciences* (its internationally recognized scientific journal), newsletters, its annual scientific meeting, the conduct of seminars and meetings, and the initiation of actions and reactions to various issues of concern. For its members and affiliates, AAFS provides expert witness referrals, job opportunity listings, as well as scientific reference studies. As the world’s most prestigious forensic science organization, the AAFS represents its membership to the public and serves as the focal point for public information concerning the forensic science profession. Founded in 1948, the AAFS is headquartered in Colorado Springs, CO.

**AAFS Annual Scientific Meeting**

Each February, the AAFS scientific meeting gathers together approximately 5,000 world-renowned professionals to present the most current information, research, and updates in their fields. More than 1,000 scientific papers, seminars, workshops, and other special sessions are presented. In addition, approximately 180 exhibitors will be present to showcase the cutting-edge technology and services of this ever-changing profession.

**Future Annual Meetings**

**2017 AAFS Annual Meeting**
February 13-18, 2017
Hyatt Regency New Orleans
New Orleans, LA

**2018 AAFS Annual Meeting**
February 19-24, 2018
Washington State Convention Center
Seattle, WA

**2019 AAFS Annual Meeting**
February 18-23, 2019
The Baltimore Convention Center
Baltimore, MD

**2020 AAFS Annual Meeting**
February 17-22, 2020
Anaheim Convention Center
Anaheim, CA

**2021 AAFS Annual Meeting**
February 15-20, 2021
George R. Brown Convention Center
Houston, TX

410 North 21st Street
Colorado Springs, CO 80904
Phone: (719) 636-1100
Fax: (719) 636-1993
Email: membership@aafs.org
Website: www.aafs.org

Anne Warren, Executive Director
Las Vegas
2016

OFFICERS & OFFICIALS

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Pathology/Biology: Gregory G. Davis, MD
Psychiatry & Behavioral Science: Christopher R. Thompson, MD
Questioned Documents: Carl R. McClary, BA
Toxicology: Ruth E. Winecker, PhD

2016 Annual Scientific Meeting Program Committee

Program Chair: Andrew M. Baker, MD
Program Co-Chair: Julie A. Howe, MBA
Plenary Session: Matthew R. Wood, MS; Joanna L. Collins, MFS
Poster Sessions: Tanisha V. Henson, MFS; Vincent J. Desiderio, Jr., MS
Workshops: Jane A. Lewis, MFS; Christopher R. Thompson, MD
Breakfast Seminars: Adam J. Freeman, DDS; Laura C. Fulginiti, PhD
Luncheon Seminars: Jeffery K. Tomberlin, PhD; Gregory G. Davis, MD
Last Word Society: James E. Starrs, LLM; Kenneth E. Nelson, JD
Bring Your Own Slides: Michael M. Baden, MD; Joseph A. Prahlow, MD
Student Academy: Julie A. Howe, MBA; Marilyn T. Miller, EdD
Interdisciplinary Symposium: Jeri D. Ropero-Miller, PhD; Marla E. Carroll, BS
Local Arrangements: Lisa A. Gavin, MD
Anthropology: Gregory E. Berg, PhD; Kate Spradley, PhD
Criminalistics: Vincent J. Desiderio, Jr., MS; Kristy Kadosh, PhD
Digital & Multimedia Sciences: Samuel I. Brothers, BBA; Jeff M. Smith, MS
Engineering Sciences: David Pienkowski, PhD
General: Arthur S. Chancellor, MA; Melissa A. Connor, PhD
Jurisprudence: Lauri Traub, JD; Ted W. Vosk, JD
Odontology: Adam J. Freeman, DDS
Pathology/Biology: Joyce L. deJong, DO
Psychiatry & Behavioral Science: R. Gregg Dwyer, MD, EdD; Varendra Gosein, MD
Questioned Documents: Jan S. Kelly, BA
Toxicology: Fiona J. Couper, PhD; Nikolas P. Lemos, PhD
## Past Presidents

<table>
<thead>
<tr>
<th>Past President</th>
<th>Years</th>
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<tbody>
<tr>
<td>R.B.H. Gradwohl, MD</td>
<td>1949-51</td>
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<td>S.A. Levinson, MD, PhD</td>
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<td>R.N. Hager, PhD</td>
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<td>Louis P. Regan, MD, LLB</td>
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<tr>
<td>A.W. Freireich, MD</td>
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<td>Fred E. Inbau, BS, LLB, LL.M.</td>
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<td>Alan R. Moritz, MD</td>
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<td>Val B. Satterfield, MD</td>
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<td>John F. Williams, BS</td>
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<td>Ordway Hilton, MA</td>
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<td>Dwight M. Palmer, MD</td>
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<td>Jack L. Sachs, JD</td>
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<td>Charles S. Petty, MD</td>
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<td>Maier I. Tuchler, MD</td>
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<td>James W. Osterburg, MPA</td>
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<td>Edwin C. Conrad, JD, PhD</td>
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<td>Cyril H. Wecht, MD, JD</td>
<td>1971-72</td>
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<td>Douglas M. Lucas, MSc, DSc</td>
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<td>Morton F. Mason, PhD</td>
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<td>David A. Crown, DCrim</td>
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<td>Robert J. Joling, JD</td>
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<td>James T. Weston, MD</td>
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<td>B. Edward Whittaker, BS</td>
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<td>Kurt M. Dubowski, PhD</td>
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<td>June K. Jones, MS</td>
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<td>Lowell J. Levine, DDS</td>
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<td>Joseph H. Davis, MD</td>
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<td>Anthony Longhetti, BA</td>
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<td>George E. Gantner, MD</td>
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<td>Maureen Casey Owens, AB</td>
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<td>Arthur D. Goldman, DMD</td>
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<td>Yale H. Caplan, PhD</td>
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<td>Richard S. Frank, BS</td>
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<td>Richard C. Froede, MD</td>
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<td>Ellis R. Kerley, PhD</td>
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<td>Homer R. Campbell, Jr., DDS</td>
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<td>Marina Stajić, PhD</td>
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<td>Enrico N. Togneri, BA</td>
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<td>Steven C. Battersman, PhD</td>
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<td>Haskell M. Pitluck, JD</td>
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<td>Richard Rosner, MD</td>
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<td>Michael A. Peat, PhD</td>
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<td>Barry A.J. Fisher, MS, MBA</td>
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<td>Patricia J. McFeeley, MD</td>
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<td>John D. McDowell, DDS, MS</td>
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<td>Mary Fran Ernst, BLS</td>
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<td>Graham R. Jones, PhD</td>
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<td>Kenneth E. Melson, JD</td>
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<td>Ronald L. Singer, MS</td>
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<td>Edmund R. Donoghue, MD</td>
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<td>James G. Young, MD</td>
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<td>Bruce A. Goldberger, PhD</td>
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<tr>
<td>Carol E. Henderson, JD</td>
<td>2008-09</td>
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<td>Thomas L. Bohan, PhD, JD</td>
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<td>Joseph P. Bono, MA</td>
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<td>Douglas H. Ubelaker, PhD</td>
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<td>Robert E. Barsley, DDS, JD</td>
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<td>Barry K. Logan, PhD</td>
<td>2013-14</td>
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<td>Daniel A. Martell, PhD</td>
<td>2014-15</td>
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*Deceased*
Section Officers

Anthropology
Chair: Phoebe R. Stubblefield, PhD
Secretary: Angi M. Christensen, PhD

Criminalistics
Chair: John J. Lentini, BA
Secretary: Karolyn L. Tontarski, MS

Digital & Multimedia Sciences
Chair: Rhesa G. Gilliland, MS
Secretary: Marcus Rogers, PhD

Engineering Sciences
Chair: John Nixon, MBA
Secretary: Michelle R. Hoffman, MS

General
Chair: Claire E. Shepard, MS
Secretary: Joanna L. Collins, MFS

Jurisprudence
Chair: Christine Funk, JD
Secretary: Stephanie Domitrovich, JD, PhD

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Chair: Iain A. Pretty, DDS, PhD
Secretary: Raymond G. Miller, DDS

Pathology/Biology
Chair: Kathryn H. Haden-Pinneri, MD
Secretary: James Louis Caruso, MD

Psychiatry & Behavioral Science
Chair: Karen B. Rosenbaum, MD
Secretary: Dean Michael De Crisce, MD

Questioned Documents
Chair: Thomas W. Vastrick, BS
Secretary: Linton Mohammed, PhD

Toxicology
Chair: Sarah Kerrigan, PhD
Secretary: Dan T. Anderson, MS

R.B.H. Gradwohl Laureates

* Milton Helpern, MD ................................. 1978
* Rolla N. Harger, PhD .............................. 1979
* James T. Weston, MD ........................... 1984
* Oliver C. Schroeder, Jr., JD ..................... 1987
Abel M. Dominguez, PhD ......................... 1993
Douglas M. Lucas, MSc, DSc ..................... 1995
Kenneth S. Field, MBA ......................... 1997
* Sidney Kaye, PhD ................................. 1998
* Richard C. Froede, MD .......................... 2002
* Joseph H. Davis, MD ......................... 2005
Barry A.J. Fisher, MS, MBA ................. 2008
Kurt M. Dubowski, PhD ................... 2011
James E. Starrs, LLM ......................... 2012
Thomas T. Noguchi, MD .................. 2015

* Deceased

Douglas M. Lucas Medalists

Sir Alec J. Jeffreys, DPhil ......................... 1999
* Alan S. Curry, PhD .............................. 2002
Joseph Almog, PhD ............................... 2005
* Clyde C. Snow, PhD ............................ 2008
Pierre A. J.-L. Margot, PhD .................. 2011
Duarte N. Vieira, PhD, MD ................. 2014
Distinguished Fellows

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<th>Name</th>
<th>Title/Qualifications</th>
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<td>1990</td>
<td>Abel M. Dominguez</td>
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<td>Douglas M. Lucas</td>
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<td>Irwin N. Perr</td>
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<td>William Bass III</td>
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<td>1990</td>
<td>Henry C. Lee</td>
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<td>David J. Purtell</td>
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<td>Charles J. Stahl III</td>
<td>MD</td>
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<td>Irving Sunshine</td>
<td>PhD</td>
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<td>Yale H. Caplan</td>
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<td>James E. Starrs</td>
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<td>Homer R. Campbell, Jr.</td>
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<td>Norman D. Sperber</td>
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<td>Barry A.J. Fisher</td>
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GENERAL INFORMATION

**Registration Desk Hours**
*Rio All-Suite Hotel & Casino*

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<td>Sunday</td>
<td>February 21</td>
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<td>Monday</td>
<td>February 22</td>
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<td>Thursday</td>
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<td>Friday</td>
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<td>6:45 a.m.</td>
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<tr>
<td>Saturday</td>
<td>February 27</td>
<td>7:30 a.m.</td>
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**Exhibit Hall Hours**
*Rio All-Suite Hotel & Casino*

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<th>Time</th>
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<td>Wednesday</td>
<td>February 24</td>
<td>11:30 a.m.</td>
<td>4:00 p.m.</td>
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<tr>
<td>Thursday</td>
<td>February 25</td>
<td>9:00 a.m.</td>
<td>2:00 p.m.</td>
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<tr>
<td>AAFS Reception</td>
<td>(Exhibits Open)</td>
<td>6:00 p.m.</td>
<td>8:00 p.m.</td>
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<tr>
<td>Friday</td>
<td>February 26</td>
<td>9:00 a.m.</td>
<td>1:00 p.m.</td>
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**Attention Meeting Presenters**

The *Journal of Forensic Sciences* encourages authors to submit previously unpublished reports and papers presented at the annual meeting.

Consult “Editorial Communications” which appears in each edition of the Journal for full instructions on manuscript preparation. **Authors are encouraged to submit their manuscripts electronically via Manuscript Central: http://mc.manuscriptcentral.com/jofs.** Alternately, manuscripts may be sent to:

Michael A. Peat, PhD  
Editor, *Journal of Forensic Sciences*  
6700 Woodlands Parkway, Suite 230-308  
The Woodlands, TX 77381  
Fax: (281) 419-6236  
jfs.editor@att.net

Video and/or audio recording of any session(s) or parts thereof is not permitted without prior approval from the American Academy of Forensic Sciences. English is the official language of the AAFS and its meetings; neither oral nor written translations will be provided.

Although precautions are taken to prevent schedule changes, speakers and program schedules may change due to unforeseen circumstances.

*As a courtesy to others, meeting attendees are asked to turn off their cell phones when attending the sessions. If a phone conversation must be held, please step outside of the meeting room.*
AWARDS & RECEPTIONS

The Distinguished Fellow Award will be presented on Wednesday, February 24, during the AAFS Annual Business Meeting. Join us in acknowledging your most distinguished colleague as he is presented with this prestigious award.

Distinguished Fellow Honoree

Douglas H. Ubelaker, PhD

AAFS Outstanding Early Career Achievement in Forensic Science Award

The AAFS Outstanding Early Career Achievement in Forensic Science Award will be presented on Wednesday, February 24, during the AAFS Annual Business Meeting. You’ll want to be present to congratulate recipient:

Cliff Akiyama, MPH, MA

Section Awards will be presented during Section Business Meetings, also on Wednesday, February 24 (see Section Business Meeting start times on page 15). The Section Award recipients will be acknowledged again before the entire membership during the AAFS Annual Business Meeting along with the presentation of the Distinguished Fellow and the AAFS Outstanding Early Career Achievement in Forensic Science Awards.

2016 Section Award Honorees

**Anthropology Section’s**
- T. Dale Stewart Award
  - Bruce E. Anderson, PhD
  - Valda Black, MA
- J. Lawrence Angel Award
  - Derek Congram, PhD
- Ellis R. Kerley Foundation Best Paper Award
  - William M. Bass III, PhD
  - William R. Belcher, PhD
- Service Award
  - Ann H. Ross, PhD

**Criminalistics Section’s**
- Paul L. Kirk Award
  - Christopher R. Bommarito, MS
- Mary E. Cowan Outstanding Service Award
  - Marie Samples, MS
- Meritorious Service Award
  - Thomas A. Brettell, PhD

**Digital & Multimedia Sciences Section’s**
- Outstanding Research Award
  - Kathryn C. Seigfried-Spellar, PhD
- Outstanding Case Study Award
  - Thomas L. Murray, MS
  - Joseph Levi White, MS
- Carrie Morgan Whitcomb Service Award
  - Zeno J. Geradts, PhD

**Engineering Sciences Section’s**
- Founders Award
  - Peter Alexander, PhD
- Kurt D. Weiss, MS
- Andrew H. Payne, Jr., Special Achievement Award
  - Mark C. Pozzi, MS

**General Section’s**
- Robert Gaffney Achievement Award
  - Catherine G. Rushton, MSFS
- John R. Hunt Award
  - Virginia A. Lynch, MSN
- Paul W. Kehres Meritorious Service Award
  - Richard D. Walter, MA
Odontology Section’s
Reidar F. Sognnaes Award of Excellence in Forensic Odontology  
Duane E. Spencer, DDS

Pathology/Biology Section’s
2015 Best Resident Paper Award Honorable Mention  
Melissa M. Blessing, DO
Gregory G. Davis, MD
Thomas T. Noguchi, MD

Psychiatry & Behavioral Science Section’s
Maier I. Tuchler Award  
Christopher R. Thompson, MD

Toxicology Section’s
Alexander O. Gettler Award  
Mahmoud A. ElSohly, PhD
J. Rod McCutcheon, BS
Robert Kronstrand, PhD
Erin A. Spargo, PhD

2016 AAFS Regional Award Winners

Midwestern Association of Forensic Scientists  
Mark Goff, BA

Southwestern Association of Toxicologists  
Heidi Christensen, BS

2015-16 FSF Emerging Forensic Scientist Award Honorees

The FSF Emerging Forensic Scientist Award will be presented on Wednesday, February 24, 2016, during the AAFS Annual Business Meeting. You’ll want to be present to congratulate recipients:

Whitney A. Simpson, BS and Federica Collini, MD

2015-16 FSF Henry C. Lee Scholarship Recipient

The FSF Henry C. Lee Scholarship will be presented on Wednesday, February 24, 2016, during the AAFS Annual Business Meeting. You’ll want to be present to congratulate recipient:

Mithun Rajshekar, MFSc

2015-16 FSF Jan S. Bashinski Criminalistics Graduate Thesis Assistance Grant

The FSF Jan S. Bashinski Criminalistics Graduate Thesis Assistance Grant will be presented on Wednesday, February 24, 2016, during the Criminalistics Section Business Meeting. You’ll want to be present to congratulate recipient:

Sarah Riman, PhD

RECEPTION INFORMATION

Welcoming Reception — Tuesday, February 23 — 6:00 p.m. - 8:00 p.m.

This opening event is your opportunity to meet old friends and to make new acquaintances. Snacks and cash bars will be available.

AAFS 68th Annual Wine & Cheese Reception — Thursday, February 25 — 6:00 p.m. - 8:00 p.m.

The AAFS Wine & Cheese Reception will be held to celebrate what promises to be an excellent 2016 program and to toast your return to the Academy’s 69th Annual Scientific Meeting in 2017 (New Orleans, LA)!
The Sections

The Sections of the American Academy of Forensic Sciences will hold their annual business meetings on Wednesday, February 24. Some of the sections will hold a luncheon prior to the start of the business meeting. This is your opportunity to participate! Please attend and contribute to your section’s future plans. Specific times are noted below:

<table>
<thead>
<tr>
<th>Section</th>
<th>Luncheon</th>
<th>Business Meeting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anthropology</td>
<td>2:00 p.m. - 3:45 p.m.</td>
<td>2:00 p.m. - 3:45 p.m.</td>
</tr>
<tr>
<td>Criminalistics$^1$</td>
<td>12:00 p.m. - 1:00 p.m.</td>
<td>1:05 p.m. - 3:45 p.m.</td>
</tr>
<tr>
<td>Digital &amp; Multimedia Sciences$^1$</td>
<td>12:00 p.m. - 1:45 p.m.</td>
<td>2:00 p.m. - 3:45 p.m.</td>
</tr>
<tr>
<td>Engineering Sciences</td>
<td></td>
<td>1:30 p.m. - 3:45 p.m.</td>
</tr>
<tr>
<td>General$^1$</td>
<td>12:00 p.m. - 1:15 p.m.</td>
<td>1:30 p.m. - 3:45 p.m.</td>
</tr>
<tr>
<td>Jurisprudence$^1$</td>
<td>12:00 p.m. - 1:45 p.m.</td>
<td>2:00 p.m. - 3:45 p.m.</td>
</tr>
<tr>
<td>Odontology</td>
<td></td>
<td>2:00 p.m. - 3:45 p.m.</td>
</tr>
<tr>
<td>Pathology/Biology$^1$</td>
<td>12:00 p.m. - 1:30 p.m.</td>
<td>1:45 p.m. - 3:45 p.m.</td>
</tr>
<tr>
<td>Psychiatry &amp; Behavioral Science$^2$</td>
<td>12:00 p.m. - 1:45 p.m.</td>
<td>2:00 p.m. - 3:45 p.m.</td>
</tr>
<tr>
<td>Questioned Documents</td>
<td></td>
<td>2:00 p.m. - 3:45 p.m.</td>
</tr>
<tr>
<td>Toxicology$^1$</td>
<td>12:00 p.m. - 1:45 p.m.</td>
<td>2:00 p.m. - 3:45 p.m.</td>
</tr>
</tbody>
</table>

$^1$ These luncheons require pre-registration.

$^2$ This luncheon requires pre-registration and is open only to members of the Psychiatry & Behavioral Science Section.

The Annual Business Meeting of Fellows and Members — Attend to Win a Complimentary Meeting Registration!

The Annual Business Meeting of the Fellows and Members of AAFS will be held Wednesday, February 24, at 4:15 p.m., at the Rio All-Suite Hotel & Casino in Las Vegas, NV. It is essential that all Fellows and Members attend this very important meeting in order to reach a quorum for the voting process. Agenda items include the election of 2016-17 Officers, consideration of bylaws amendments, presentation of the Distinguished Fellow Award, and recognition of all Members being promoted to Fellow status. You also will be briefed on AAFS activities during the past year and plans for the future.

As an incentive to attend, all Fellows and Members present will automatically be entered in a drawing for a complimentary meeting registration to attend the 2017 AAFS Annual Scientific Meeting in New Orleans, LA.
Welcome to Las Vegas, Nevada

One thing is for sure - Las Vegas is a city that needs no introduction. With its five-star resorts, world-class restaurants and boutiques, and spectacular entertainment and nightlife, Nevada’s largest city has long outgrown its adult playground reputation. It has truly earned its spot as one of the world’s premier destinations. Nicknamed the “Entertainment Capital of the World,” it is situated in the Mojave Desert of Southern Nevada. The city features many mega-hotel/casino complexes decorated with lavish care and attention to detail creating a fantasy-like environment.

Climate

Las Vegas has an arid climate with sunny, dry, and extremely hot summers. Winter is much cooler with daytime highs averaging around 60°F and nighttime lows averaging about 40°F. During winter, a cold spell may set in for several days. Snowfall is quite rare in the metropolitan area itself, but the mountains surrounding the valley are topped with snow during the winter.

Transportation

By Plane
McCarran International Airport (LAS) is the main airport serving the Las Vegas area. It is the 24th busiest airport in the world in terms of passengers and 8th in terms of takeoffs and landings. There are two passenger terminals, Terminal 1 and Terminal 3. Terminal 1 services Allegiant, American, Delta, Omni, Southwest, Spirit Airlines, and Vision. Terminal 3 services domestic carriers Alaska, Frontier, Hawaiian, JetBlue, Sun Country, United, and Virgin America, as well as international carriers such as Aeromexico, Air Canada, British Airways, Condor, Copa, Edelweiss, Interjet, Korean Air, MagniCharters, Sunwing, Thomas Cook, Virgin Atlantic, VivaAerobus, Volaris, and WestJet.

By Train
There are no direct rail services into Las Vegas per se. Below are the nearest train routes with an Amtrak Thruway Motorcoach shuttling passengers between Las Vegas and the nearest Amtrak station:

- Amtrak’s Southwest Chief operates daily service from Los Angeles, CA and Albuquerque, NM to Kingman, AZ located 112 miles south of Las Vegas. From Kingman, you may purchase Amtrak Thruway Motorcoach service to Las Vegas.
- Amtrak’s San Joaquin Route operates between Stockton, CA and Bakersfield, CA. From Bakersfield, Amtrak operates two daily Thruway Motorcoaches to Las Vegas.

By Car
The main highway connecting Las Vegas with the rest of the country is I-15; it links Montana, Idaho, and Utah with Southern California. The drive from Los Angeles is quite popular and can get very crowded on weekends as hopeful gamblers make their way to and from Las Vegas.

From the east, take I-70 or I-80 west to Kingman, Arizona, and then U.S. 93 north to Downtown Las Vegas. From the south, take I-10 west to Phoenix, and then U.S. 93 north to Las Vegas. From San Francisco, take I-80 east to Reno, and then U.S. 95 south to Las Vegas. Vegas is 286 miles from Phoenix, 759 miles from Denver, 421 miles from Salt Lake City, 269 miles from Los Angeles, and 586 miles from San Francisco.

International visitors should note that insurance and taxes are almost never included in quoted rental-car rates in the U.S. Be sure to ask your rental agency about these. They can add a significant cost to your car rental.

Getting Around Las Vegas

By Car
Though you can get around central Las Vegas adequately without a car, the best way to experience the city can be to drive it. A car gives you easy access to all the casinos and attractions; lets you make excursions to Lake Mead, Hoover Dam, and elsewhere at your leisure; and gives you the chance to cruise the Strip and bask
in its neon glow. If you plan to spend most of your time on the Strip, a car may not be worth the trouble, but if you plan on seeing the sights in and around Las Vegas, renting or bringing a car is a good idea.

Parking on and around the Strip, although free, can require a bit of work. You’ll have to brave some rather immense parking structures. Parking at the Rio All-Suite Hotel & Casino is complimentary for hotel guests! Valet parking is available but can take a while at busy times and requires that you tip the valets ($2 to $3). Still, it’s usually less expensive to rent a car and drive around Vegas, or to use the monorail (or even—gasp!—to walk), than to cab it everywhere.

By Taxi
One of the easiest ways to get around is by taxi. It is relatively cheap to go from hotel to hotel, but be aware that since traffic is often so congested on the strip, taking a taxi often isn’t much faster than walking. The taxi driver is required to use the meter and to take the shortest route to your destination. There is a surcharge for rides originating at the airport, but not for extra passengers. Taxi lines (queues) are typically found at the front of hotels. Cabs aren’t allowed to pick up passengers on the street, so you can’t hail a cab New York–style. You have to wait in a hotel taxi line or call a cab company. If you dine at a restaurant off the Strip, the restaurant will call a cab to take you home.

Fares
The fare is $3.30 on the meter when you get in and 20¢ for every 1/13th mile (there’s also a $30 per-hour charge for waiting). Taxis are limited by law to carrying a maximum of four passengers, and there’s no additional charge per person. No fees are assessed for luggage, but taxis leaving the airport are allowed to add an airport surcharge of $2. The trip from the airport to most hotels on the south end of the Strip should cost about $13 to $16, to the north end of the Strip about $16 to $27, and to Downtown about $22 to $26.

Tipping
Drivers should be tipped around 15% to 18% for good service. Some drivers can’t accept credit cards (and those that do usually add a surcharge); all drivers carry only nominal change with them.

Suggested Routes
Be sure to specify to your driver that you don’t want to take Interstate 15 or the airport tunnel on your way to or from the airport. This is always the longer route distance-wise, which means it’s the most expensive, but it can sometimes save you 5 to 10 minutes on the trip if traffic is heavy on the Strip. Drivers who take passengers through the airport tunnel without asking are committing an illegal practice known as “long-hauling.”

When you get in the taxi, tell the driver you want to be taken to your hotel via Swenson Avenue, NOT, the airport tunnel. The airport tunnel may seem faster because it connects to the freeway and has fewer lights, but the route is several miles longer resulting in cab fares that are $5 to $10 more. Besides, if you hit the airport tunnel route during rush hour (8:00 a.m.-10:00 a.m. and 4:00 p.m.-7:00 p.m.), any time savings you gain using the freeway will disappear in the exhaust of the morning or evening commute. So say NO to the airport tunnel (the only tunnel in Vegas) and use the extra cash for an extra cocktail instead.

By Shuttle Van
Shuttle service is often shared with other riders, and costs $6 to $8 per person to the Strip, $9 to $15 to Downtown, and $12 to $33 to outlying casinos (excluding tips). The vans wait for passengers outside the terminal in marked areas. Because the vans often make numerous stops at different hotels, it’s not the best means of transportation if you’re in a hurry. For round-trip service, save time and money by booking online and printing out your vouchers beforehand.

Sources:
Frommers: www.frommers.com/destinations/las-vegas/
Travel Nevada: http://travelnevada.com/
WikiTravel: http://wikitravel.org/en/Las_Vegas
68th Annual Scientific Meeting Accommodations Information

AAFS 68th Annual Scientific Meeting
February 22-27, 2016
Rio All-Suite Hotel & Casino
Las Vegas, NV, U.S.A.

The American Academy of Forensic Sciences has selected the Rio All-Suite Hotel & Casino for your stay during the 68th Annual Scientific Meeting in Las Vegas, NV. The Rio All-Suite Hotel & Casino offers great amenities to help you through your stay.

For hotel availability during the American Academy of Forensic Sciences’ 68th Annual Scientific Meeting, please go to the AAFS Annual Meeting “Accommodations” webpage to make your hotel reservation under the AAFS room block. By using this link on the AAFS Accommodations page, you will be taken to the hotel’s AAFS specific meetings page where you may secure your reservation at the group-contracted rate of $170 for either single or double rooms.

While early reservations are recommended to take advantage of discounted rates, please be sure to cancel your reservations prior to the Monday, January 18, 2016, deadline if you are unable to attend or you cannot use the reservations. This will make the rooms available for other attendees and will help AAFS avoid the financial penalties associated with cancellations made after the room block closes.

Rio All-Suite Hotel & Casino
3700 West Flamingo Road
Las Vegas, NV 89103
Telephone: (866) 746-7671
Reservations:  (888) 746-6955
Single/Double: $170

If there’s one place that captures the rhythm of Las Vegas, it’s the Rio All-Suite Hotel & Casino. Like its namesake, the Rio draws its style and passion from Carnival, the biggest celebration on earth. With vibrant colors and a pulsing samba beat, the Rio is exotic, festive and fun. The Rio is about enjoying every moment and that spirit is just as evident in the meetings and events that happen here.

Standard Amenities:
- High-speed internet access (When Booked Through AAFS Room Block)
- Iron and ironing board
- Phone with voicemail
- Hair dryer
- On-demand movies, music and games
- 24-hour room service
- Alarm clock radio
- Available dry cleaning and laundry service
- In-room safe
- Free parking for hotel guests
- In-room coffeemaker (coffee available through mini-bar purchase)

To book within the AAFS room block, use the online reservation link or call (888) 746-6955 and request “the American Academy of Forensic Sciences group rate” or use the code “SRAFS6.” Attendees booking within the room block will not be charged the $25 daily Resort Fee and will receive complimentary in-room internet for one device. Use of the fitness center and local/1-800 number phone calls in the guest room will be billed to each guest individually based on usage. Any attendees not booked inside the AAFS room block will be charged the mandatory $25 daily resort fee per room. Attendees not booked within the AAFS block will not be able to request rate or resort fee remediation.

Booking a room in the AAFS room block is an important way to support our organization and to keep overall meeting costs as low as possible. AAFS commits to a block of rooms at the Headquarter hotel(s) on behalf of meeting attendees and has a financial obligation to fill those blocks. Please help us to avoid penalties and to control costs for future events by staying at the official hotel. Staying within the block is also more convenient and helps you stay connected with the informal activities and networking opportunities that occur at the hotels during the meeting. If you are required to reserve a room through your company’s travel department, please forward the booking link to them so that you can reserve a room in the AAFS room block.
General Information

All meeting sessions are lectures with one or more speakers. Continuing professional education credits are offered for physicians, dentists, attorneys, and chemists. Continuing education credit applications have been submitted for physicians, dentists, attorneys, and chemists. Nurses may use the AAFS CME Credit Reporting Forms for filing CERP hours with their state accreditation agency. Please check with your state agency for details. In addition, AAFS offers a generic CE certificate which may be used for purposes not outlined above.

To register for continuing education credit, please complete the appropriate section on the meeting Registration Form. An individual must be a registrant to obtain continuing education credits. Fees charged for continuing education credits are based on projected costs of supplies and other materials needed to comply with requirements of the various continuing education accreditation agencies. The AAFS has adopted a user-pay approach so that those individuals who benefit from the specific continuing education program are responsible for the costs incurred.

In order to be in compliance with the various accrediting organizations, introductions, breaks, and lunches have been deducted from the total hours. Please note that continuing education credit is not available for all sessions. All continuing education credit recipients will receive documentation regarding the number of continuing education hours awarded. Attendance reports are filed with the appropriate state or national agency, as required.

Objectives of the AAFS Continuing Education Program

To provide for multidisciplinary presentation, instruction, and discussion of relevant forensic science issues related to science, evidence and the law, and to research descriptive studies, technology and methods, diagnostics, interpretations, testimony, and administrative functions performed by forensic scientists in the disciplines of pathology, biology, odontology, anthropology, psychiatry & behavioral science, psychology, engineering sciences, toxicology, questioned document examination, criminalistics, jurisprudence, digital & multimedia sciences, and general forensic investigation.

Expected Outcome of Participation

A participant in the AAFS Continuing Education Program should: a) understand the perspectives and roles of the various forensic science disciplines; b) increase awareness of current forensic science issues; c) learn new technologies and methods; d) broaden diagnostic acumen; e) gain practical knowledge to modify current practices; f) affirm current concepts and practices; g) improve interpretative skills regarding evidence, observations, and information; h) interact with colleagues; and, i) expand one’s historical perspective on the forensic sciences.

Faculty Disclosure Policy

As a sponsor of continuing education, the American Academy of Forensic Sciences must insure balance, independence, objectivity, and scientific rigor in all its educational activities. All faculty participating in a sponsoring activity are expected to disclose any significant financial interest or other relationship: (1) with the manufacturer(s) of any commercial product(s) and/or provider(s) of commercial services discussed in an educational presentation; and, (2) with any commercial supporters of the activity. (Significant financial interest or other relationship can include such things as grants or research support, employee, consultant, major stockholder, member of speaker’s bureaus, etc.) AAFS has an established policy regarding conflicts of interest that includes decisions the Program Committee members may make in selecting content for the Annual Scientific Meeting Program. By serving on the committee, regardless of role, each member has agreed to comply with Section 1.4.7 of the AAFS Policy and Procedure Manual.

To serve on the 2015-16 Program Committees, it is required that relevant AAFS staff members, program committee members, and/or reviewers complete a Financial Disclosure form before they were provided access to review submissions for the program. For continuing education accreditation purposes, the disclosed relationships are published below so that learners are aware of the nature of any relationships that may impact the selection of presentations for the program. If a committee member failed to provide complete disclosure of a relevant financial interest or relationship, the committee member or reviewer was not allowed to serve. The executed Faculty Disclosure Forms are on file in the AAFS Office.
CONTINUING EDUCATION

American Board of Criminalists Approval

The American Academy of Forensic Sciences (AAFS) is approved by the American Board of Criminalistics (ABC) to offer continuing education points for approved workshops for criminalists and forensic scientists. The ABC maintains responsibility for the program, and credit may be awarded to ABC Fellows, Diplomates, and Affiliates.

Overall Purpose and Objective Statements for Major Aspects of AAFS Programs

Workshops and Special Sessions
Purpose: To provide an opportunity for experts to present material and to lead discussion and practical exercises related to forensic science methods, procedures, diagnosis, investigation, professional relations and practices, communication, administration, and professional development.

Educational Objectives: Detailed individually in each workshop and special session announcement and description.

CE Credit: Varies from 1.5 credit hours to 16 credit hours depending on sessions.

Breakfast/Luncheon Seminars
Purpose: To provide an opportunity for presentation and discussion of relevant historical and current topics of forensic science interest related to specific case investigations, or general or specific investigative needs and procedures, methodologies, and testimony.

Educational Objectives: Detailed individually in each breakfast/luncheon seminar announcement and description.

CE Credit: Designated for a maximum of .75 credit hour for Breakfast Seminars and 1.0 credit hour for Luncheon Seminars.

Plenary Session
Purpose: To provide a multidisciplinary presentation and discussion of issues related to the forensic science profession.

Educational Objectives: Attendees will be able to: a) identify the challenges the forensic science profession has faced and will continue to face in terms of ensuring quality; b) identify ways to deal with the variances each challenge presents; and, c) identify the entities which have influence over setting the quality standards in the field of forensic science.

CE Credit: Designated for a maximum of 2.0 credit hours.

Bring Your Own Slides
Purpose: To enable guided but spontaneous discussion and instruction related primarily to challenging death investigation cases involving forensic pathology and other related forensic science issues. Presented cases are used as a focal point for improving diagnostic methods and interpretation of pathologic findings and related evidence, and for presenting case-related information on previously unreported or rarely occurring cases which may alert forensic pathologists and scientists to information useful in future death investigations.

Educational Objectives: Attendees will be able to: a) discuss issues of importance regarding interpretation of selected wounds, diseases and evidence; b) provide arguments for and against opinions raised during specific case discussions; and, c) recognize when consultation with other experts may be indicated.

CE Credit: Designated for a maximum of 2.0 credit hours.

Oral and Poster Section Scientific Sessions
Purpose: To provide an opportunity for presentation and discussion of case reports, descriptive studies, review presentations, research, administrative issues, and investigative/diagnostic methods regarding topics and issues of importance to a primary discipline among the forensic sciences.

Educational Objectives: To meet the educational objectives stated by each presenter for his/her presentation.

CE Credit: Varies according to the individual’s session attendance. Designated for a maximum of 25.0 credit hours.

Last Word Society
Purpose: To provide a retrospective forensic analysis of historical events and to provide education about the history and evolution of forensic sciences as well as the modern methods and technologies used to re-examine past events of forensic science interest. Emphasis is
CONTINUING EDUCATION

placed on the evaluation of the original opinions and case outcome and on the development of newer hypotheses based on the re-analysis.

Educational Objectives: To meet the educational objectives stated by each presenter for his/her presentation.

CE Credit: Designated for a maximum of 2.0 credit hours.

Guidelines For Claiming Credit

As the sponsor of Continuing Education Credit, the AAFS recognizes that the forensic science disciplines are inextricably linked and that inter-disciplinary knowledge is critical to promote competence in forensic practice. As a result, the claiming of credit for various continuing education activities related to medicine, dentistry, law, chemistry, and other forensic disciplines need not be limited to one’s primary professional specialty. For example, a forensic pathologist from the Pathology/Biology Section may gain very useful and relevant information by attending a presentation in the Anthropology Section scientific session. It is appropriate to claim continuing medical education credit for that session. Many other examples exist where the claiming of continuing education credit is appropriate for attending sessions that cover material related to, but which lay outside of, one’s primary professional area of expertise.

It is the conference attendee’s responsibility to document which program sessions were attended and to determine those sessions for which continuing education credit may be claimed. The AAFS operates under the assumption that meeting attendees will, in general, be unlikely to attend sessions that will not be beneficial to their professional practice and that the claim for continuing education credit is justified if a session contains scientific or practice-related information that may bring new knowledge, may affirm current knowledge, or may provide information that could possibly modify one’s professional practices.

Those who wish to receive continuing education credit must register and pay for this service on the meeting Registration Form. CE Credit Request Forms will be available at the registration desk. The completed forms must be returned to AAFS by the designated deadline.

Chemistry

Application will be made to the American Association for Clinical Chemistry, Inc., in order for AAFS to offer ACCENT® credit. Credit will be awarded on an hour-for-hour basis.

Dental

The American Academy of Forensic Sciences is designated as an Approved PACE Program Provider by the Academy of General Dentistry. The formal continuing education programs of this program provider are accepted by AGD for Fellowship/Mastership and membership maintenance credit. Approval does not imply acceptance by a state or provincial board of dentistry or AGD endorsement. The current term of approval extends from 1/1/13 to 12/31/16. Provider ID: 218044

Legal

Continuing legal education credit will be awarded on an hour-for-hour basis. Attorneys may file the AAFS-issued CLE certificate with their respective state bars.

Please contact Continuing Education Coordinator Kimberly Wrasse, kwrasse@aafs.org, no later than January 7 if your state bar will not allow you to self-report. AAFS will apply for accreditation/approval from your state in this circumstance.

Medical

The American Academy of Forensic Sciences (AAFS) is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians. The American Academy of Forensic Sciences designates this live activity for a maximum of 60 AMA PRA Category 1 Credits™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.
The American Academy of Forensic Sciences would like to thank the following supporters for their contributions to the 2016 AAFS 68th Annual Scientific Meeting:

- A2LA
- Agilent Technologies, Inc.
- Anthropology Section
- Cerilliant Corporation
- Clark County Coroner’s Office
- Criminalistics Section
- Engineering Sciences Section
- Foster & Freeman USA, Inc.
- General Section
- Immunalysis Corporation
- Jurisprudence Section
- Lipomed, Inc.
- New York City OCME
- NMS Labs
- Pathology/Biology Section
- Randox Toxicology Ltd.
- The Fredric Rieders Family Renaissance Foundation
- VTO Inc.
- Waters Corporation
CALENDAR OF EVENTS

AAFS 68th Annual Scientific Meeting

Calendar of Events

Saturday, February 20, 2016

8:00 a.m. - 5:00 p.m. American Board of Criminalistics (ABC) Board of Directors
8:00 a.m. - 5:00 p.m. ABC Examination Committee
8:00 a.m. - 5:00 p.m. American Board of Forensic Odontology (ABFO) Board Examination
8:00 a.m. - 5:00 p.m. ABFO Dental Identification Workshop
8:30 a.m. - 5:00 p.m. ASTM E30 Forensic Sciences
9:00 a.m. - 5:00 p.m. Forensic Specialties Accreditation Board (FSAB) Annual Meeting
11:00 a.m. - 5:00 p.m. Forensic Science Education Programs Accreditation Commission (FEPAC) Business Meeting
1:00 p.m. - 5:00 p.m. ASTM E30.12 Digital and Multimedia Evidence

Sunday, February 21, 2016

8:00 a.m. - 5:00 p.m. Forensic Science Education Programs Accreditation Commission (FEPAC) Business Meeting
8:00 a.m. - 5:00 p.m. ABC Board of Directors
8:00 a.m. - 5:00 p.m. ABC Examination Committee
8:00 a.m. - 5:00 p.m. ABFO Expert Witness Testimony Workshop
8:00 a.m. - 5:00 p.m. American National Standards Institute (ANSI) U.S. TAG ISO TC/272 Forensic Science
8:00 a.m. - 5:00 p.m. ASTM E30 Forensic Sciences
9:00 a.m. - 12:00 p.m. National Safety Council (NSC) Executive Board
9:00 a.m. - 5:00 p.m. Forensic Specialties Accreditation Board
9:00 a.m. - 5:00 p.m. International Association of Coroners & Medical Examiners (IAC&ME) Executive Board
1:00 p.m. - 5:00 p.m. AAFS REGISTRATION OPEN
1:00 p.m. - 5:00 p.m. NSC Alcohol, Drugs and Impairment Division (ADID) Annual Meeting
1:00 p.m. - 6:00 p.m. AAFS Cyber Cafe
1:00 p.m. - 6:00 p.m. AAFS Speaker Ready Room

Monday, February 22, 2016

6:00 a.m. - 6:00 p.m. AAFS Speaker Ready Room
6:45 a.m. - 5:00 p.m. AAFS REGISTRATION OPEN
7:00 a.m. - 8:30 a.m. Breakfast #1: Death in a Bathtub: The Defense of Drew Peterson (Pre-Registration Required)
7:00 a.m. - 6:00 p.m. AAFS Cyber Cafe
7:00 a.m. - 11:00 p.m. Press Room
8:00 a.m. - 10:00 a.m. National Institute of Standards and Technology (NIST) Organization of Scientific Area Committees (OSAC) – Digital/Multimedia Scientific Area Committee Public Status Reports & Open Discussion
8:00 a.m. - 1:00 p.m. ABC Educator FSAT Training
8:00 a.m. - 5:00 p.m. AAFS Board of Directors
8:30 a.m. - 12:00 p.m. Workshop #1: Information Does Exist Beyond the First Page of Your Google Search! Tools and Strategies for Forensic Science Literature Searching and Use (Pre-Registration Required)
8:30 a.m. - 12:00 p.m. Workshop #2: Advanced Mass Spectrometry (MS) Techniques for Forensic Analysis: What Does the Future Hold? (Pre-Registration Required)
Las Vegas 2016

CALENDAR OF EVENTS

8:30 a.m. - 12:30 p.m. Workshop #3: How and Why You Can and Should Integrate Advanced Imaging Techniques Into Your Daily Autopsy Practice (Pre-Registration Required)

8:30 a.m. - 12:30 p.m. Workshop #4: A Cloud Descends on the Courtroom: The Impact of Cloud Computing on Evidence in the Courtroom (Pre-Registration Required)

8:30 a.m. - 12:30 p.m. Workshop #5: UVIS Dental Identification Module (UDIM) — A Hands-On Workshop (Pre-Registration Required)

8:30 a.m. - 4:30 p.m. Workshop #6: Frequency Occurrence in Handwriting and Hand Printing Characteristics (Pre-Registration Required)

8:30 a.m. - 4:45 p.m. Workshop #7: Extreme Violence — Military vs. Civilian Crime Scene Investigation (CSI) Cases — Forensic Analysis and Disciplines in Practice (Pre-Registration Required)

8:30 a.m. - 5:00 p.m. Workshop #8: From the Ashes — Transforming the Response to Mass Disasters (Pre-Registration Required)

8:30 a.m. - 5:00 p.m. Workshop #9: Strategies for Scientific Problem-Solving With Physical Evidence (Pre-Registration Required)

8:30 a.m. - 5:00 p.m. Workshop #10: Practical Homicide Investigation®: An Evaluation of Homicides Involving Child Victims, Child Offenders, and Equivocal Death Investigations (Pre-Registration Required)

9:00 a.m. - 5:00 p.m. IAC&ME Executive Board

9:00 a.m. - 6:00 p.m. American Board of Forensic Toxicology (ABFT) Examination Committee

10:00 a.m. - 12:00 p.m. ABFO Bitemark Committee

10:15 a.m. - 12:00 p.m. NIST OSAC – Biology/DNA Scientific Area Committee Public Status Reports & Open Discussion

1:00 p.m. - 5:00 p.m. Workshop #11: Child Homicides: The Critical Role of Interdisciplinary Expert Collaboration (Pre-Registration Required)

1:00 p.m. - 5:00 p.m. Workshop #12: Development of a Reasonable Minimum Documentation Standard for Latent Prints (Pre-Registration Required)

1:00 p.m. - 5:00 p.m. NIST OSAC – Crime Scene/Death Investigation Scientific Area Committee Public Status Reports & Open Discussion

1:30 p.m. - 5:00 p.m. Workshop #14: Vaping: What You Didn’t Know About Electronic Cigarette — And Why You Should Care (Pre-Registration Required)

1:30 p.m. - 5:00 p.m. Workshop #15: Addressing Damaged Mobile Devices for Data Acquisition (Pre-Registration Required)

3:00 p.m. - 5:00 p.m. National Association of Medical Examiners (NAME) Journal Editorial Board

4:00 p.m. - 6:00 p.m. NAME Organ and Tissue Procurement Committee

5:00 p.m. - 6:00 p.m. Consortium of Forensic Science Organizations (CFSO) Legislative Update Presentation (Open to All Meeting Attendees)

5:00 p.m. - 8:00 p.m. ABFO Combined Executive Committee and Board of Directors

6:00 p.m. - 10:00 p.m. NAME Inspection and Accreditation Training

6:00 p.m. - 11:00 p.m. NAME Executive Committee

8:00 p.m. - 10:00 p.m. ABFO Diplomates Annual Meeting

Tuesday, February 23, 2016

6:00 a.m. - 6:00 p.m. AAFS Speaker Ready Room

6:45 a.m. - 6:00 p.m. AAFS REGISTRATION OPEN

7:00 a.m. - 8:00 a.m. NAME Foundation Board of Trustee

7:00 a.m. - 8:30 a.m. Breakfast #2: Death From a Distance: The Etiology of Serial Sniper Homicides (Pre-Registration Required)

7:00 a.m. - 9:00 a.m. Toxicology Section Steering Committee

7:00 a.m. - 5:30 p.m. 46th Annual Scientific Session of the American Society of Forensic Odontology (ASFO)
<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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</thead>
<tbody>
<tr>
<td>7:00 a.m.</td>
<td>AAFS Cyber Cafe</td>
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<tr>
<td>7:00 a.m.</td>
<td>Press Room</td>
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<td>7:30 a.m.</td>
<td>International Board of Forensic Engineering Sciences (IBFES) Oral Examinations and Directors Meeting</td>
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<tr>
<td>8:00 a.m.</td>
<td>Forensic Sciences Foundation (FSF) Board of Trustees</td>
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<td>8:00 a.m.</td>
<td>ABFT Accreditation Committee</td>
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<td>8:00 a.m.</td>
<td>ABFT Examination for Certification</td>
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<td>8:00 a.m.</td>
<td>NAME Board of Directors</td>
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<td>8:00 a.m.</td>
<td>CFSO Board (Not Open to the Public)</td>
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<tr>
<td>8:00 a.m.</td>
<td>National Institute of Justice (NIJ) Forensic Science Research &amp; Development Symposium</td>
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<tr>
<td>8:30 a.m.</td>
<td>Workshop #16: <em>The American Academy of Forensic Sciences (AAFS) Humanitarian and Human Rights Resource Center</em> (Pre-Registration Required)</td>
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<tr>
<td>8:30 a.m.</td>
<td>Workshop #17: <em>Postmortem Monocular Indirect Ophthalmoscopy (PMIO)</em> (Pre-Registration Required)</td>
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<tr>
<td>8:30 a.m.</td>
<td>NIST OSAC – Physics/Pattern Interpretation Scientific Area Committee Public Status Reports &amp; Open Discussion</td>
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<tr>
<td>8:30 a.m.</td>
<td>Workshop #18: <em>Improving Your Image: How to Get the Best Out of Your Expensive X-Ray Equipment</em> (Pre-Registration Required)</td>
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<tr>
<td>8:30 a.m.</td>
<td>Workshop #19: <em>Diversity and Inclusion at the Forensic Science Workplace</em> (Pre-Registration Required)</td>
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<td>8:30 a.m.</td>
<td>FEPAC: <em>Accreditation of Forensic Science Academic Programs Through the AAFS</em></td>
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<tr>
<td>8:30 a.m.</td>
<td>Special Session #1: <em>Interdisciplinary Symposium - Innovative Science — How Advances in Technology Transform Forensic Science</em> (Pre-Registration Required)</td>
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<td>8:30 a.m.</td>
<td>Workshop #20: <em>On the Leading Edge of Forensic Science</em> (Pre-Registration Required)</td>
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<td>8:30 a.m.</td>
<td>Special Session #2: <em>Young Forensic Scientists Forum (YFSF) - Viva La Forensics</em> (Pre-Registration Required)</td>
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<td>8:30 a.m.</td>
<td>Workshop #21: <em>Crime Assessment: Solving Crime Beyond Profiling</em> (Pre-Registration Required)</td>
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<td>8:30 a.m.</td>
<td>Workshop #22: <em>Developing a Professional Code of Ethics in Digital Forensics</em> (Pre-Registration Required)</td>
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<tr>
<td>8:30 a.m.</td>
<td>Workshop #23: <em>Considerations for Implementing Next Generation Sequencing (NGS) Technologies Into a Forensic Laboratory</em> (Pre-Registration Required)</td>
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<td>9:00 a.m.</td>
<td>AAFS 2016 Annual Meeting Program Committee Review and Breakfast</td>
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<td>9:00 a.m.</td>
<td>AAFS Student Academy</td>
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<td>9:00 a.m.</td>
<td>NAME 2016 Interim Scientific Program Registration</td>
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<td>12:00 p.m.</td>
<td>AAFS 2015 Section Officers Luncheon and Meeting</td>
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<td>12:00 p.m.</td>
<td>46th Annual Business Meeting and Luncheon of the ASFO</td>
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<td>12:00 p.m.</td>
<td>AAFS Long Term Planning Committee (LTTP)</td>
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<td>12:00 p.m.</td>
<td>ABFT Board of Directors</td>
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<td>12:55 p.m.</td>
<td>NAME 2015 Interim Scientific Program</td>
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<tr>
<td>1:00 p.m.</td>
<td>Workshop #24: <em>Elder Abuse and Neglect: What’s Happening to Grandma?</em> (Pre-Registration Required)</td>
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<td>1:00 p.m.</td>
<td>NIST OSAC – Chemistry/Instrumental Analysis Scientific Area Committee Public Status Reports &amp; Open Discussion</td>
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<td>1:30 p.m.</td>
<td>FEPAC Program Directors</td>
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<td>2:00 p.m.</td>
<td>International Affairs Committee</td>
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<td>4:00 p.m.</td>
<td>FSF Theoretical Forensic Sciences “Think Tank” Committee</td>
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<td>4:00 p.m.</td>
<td>American Board of Forensic Anthropology (ABFA) Board of Directors</td>
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<td>5:30 p.m.</td>
<td>Society of Forensic Anthropologists (SOFA) Board</td>
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<td>6:00 p.m.</td>
<td>Employment Forum</td>
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<td>6:00 p.m.</td>
<td>AAFS Welcoming Reception</td>
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<td>7:00 p.m.</td>
<td>YFSF Bring Your Own Posters</td>
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<td>7:00 p.m.</td>
<td>Evening Session: <em>The American Academy of Forensic Sciences (AAFS) Standards Development Process</em> (Open to all Meeting Attendees)</td>
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<td>8:00 p.m.</td>
<td>Diversity and Inclusion in Forensic Sciences Reception (Open to all Meeting Attendees)</td>
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Wednesday, February 24, 2016

6:00 a.m. - 6:00 p.m. AAFS Speaker Ready Room
6:45 a.m. - 5:00 p.m. AAFS REGISTRATION OPEN
7:00 a.m. - 8:30 a.m. Breakfast #3: A Primer on the Structure and Activity of the National Institute of Standards and Technology's (NIST's) Organization of Scientific Area Committees (OSAC) (Pre-Registration Required)
7:00 a.m. - 12:00 p.m. ABC Certification Examination
7:00 a.m. - 12:00 p.m. Society of Forensic Toxicologists (SOFT) Board of Directors Interim Meeting
7:00 a.m. - 6:00 p.m. AAFS Cyber Cafe
7:00 a.m. - 11:00 p.m. Press Room
7:30 a.m. - 9:00 a.m. AAFS Government Relations Committee
8:00 a.m. - 8:45 a.m. AAFS ACADEMY CUP
8:00 a.m. - 9:00 a.m. AAFS Continuing Education Committee
8:30 a.m. - 11:30 a.m. American Dental Association (ADA) OSAC Forensic Odontology Taskforce
9:00 a.m. - 10:00 a.m. Odontology Section Science and Legal Committee (by Invitation Only)
9:00 a.m. - 11:00 a.m. AAFS PLENARY SESSION
11:00 a.m. - 12:00 p.m. AAFS Membership Application “How To” Session
11:30 a.m. - 1:00 p.m. Poster Sessions - Anthropology, Criminalistics, General, Jurisprudence, Odontology, Pathology/Biology, Psychiatry & Behavioral Science
Posters will be available for viewing from 10:00 a.m. – 4:00 p.m. Presenting authors will be available for discussion from 11:30 a.m. – 1:00 p.m.

11:30 a.m. - 4:00 p.m. EXHIBITS OPEN
12:00 p.m. - 1:00 p.m. Criminalistics Section Luncheon (Pre-Registration Required)
12:00 p.m. - 1:15 p.m. General Section Luncheon (Pre-Registration Required)
12:00 p.m. - 1:30 p.m. Pathology/Biology Section Luncheon (Pre-Registration Required)
12:00 p.m. - 1:45 p.m. Digital & Multimedia Sciences Section Luncheon (Pre-Registration Required)
12:00 p.m. - 1:45 p.m. Jurisprudence Section Luncheon (Pre-Registration Required)
12:00 p.m. - 1:45 p.m. Psychiatry & Behavioral Science Section Luncheon (Pre-Registration Required)
12:00 p.m. - 1:45 p.m. Toxicology Section Luncheon (Pre-Registration Required)
12:00 p.m. - 1:45 p.m. Odontology Section Executive Committee Luncheon
12:30 p.m. - 1:30 p.m. ABFA Diplomates
1:00 p.m. - 2:00 p.m. AAFS Abstract Submission “How To” Session
1:00 p.m. - 2:00 p.m. SOFT Drug Facilitated Crimes (DFC) Committee
1:05 p.m. - 3:45 p.m. Criminalistics Section Business Meeting
1:30 p.m. - 3:45 p.m. Engineering Sciences Section Business Meeting
1:30 p.m. - 3:45 p.m. General Section Business Meeting
1:45 p.m. - 3:45 p.m. Pathology/Biology Section Business Meeting
2:00 p.m. - 3:45 p.m. Anthropology Section Business Meeting
2:00 p.m. - 3:45 p.m. Digital & Multimedia Sciences Section Business Meeting
2:00 p.m. - 3:45 p.m. Jurisprudence Section Business Meeting
2:00 p.m. - 3:45 p.m. Odontology Section Business Meeting
2:00 p.m. - 3:45 p.m. Psychiatry & Behavioral Science Section Business Meeting
2:00 p.m. - 3:45 p.m. Questioned Documents Section Business Meeting
2:00 p.m. - 3:45 p.m. Toxicology Section Business Meeting
4:15 p.m. - 5:30 p.m. AAFS ANNUAL BUSINESS MEETING & AWARDS CEREMONY
5:30 p.m. - 7:30 p.m. SOFA General Membership Meeting
6:00 p.m. - 7:00 p.m. YFSF Bring Your Own Slides (BYOS)
6:30 p.m. - 8:00 p.m. Boston University School of Medicine Alumni and Student Reception
6:30 p.m. - 8:30 p.m. Promega Genetic Identity Reception
7:00 p.m. - 9:00 p.m. CRC Press Authors’ Reception
7:00 p.m. - 9:00 p.m. Duquesne University MS-FSL Reception
7:00 p.m.  -  9:00 p.m. The George Washington University Forensic Sciences Alumni Reception
7:00 p.m.  -  9:00 p.m. John Jay College on the Road — AAFS Alumni Reception
7:00 p.m.  -  9:00 p.m. Marshall University Forensic Science Alumni Reception
7:30 p.m.  -  9:00 p.m. Toxicology Section Poster Session
8:00 p.m.  -  10:00 p.m. Bring Your Own Slides (BYOS)
8:00 p.m.  -  10:00 p.m. ABC Ice Cream Social
8:00 p.m.  -  10:00 p.m. Sam Houston State University Alumni and Student Reception
8:00 p.m.  -  10:00 p.m. University of New Haven Student and Alumni Reception
8:00 p.m.  -  10:00 p.m. Virginia Commonwealth University Alumni and Student Reception

Thursday, February 25, 2016

6:00 a.m.  -  6:00 p.m. AAFS Speaker Ready Room
6:45 a.m.  -  5:00 p.m. AAFS REGISTRATION OPEN
7:00 a.m.  -  8:30 a.m. Breakfast #4: One Night in August: The I-35W Bridge Collapse in Minneapolis
(Pre-Registration Required)
7:00 a.m.  -  10:00 a.m. YFSF Annual Breakfast (Pre-Registration Required)
7:00 a.m.  -  6:00 p.m. AAFS Cyber Cafe
7:00 a.m.  -  6:00 p.m. AAFS Speaker Ready Room
7:00 a.m.  -  11:00 p.m. Press Room
7:30 a.m.  -  8:00 a.m. AAFS Moderator’s “How To” Preview
7:30 a.m.  -  9:00 a.m. AAFS Policy and Procedure Committee
9:00 a.m.  -  11:30 a.m. Council of Federal Forensic Laboratory Directors (CFFLD)
9:00 a.m.  -  2:00 p.m. EXHIBITS OPEN
11:30 a.m.  -  1:00 p.m. Poster Sessions - Anthropology, Criminalistics, Engineering Sciences, General, Jurisprudence, Odontology, Pathology/Biology, Psychiatry & Behavioral Science, Questioned Documents
Posters will be available for viewing from 10:00 a.m. – 4:00 p.m. Presenting authors will be available for discussion from 11:30 a.m. – 1:00 p.m.

Scientific Sessions – Morning
8:25 a.m.  -  12:15 p.m. Criminalistics Session I
8:30 a.m.  -  11:30 a.m. Questioned Documents
8:30 a.m.  -  11:40 a.m. Digital & Multimedia Sciences
8:30 a.m.  -  11:45 a.m. Anthropology
8:30 a.m.  -  11:45 a.m. Engineering Sciences
8:30 a.m.  -  11:50 a.m. Psychiatry & Behavioral Science
8:30 a.m.  -  12:00 p.m. General
8:30 a.m.  -  12:00 p.m. Jurisprudence Session I
8:30 a.m.  -  12:00 p.m. Toxicology
8:30 a.m.  -  12:15 p.m. Odontology
8:30 a.m.  -  12:15 p.m. Pathology/Biology Session I
8:40 a.m.  -  12:00 p.m. Criminalistics Session II
9:00 a.m.  -  12:00 p.m. Pathology/Biology Session II

Scientific Sessions – Afternoon
1:00 p.m.  -  4:30 p.m. Digital & Multimedia Sciences
1:00 p.m.  -  5:00 p.m. Multidisciplinary Session: Engineering Sciences Session/Jurisprudence Session II — The Judge as Gatekeeper
1:00 p.m.  -  5:00 p.m. General
1:00 p.m.  -  5:00 p.m. Psychiatry & Behavioral Science
1:00 p.m.  -  5:00 p.m. Toxicology
## CALENDAR OF EVENTS

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>1:00 p.m.</td>
<td>Criminalistics Session II</td>
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<tr>
<td>1:00 p.m.</td>
<td>Criminalistics Session I</td>
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<tr>
<td>1:30 p.m.</td>
<td>Anthropology</td>
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<td>1:30 p.m.</td>
<td>Jurisprudence Session I</td>
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<tr>
<td>1:30 p.m.</td>
<td>Questioned Documents</td>
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<tr>
<td>1:30 p.m.</td>
<td>Pathology/Biology Session I</td>
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<td>1:45 p.m.</td>
<td>Odontology</td>
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<td>2:00 p.m.</td>
<td>Pathology/Biology Session II</td>
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<tr>
<td>12:00 p.m.</td>
<td>Journal of Forensic Sciences Editors’ Wine &amp; Cheese Luncheon</td>
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<tr>
<td>12:00 p.m.</td>
<td>Luncheon #1: Working Stiff: Forensic Training &amp; Public Relations in a Digital Age (Pre-Registration Required)</td>
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<tr>
<td>12:00 p.m.</td>
<td>ABFO Combined Executive Committee and Board of Directors</td>
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<tr>
<td>1:00 p.m.</td>
<td>AAFS International Educational Outreach Program (IEOP) 2016 – New Zealand</td>
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<tr>
<td>2:00 p.m.</td>
<td>AAFS Finance Committee</td>
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<tr>
<td>2:00 p.m.</td>
<td>Luncheon #1 Author Book Signing: Judy Melinek, MD – Working Stiff</td>
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<tr>
<td>3:30 p.m.</td>
<td>AAFS Exhibitor Liaison Committee &amp; Reception</td>
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<tr>
<td>5:00 p.m.</td>
<td>SOFT/AAFS Drugs &amp; Driving Committee</td>
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<tr>
<td>6:00 p.m.</td>
<td>AAFS 68th Annual Wine &amp; Cheese Reception</td>
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<td>6:00 p.m.</td>
<td>University Fair</td>
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<td>7:00 p.m.</td>
<td>Fire Debris Discussion Group</td>
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<td>7:00 p.m.</td>
<td>Toxicology Open Forum</td>
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<td>8:00 p.m.</td>
<td>Last Word Society</td>
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<td>8:15 p.m.</td>
<td>Council of Forensic Science Educators (COFSE)</td>
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### Friday, February 26, 2016

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>6:00 a.m.</td>
<td>AAFS Speaker Ready Room</td>
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<td>6:45 a.m.</td>
<td>AAFS REGISTRATION OPEN</td>
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<tr>
<td>7:00 a.m.</td>
<td>Breakfast #5: Back to the Future – A Journey Across the Timelines and Possible Realities for the Future of Forensic Sciences (Pre-Registration Required)</td>
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<tr>
<td>7:00 a.m.</td>
<td>Breakfast #6: Forensic Anthropology: Science Into Fiction (Pre-Registration Required)</td>
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<tr>
<td>7:00 a.m.</td>
<td>AAFS Cyber Cafe</td>
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<tr>
<td>7:00 a.m.</td>
<td>Press Room</td>
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<td>8:00 a.m.</td>
<td>AAFS 2016-2017 Nominating Committee</td>
</tr>
<tr>
<td>9:00 a.m.</td>
<td>Breakfast #6 Author Book Signing: Kathleen J. Reichs, PhD – Speaking in Bones (Books available for sale at the AAFS Sales Desk)</td>
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<tr>
<td>9:00 a.m.</td>
<td>EXHIBITS OPEN</td>
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<tr>
<td>9:30 a.m.</td>
<td>AAFS 2016-17 Section Officers</td>
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<tr>
<td>10:30 a.m.</td>
<td>AAFS 2016-17 Program Committee</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>Poster Sessions - Anthropology, Criminalistics, Digital &amp; Multimedia Sciences, Engineering Sciences, General, Jurisprudence, Odontology, Pathology/Biology, Psychiatry &amp; Behavioral Science, Questioned Documents (Posters will be available for viewing from 10:00 a.m. – 4:00 p.m. Presenting authors will be available for discussion from 11:30 a.m. – 1:00 p.m.)</td>
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**Scientific Sessions – Morning**

<table>
<thead>
<tr>
<th>Time</th>
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<tbody>
<tr>
<td>8:25 a.m.</td>
<td>Criminalistics Session II</td>
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<tr>
<td>8:25 a.m.</td>
<td>Criminalistics Session II</td>
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</tbody>
</table>
CALENDAR OF EVENTS

8:30 a.m. - 11:30 a.m. Questioned Documents
8:30 a.m. - 11:40 a.m. Digital & Multimedia Sciences
8:30 a.m. - 11:50 a.m. Pathology/Biology Session II
8:30 a.m. - 12:00 p.m. General
8:30 a.m. - 12:00 p.m. Multidisciplinary Session: Pathology/Biology Session I/Toxicology
8:30 a.m. - 12:00 p.m. Psychiatry & Behavioral Science
8:30 a.m. - 12:45 p.m. Engineering Sciences
8:40 a.m. - 12:00 p.m. Jurisprudence
8:45 a.m. - 11:30 a.m. Anthropology
9:00 a.m. - 11:45 a.m. Odontology

Scientific Sessions – Afternoon
1:00 p.m. - 2:45 p.m. Digital & Multimedia Sciences
1:00 p.m. - 5:00 p.m. General
1:00 p.m. - 5:00 p.m. Psychiatry & Behavioral Science
1:00 p.m. - 5:00 p.m. Toxicology
1:00 p.m. - 5:15 p.m. Criminalistics Session II
1:00 p.m. - 5:30 p.m. Criminalistics Session I
1:15 p.m. - 4:30 p.m. Odontology
1:15 p.m. - 5:00 p.m. Jurisprudence
1:30 p.m. - 3:10 p.m. Questioned Documents
1:30 p.m. - 4:20 p.m. Pathology/Biology Session II
1:30 p.m. - 4:30 p.m. Anthropology
1:30 p.m. - 5:00 p.m. Pathology/Biology Session I
1:45 p.m. - 2:55 p.m. Engineering Sciences

12:00 p.m. - 1:30 p.m. AAFS Past Presidents Council Luncheon
12:00 p.m. - 1:30 p.m. Luncheon #2: Operation Lima Sea — Unidentified Remains of a Human Torso in Queensland, Australia: Case Report on the Collaborative Investigative and Novel Anthropological (Forensic) Responses in the Establishment of Identification (Pre-Registration Required)
5:30 p.m. - 7:30 p.m. Illumina 3rd Annual User Symposium
7:00 p.m. - 9:00 p.m. Criminalistics Evening Session: Criminalistics Believe It or Not!

Saturday, February 27, 2016

6:00 a.m. - 12:00 p.m. AAFS Speaker Ready Room
7:00 a.m. - 9:30 a.m. AAFS 2016-2017 Board of Directors
7:30 a.m. - 9:30 a.m. AAFS REGISTRATION OPEN

Scientific Sessions – Morning
8:00 a.m. - 12:00 p.m. Criminalistics Session I
8:00 a.m. - 12:00 p.m. Criminalistics Session II
8:30 a.m. - 12:00 p.m. Pathology/Biology
8:30 a.m. - 12:00 p.m. Psychiatry & Behavioral Science
9:00 a.m. - 11:40 a.m. Jurisprudence
10:00 a.m. - 11:30 a.m. Anthropology
Pre-Registration Required — $15

Tuesday
February 23, 2016 — 9:00 a.m. - 2:00 p.m.

The purpose of the Student Academy of Forensic Sciences is to bring to the attention of local area high school and college students the vital importance of the application of scientific principles to the administration of justice. It acquaints the participants with the role of the forensic science disciplines in the legal system as well as the education and training required for the career in each discipline. All high school and college age students are welcome to attend.

Chair:
Julie A. Howe, MBA
Saint Louis University
St. Louis, MO

Chair Emeritus:
James L. Frost, MD
Morgantown, WV

Co-Chair:
Marilyn T. Miller, EdD
VA Commonwealth University
Richmond, VA

Faculty:
Anthropology:
Elizabeth A. Murray, PhD
College of Mount St. Joseph
Cincinnati, OH

Crimalistics:
Lynn A. Schneeweis, MS
Massachusetts State Police Crime Laboratory
Maynard, MA

Digital & Multimedia Sciences:
Richard W. Vorder Bruegge, PhD
Federal Bureau of Investigation
Quantico, VA

Engineering Sciences:
Roy Crawford, BSME
RR Crawford Engineering, Inc.
Whitesburg, KY

General:
Claire E. Shepard, MS
La Delta Community College
Monroe, LA

Jurisprudence:
Christine Funk, JD
Washington, DC

Odontology:
Robin A. Scheper, DDS
Wildwood, NJ

Pathology/Biology:
J.C. Upshaw Downs, MD
GBI Medical Examiner’s Office
Savannah, GA

Psychiatry & Behavioral Science:
Christopher R. Thompson, MD
Los Angeles, CA

Questioned Documents:
Sandra L. Miller, BS
Pennsylvania State Police
Harrisburg, PA

Toxicology:
Philip M. Kemp, PhD
Bioaeronautical Research Laboratory
Oklahoma City, OK
Pre-Registration Required — $75

S1 Innovative Science — How Advances in Technology Transform Forensic Science

Tuesday, February 23, 2016 — 8:30 a.m. - 12:45 p.m.  4.0 CE Hours

Chair: Jeri D. Ropero-Miller, PhD
RTI International
Research Triangle Park, NC

Faculty:
John Collins, Jr., MA
The Forensic Foundations Group
Dewitt, MI

Kenneth G. Furton, PhD
Florida International University
International Forensic Research Institute
University Park
Miami, FL

Zeno J. Geradts, PhD
Netherlands Forensic Institute
Ministry of Justice
Den Haag, NETHERLANDS

Richard A. Guerrieri, MS
Stafford, VA

Co-Chair: Marla E. Carroll, BS
Forensic Video & Audio Assoc
Plantation, FL

Christina G. Hayes, BS
St. Louis Metropolitan Police Department
St. Louis, MO

Kurt B. Nolte, MD
Office of Medical Investigator
Albuquerque, NM

Jed S. Rakoff, JD
U.S. District Court, Southern District NY
New York, NY

Nancy Rodriguez, PhD
National Institute of Justice
Dept of Justice/Office of Justice Programs
Washington, DC

Howard A. Schmidt, MS
SAFECode
Washington, DC

Educational Objective(s): After attending this presentation, attendees will better understand some best practices for technology adoption and implementation that have improved efficiency, quality, accuracy, reliability, and operational excellence in forensic sciences and beyond. Furthermore, the Interdisciplinary Symposium will help attendees understand the benefits and risks of emerging technologies to enable consideration and implementation.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by highlighting how technology and its adoption can advance teaching and learning experiences, improve operational and legal standards, and embrace scientific innovation.

Program Description: Whether at the scene of a death or a crime, in the forensic laboratory, or in the courtroom, technologies are used every day by practitioners to impart evidentiary proof and thereby solve cases. Forensic science has always been held to a high standard in order to uphold justice and for this to continue, forensic science must evolve and innovate.

As science progresses, answering a research question utilizing evidence-based science and technology typically leads to more questions. In fact, scientific knowledge begets new technologies, which beget new observations and scientific knowledge, which begets the next technological advancement. Keeping up with these advances in a forensic environment requires change, both operationally and culturally. Understanding, embracing, communicating, and when necessary, enforcing these changes requires the involvement of all stakeholders — the government, the criminal justice system, medical and forensic communities, and the public.
Pre-Registration Required — $75

S1  Innovative Science — How Advances in Technology Transform Forensic Science (continued)

The 2016 American Academy of Forensic Sciences Interdisciplinary Symposium program will help forensic scientists keep pace with technology-enabled opportunities by highlighting advances in forensic science that have improved efficiency, quality, accuracy, reliability, and operational excellence. From forensic science disciplines including pattern comparison and forensic medicine to newer ones such as digital and multimedia sciences and next generation sequencing, innovation in science and technology is all about understanding what the technology brings to the science and how the science can harness new knowledge and information to improve impact and confidence.

This Interdisciplinary Symposium program will include prominent speakers who support technology adoption in academia, the government and private sectors, management, and the legal system. This program will continue with innovative and emerging technology “stars” among us and “integrators” of technology who will share how they have experienced and continue to transform their practice based on the latest technology.

Howard A. Schmidt, MS
Keynote Presentation
Dr. Howard Schmidt maintains a phenomenal career that spans many first-hand experiences of how technological advances can be transformational. He has been the Chief Information Security Officer for not one but two Fortune 500 companies — Microsoft® and eBay®, as well as serving as a Cyber Advisor to the White House (George W. Bush and Obama administrations) for 31 years of public service in local and federal governments before his retirement in 2012. He presently is a partner of a prestigious cybersecurity consulting firm, Ridge Schmidt Cyber LLC. Dr. Schmidt will lead a “fireside chat” with Interdisciplinary Symposium attendees to share his unique experiences of commercial research and development in the 1990s and early 2000s; governmental issues and policies for cyber security, including noteworthy happenings less known to the public; winning strategies for technology adoption and implementation; and technology of the future based on his four decades of leadership in technology and cyber security advancement.

Nancy Rodriguez, PhD
As the federal government’s lead agency for forensic science research and development, as well as the administration of programs to facilitate technical assistance, the National Institute of Justice (NIJ) has a prominent role in directing efforts to address the needs of the forensic science community. Using various sources such as the Report issued by the National Academy of Sciences (NAS) in 2009 — Strengthening Forensic Science in the United States: A Path Forward — NIJ has made an unprecedented investment to help strengthen forensic science in the United States. The NIJ remains committed to a strategy that couples rigorous research and development with technical assistance to serve the forensic science community. This approach provides the forensic science field with evidence-based research to create long-term success and ultimately improve public safety.

Kenneth G. Furton, PhD
Historically, higher education has been focused on disseminating knowledge and creating new knowledge, but increasingly, universities are becoming hubs for innovation and entrepreneurship and helping to drive the economic development of the communities they serve. This trend can be transformative for forensic science as the translational research occurring in major academic forensic programs is spurring advances in many fields of forensic science that will impact the courtroom as well as the corporate boardroom. This presentation will highlight how academic forensic scientists have and will transform the field of forensic science in a variety of areas with a focus on detection science where trace detection of evidence and odors left from removed evidence is having a major impact on forensic science.

Jed S. Rakoff, JD
In the Anglo-American legal system, change tends to be incremental, with judges attempting to fit new situations and advances into the framework of previously developed legal principles; however, when it comes to technological advances, judges who rarely have much technological training or knowledge often find this difficult to do. This presentation will examine some of the difficulties judges have faced in dealing with technological advances in the forensic sciences and will suggest ways some of the problems of translating these advances into useable legal form might be better approached.
S1 Innovative Science — How Advances in Technology Transform Forensic (continued) Science

John M. Collins, Jr., MA
When forensic science professionals think of technology, their attention understandably gravitates toward innovations that relate directly to casework and the testing of evidence. But technology is not only about scientific practice. Managerial technology and innovations dealing with the administration of forensic science organizations are equally important. In this session, attendees will be introduced to the concept of administrative technologies and the way innovation can improve how forensic science organizations are managed. By examining some best-in-class practices from both inside and outside the forensic sciences, attendees will come to appreciate how technology can be leveraged in forensic science, not just for the testing of evidence, but in the management of people, customers, and organizational cultures.

Richard A. Guerrieri, MS
Forensic DNA analysis through Capillary Electrophoresis (CE) -based typing of Short Tandem Repeats (STR) is a well-established and successful technology with widespread technical acceptance. The emergence of Next Generation Sequencing (NGS) introduces opportunities for enhanced discrimination within mixtures and human remains, as well as identity, physical appearance, and ancestry relationships. NGS also introduces levels of change which are disruptive to present forensic laboratory approaches and will require modifications of established quality assurance practices and the development of new measures. NGS experiences in this area will be shared and implementation strategies for consideration by the forensic DNA community will also be discussed.

Kurt B. Nolte, MD
Advanced radiologic imaging modalities such as Computed Tomography (CT) scanners are transforming the practice of forensic pathology. CT allows for the rapid acquisition of a full volume of morphologic data that can be reconstructed in multiple planes as well as 3D perspectives. These images are detailed and can cover the full body. Research performed at the New Mexico Office of the Medical Investigator (OMI) has demonstrated that while both CT and autopsy have limitations in recognizing disease and injuries, they can be complementary in achieving the fullest diagnostic data set. This research has also demonstrated that in certain decedent cohorts, CT can supplant autopsy by developing an adequate diagnostic data set for accurately determining the cause of death. The OMI CT scanner is used daily by forensic pathologists to triage cases and to supplement and supplant autopsy.

Christina G. Hayes, BS
In the world of chemistry, there is a vast array of instrumentation that is available for use, yet in forensic drug chemistry, generally only a few instruments are utilized. By exploring the new technology available and comparing it to the standard instrumentation used with specific groups of drugs, it is possible to expand the drug chemists’ repertoire for drug analysis.

Amanda R. Hale, MA
Digital imaging innovation is integral to advancing methods in forensic anthropology. The application of imaging techniques such as Computed Tomography (CT), 3D laser scanning, and digitization has already increased accuracy when performing putative identifications, ancestry estimation, and juvenile aging. In addition, digital imaging has increased database reference material used for both research and application. In combination with advanced statistical techniques, these provide a powerful new avenue for developing more precise methods in skeletal biology.

Zeno J. Gerdts, PhD
The development of digital and multimedia sciences is rapid due to the growth of data and the wide range of devices where digital evidence can be found; smartphones and most electronic devices now have digital storage that communicates with networks. Several sources state that 90% of the digital data has been produced during the last two years. Due to these rapid developments of big data, new techniques can be used and validation is crucial. Several developments in facial and image recognition based on deep learning algorithms have seen good progress and can be used in practice to assist forensic casework. New techniques on weak signal analysis will cause more possibilities for predictive methods. Also, if data is not accessible due to encryption, techniques for analyzing data streams can also help in cyber forensics cases.
S1 Innovative Science — How Advances in Technology Transform Forensic Science (continued)

Program:

8:30 a.m. - 8:35 a.m.  Opening Remarks
  Jeri D. Ropero-Miller, PhD

8:35 a.m. - 9:05 a.m.  Keynote Presentation
  Howard A. Schmidt, MS

9:05 a.m. - 9:25 a.m.  Strengthening Forensic Science at the National Institute of Justice
  Nancy Rodriguez, PhD

9:25 a.m. - 9:45 a.m.  Transformation of Academic Forensic Science From Knowledge Creators and Disseminators to Catalysts of Innovation, Entrepreneurship, and Economic Development
  Kenneth G. Furton, PhD

9:45 a.m. - 10:05 a.m.  Why Judges Fear Technology
  Jed S. Rakoff, JD

10:05 a.m. - 10:15 a.m.  Panel Discussion
  Jeri D. Ropero-Miller, PhD; Howard A. Schmidt, MS; Nancy Rodriguez, PhD; Kenneth G. Furton, PhD; Jed S. Rakoff, JD

10:15 a.m. - 10:45 a.m.  Break

10:45 a.m. - 11:05 a.m.  A Forensic Laboratory Management Perspective
  John M. Collins, Jr., MA

11:05 a.m. - 11:25 a.m.  Quality Assurance Considerations for Next Generation Sequencing
  Richard A. Guerrieri, MS

11:25 a.m. - 11:45 a.m.  Transforming the Practice of Forensic Pathology: Advanced Radiologic Imaging Technology
  Kurt B. Nolte, MD

11:45 a.m. - 11:55 a.m.  YFSF Young Forensic Scientists — Exploring the Technology That Can Be Used in Drug Chemistry
  Christina G. Hayes, BS

11:55 a.m. - 12:05 p.m.  YFSF Young Forensic Scientists — Digital Imaging in Forensic Anthropology: Exploration of Existing Techniques
  Amanda R. Hale, MA

12:05 p.m. - 12:25 p.m.  Digital and Multimedia Services
  Zeno J. Geradts, PhD

12:25 p.m. - 12:45 p.m.  Panel Discussion
  Jeri D. Ropero-Miller, PhD; John M. Collins, Jr., MA; Richard A. Guerrieri, MS; Kurt B. Nolte, MD; Christina G. Hayes, BS; Amanda R. Hale, MA; Zeno J. Geradts, PhD
YOUNG FORENSIC SCIENTISTS FORUM

Pre-Registration Required — $100

S2  Viva La Forensics
Tuesday, February 23, 2016 — 8:30 a.m. - 8:00 p.m.  
6.25 CE Hours

President:
Lara Frame-Newell, MA
Richmond, VA

Secretary:
Brianna B. Bermudez, BS
Okemos, MI

Program Committee

Program Chair:
Sarah J. Ellis, MS
North Carolina State Crime Laboratory
Raleigh, NC

Program Co-Chair:
Amanda R. Hale, MA
North Carolina State University
Raleigh, NC

BYOS Chair:
Betzaida L. Maldonado, BS
Atlanta, GA

YFSF Poster Session Chair:
Alicja K. Lanfear, PhD
Middle Tennessee State University
Murfreesboro, TN

Breakfast Chair:
Christina G. Hayes, BS
St. Louis Metropolitan Police Department
St. Louis, MO

Long Term Planning Committee Representative:
Lindsey E. Saunders, BS
Washington, DC

Financial Support Liaison Chair:
Lindsay Saylors
Chicago, IL

Educational Objective(s): After attending this presentation, attendees will have a better understanding of casework and solving cold cases within the fields of forensic science. Additionally, attendees will better understand how to create a resume and how to apply and interview for a job.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by demonstrating cases where forensic science was key to case resolution. This will show attendees what real casework is and how real-life cases are solved. Cases will be presented from beginning to end.

Each year at the American Academy of Forensic Sciences (AAFS) Annual Scientific Meeting, the Young Forensic Scientists Forum (YFSF) provides a program for students and forensic scientists with less than five years of professional experience. The session allows attendees to interact with peers as well as with the professional speakers and to build professional relationships that foster growth and mentorship opportunities. Special session topics provide attendees with a broad overview of the many opportunities in the field of forensic science. In addition to the special session, the YFSF session offers two opportunities for young forensic scientists to present their own work or research: the YFSF Bring Your Own Posters (BYOP) Session and the YFSF Bring Your Own Slides (BYOS) Session. The Forensic Sciences Foundation (FSF) Emerging Forensic Scientists Award winner is also invited to present her award-winning paper during this special session.

For the AAFS 68th Annual Scientific Meeting in Las Vegas, NV, the YFSF Special Session will present Viva La Forensics! The special session will be held on Tuesday, February 23, 2016, and will include speakers from many of the AAFS sections who will discuss cases where forensic science was key to solving the case. Through the presentations, attendees will learn how forensic science can be used to change the outcome of a case. Attendees will be exposed to the real life of a forensic scientist and to actual witness testimony.

Following the Tuesday session, the YFSF BYOP Session will be presented in the evening, giving young professionals the opportunity to showcase current cases and research being worked on in a poster format.
S2  Viva La Forensics (continued)

Speakers

Joseph Almog, PhD  
Hebrew University  
Casali Inst of Applied Chem  
Jerusalem, ISRAEL

Gary M. Berman, DDS  
Belleville, MI

Helmut G. Brosz, BASc, P.Eng  
Brosz Forensic Services  
Markham, ON CANADA

Joan A. Bytheway, PhD  
Sam Houston State University  
College of Criminal Justice  
Huntsville, TX

Kelsey A. Carpenter, BS  
Howell, MI

Federica Collini, MD  
Milan, ITALY

J.C. Upshaw Downs, MD  
GBI ME  
Savannah, GA

Cheryl D. Hunter  
AAFS Staff  
Colorado Springs, CO

Ja’Neisha Hutley, MS  
Philadelphia, PA

Nikolas P. Lemos, PhD  
OCME, Forensic Lab Division  
Hall of Justice, North Terrace  
San Francisco, CA

Raymond G. Miller, DDS  
Buffalo, NY

Linton Mohammed, PhD  
Forensic Science Consultants, Inc  
Burlingame, CA

John Nixon, CEng, MBA  
ARC  
Bippus, IN

Alan A. Price, MA  
University of Northern Colorado  
Greeley, CO

Claire E. Shepard, MS  
La Delta Community College  
Monroe, LA

Noelle J. Umback, PhD  
OCME  
Dept of Forensic Biology  
New York, NY

John A. Williams, PhD  
Western Carolina University  
Anthropology and Sociology  
Cullowhee, NC

The annual YFSF BYOS Session takes place the evening of Wednesday, February 24, 2016, and will include presentations from students and young professionals. YFSF does not require presenters of YFSF BYOS and BYOP Sessions to be members of AAFS and does not require they attend the special session, but it is encouraged that they do so. The program will conclude on Thursday, February 25, 2016, with the annual YFSF Breakfast Session which includes a résumé review panel. Attendees of the breakfast session must be registered for the YFSF Special Session.

Program:

8:30 a.m. - 8:45 a.m.  2016 YFSF Introduction and Speaker Welcome  
Lara Frame-Newell, MA

8:45 a.m. - 9:00 a.m.  AAFS Membership  
Cheryl D. Hunter

9:00 a.m. - 9:15 a.m.  Dental Identification Seals the Case  
Raymond G. Miller, DDS
## YOUNG FORENSIC SCIENTISTS FORUM

**Pre-Registration Required — $100**

**S2  Viva La Forensics (continued)**

### Program cont.

<table>
<thead>
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<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>9:15 a.m.</td>
<td>Human Bitemark Document and Analysis in a Child Abuse Case</td>
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<td><em>Gary M. Berman, DDS</em></td>
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<td>9:30 a.m.</td>
<td>Markers of Occupational Stress and Skeletal Identification: A Missing Person Case Study</td>
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<td><em>John A. Williams, PhD</em></td>
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<td>10:00 a.m.</td>
<td>Developments in Detecting Recent Holding of Firearms</td>
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<td><em>Joseph Almog, PhD</em></td>
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<td>10:20 a.m.</td>
<td>Break</td>
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<td>10:35 a.m.</td>
<td>The Contribution of Taphonomic Research to Forensic Casework</td>
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<td><em>Joan A. Bytheway, PhD</em></td>
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<td>11:00 a.m.</td>
<td>David Tarloff: A Case Study at the Intersection of Criminalistics, Psychiatry, and the Legal System</td>
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<td><em>Noelle J. Umback, PhD</em></td>
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<td>11:30 a.m.</td>
<td>Electrical Homicide or...?</td>
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<td><em>Helmut G. Brosz, BASc, PEng</em></td>
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<td>11:45 a.m.</td>
<td>Accident or Lovers’ Quarrel?</td>
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<td><em>John Nixon, CEng, MBA</em></td>
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<td>12:00 p.m.</td>
<td>Lunch</td>
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<td>1:30 p.m.</td>
<td>Document Examination — Not Just Handwriting</td>
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<td><em>Linton Mohammed, PhD</em></td>
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<td>2:00 p.m.</td>
<td>Prosecutorial Evidence</td>
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<td><em>Alan A. Price, MA</em></td>
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<td>2:30 p.m.</td>
<td>Terror on Kensington Avenue</td>
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<td><em>Ja’Neisha Hutley, MS</em></td>
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<td>3:00 p.m.</td>
<td>Paternal Filicide for Spousal Revenge: The Male Side of Medea’s Syndrome in the Italian Population Over the Last Ten Years</td>
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<td><em>Federica Collini, MD</em></td>
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<td>3:15 p.m.</td>
<td>Break</td>
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<td>3:30 p.m.</td>
<td>Nail Them With Good Forensics: The Use of Alternative Biological Specimens in Forensic Toxicology</td>
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<td><em>Nikolas P. Lemos, PhD</em></td>
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<td>4:00 p.m.</td>
<td>Forensic Pathology — The Medicine of Forensic Science and the Science of Forensic Medicine</td>
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<td><em>J.C. Upshaw Downs, MD</em></td>
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<td>4:30 p.m.</td>
<td>Police Officer Retaliation, or Not?</td>
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<td><em>Claire E. Shepard, MS</em></td>
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Pre-Registration Required — $100

S2 Viva La Forensics (continued)

Program cont.

4:55 p.m. - 5:00 p.m. Closing Remarks
Sarah J. Ellis, MS; Amanda R. Hale, MA

7:00 p.m. - 8:00 p.m. YFSF Poster Session

Wednesday

February 24, 2016 — 6:00 p.m. – 7:00 p.m.

YFSF Bring Your Own Slides

Thursday

Young Forensic Scientists Forum Annual Breakfast
(Registration for the Tuesday Session Is Required to Attend the YFSF Breakfast Session)

February 25 — 7:00 a.m. – 10:00 a.m.

Ask the Expert

As is the tradition, the YFSF Breakfast Session focuses on developing professional skills for the next generation; however, this year will be a little different. Instead of planned speakers, members of various AAFS sections have been asked to participate in a Q&A Panel to help facilitate conversation between young professionals and professionals already established in their field. After the panel, attendees will have the opportunity to receive résumé assistance and feedback from AAFS members.

The special session provides students, young professionals, and AAFS members with a way to foster career-long relationships. The main goal of the YFSF is to encourage mentorship between young and veteran forensic scientists. Attendees are encouraged to apply for membership in the AAFS and are given guidance on the many opportunities available to aid in career enrichment.

Program:

7:00 a.m. - 7:45 a.m. YFSF Breakfast and Introductions
Christina G. Hayes, BS; Kelsey A. Carpenter, BS

7:45 a.m. - 9:00 a.m. Panel Discussion: Q&A

9:00 a.m. - 10:00 a.m. Résumé Review Panel
Pre-Registration Not Required — Open to all Meeting Attendees

Accreditation of Forensic Science Academic Programs Through the AAFS Forensic Science Education Programs Commission

Tuesday
February 23, 2016 — 8:30 a.m. - 12:45 p.m.

Educational Objectives: Upon completion of this session, the participant should be able to understand the process of accreditation through the AAFS FEPAC mechanism and be able to participate in the process as a reviewer of academic programs. Attendees from academic programs will also learn about the process of accreditation from different perspectives.

Chair: Matthew R. Wood, MS
Ocean County Sheriff’s Department
Forensic Science Laboratory
Toms River, NJ

Commissioner: Tracey Dawson Cruz, PhD
Virginia Commonwealth University
Richmond, VA

Commissioner: Daniel E. Katz, MFS
Maryland State Police
Forensic Science Division
Pikesville, MD

Program Description: This session has been developed to assist academic institutions offering undergraduate and graduate degree programs in forensic science and forensic digital evidence to prepare for the accreditation process through the Forensic Science Education Programs Accreditation Commission (FEPAC). The session will also assist future on-site evaluators (academic and practitioners) to prepare for on-site evaluations of academic programs. Successful completion of this one-day session will qualify participants for consideration to serve as on-site evaluators for FEPAC in the future (please note that participants must still meet other FEPAC requirements such as membership in the AAFS and designation as either a practitioner or academician).

The FEPAC is a standing committee of the AAFS with a membership that includes five educators, five forensic laboratory directors, and a public member as voting members. The mission of the FEPAC is to maintain and enhance the quality of forensic science education through a formal evaluation and recognition of college-level academic programs. The primary function of the committee is to develop and maintain standards and administer an accreditation program that recognizes and distinguishes high-quality undergraduate and graduate forensic science programs. Forty academic programs have successfully completed the accreditation process since 2003. Additional information on FEPAC can be found on the FEPAC website: http://fepac-edu.org.

Program:

8:30 a.m. - 9:00 a.m.  Introduction and Welcoming Remarks
Matthew R. Wood, MS

9:00 a.m. - 9:30 a.m.  Module 2: Overview of FEPAC Process, Policies, and Procedures
Daniel E. Katz, MFS

9:30 a.m. - 10:00 a.m.  Module 3: Review of Undergraduate Standards
Tracey Dawson Cruz, PhD

10:00 a.m. - 10:15 a.m.  Break

10:15 a.m. - 10:45 a.m.  Module 4: Review of Graduate Standards
Tracey Dawson Cruz, PhD
### FEPAC SESSION

*Pre-Registration Not Required — Open to all Meeting Attendees*

Accreditation of Forensic Science Academic Programs Through the AAFS Forensic Science Education Programs Commission (continued)

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**Program cont.**

<table>
<thead>
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<th>Time</th>
<th>Module</th>
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</table>
| 10:45 a.m. - 11:15 p.m. | Module 5: Questions and Answers  
Matthew R. Wood, MS; Daniel E. Katz, MFS; Tracey Dawson Cruz, PhD |
| 11:15 p.m. - 11:45 a.m. | Module 6: The Role of the On-Site Evaluator  
Daniel E. Katz, MFS |
| 11:45 a.m. - 12:15 p.m. | Module 7: Scenario and Evaluation  
Matthew R. Wood, MS; Daniel E. Katz, MFS; Tracey Dawson Cruz, PhD |
| 12:15 p.m. - 12:45 p.m. | Questions and Answers  
FEPAC Commissioners and Director of Accreditation |
EVENING SESSION

Pre-Registration Not Required — Open to all Meeting Attendees

The American Academy of Forensic Sciences (AAFS) Standards Development Process

Tuesday, February 23 — 7:00 p.m. - 9:00 p.m.

Speakers

Chair:
Jennifer F. Limoges, MS
New York State Police
Forensic Investigation Center
Albany, NY

Co-Chair:
Mary C. McKiel, PhD
The McKiel Group, LLC
Arnold, MD

Co-Chair:
Lucy A. Davis, BHS
LDH Consultants
Pikeville, KY

Bradford J. Wing
Secretariat
AAFS Standards Board
Washington, DC

Educational Objective(s): After attending this presentation, attendees will understand the standards development process and how the AAFS Standards Development Organization (SDO) process will work.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by educating attendees on how the AAFS will be involved in generating American National Standards for the forensic sciences.

The development of standards and guidelines for forensic science has become a priority within the criminal justice community. The National Commission of Forensic Sciences (NCFS) and the National Institute of Standards and Technology (NIST) Organization of Scientific Area Committees (OSAC) are actively pursuing this goal. Many AAFS members are leaders in the development of these documents. As one of the largest and most diverse forensic science organizations in the world, it is appropriate that AAFS share its members’ expertise to ensure that standards are set by the forensic science community itself. AAFS has completed its application to the American National Standards Institute (ANSI) to become an accredited SDO. A wholly owned subsidiary corporation entitled the AAFS Standards Board, LLC has been developed to provide the mechanics of the Academy’s SDO activities. As an accredited SDO, AAFS will be able to coordinate the approval of proposed standards to become American National Standards (ANS).

Numerous industries, government agencies, and consumers outside of forensic science rely on voluntary consensus standards to direct them in their processes. The National Technology Transfer and Advancement Act (NTTAA) of 1995 and the Office of Management and Budget Circular A119 requires federal agencies to adopt private sector standards, particularly those developed by SDOs, wherever possible in lieu of creating proprietary, non-consensus standards. While there are many accredited SDOs supplying forensic-specific standards, the overall process of standard development is not always clearly understood. All ANSI-accredited SDOs must follow the “ANSI Essential Requirements: Due Process Requirement for American National Standards.” These requirements focus on ensuring the standards development follow a procedure that is open to all interested parties, is balanced to allow parties equal participation, no individual or group can dominate the procedure, and that due process including mandatory public review and comments is allowed. All comments received concerning a proposed standard must be addressed prior to final vote of the standard. The Essential Requirements also demand that final consensus must be achieved before a standard is allowed to go forth.

The AAFS SDO process will be run by the Academy Standards Board (ASB). The ASB will conduct their work in a manner that is open to public scrutiny and provide every stakeholder an opportunity to be heard, without dominance by any party, in compliance with national and international standard development procedures. The ASB will appoint a Consensus Body technical committee for each proposed standard. The Consensus Bodies will be comprised of volunteers from relevant and interested parties both within the
The American Academy of Forensic Sciences (AAFS) Standards Development Process (continued)

Academy and the forensic science community as a whole. These Consensus Bodies will be responsible for creating and approving consensus standards to be submitted to ANSI via the ASB for approval as an American National Standard. The ASB will conduct this standards development in accordance with the requirements of ANSI’s Essential Requirements for balance, lack of dominance, due process, and consensus. The Consensus Bodies will consider all public comments, views and objections to ballots, and resolve all negative comments prior to approving the proposed standard. The ASB process will be open and balanced and will encourage public comment.

This presentation will provide an overview of how the standards development process works and detail the specifics of the Academy Standard Board’s process including a specific outline of each step in the ASB standard development procedures. Issues such as how balance is achieved within a Consensus Body, how interested parties are defined, and resolution of public comments will be discussed. Information will also be provided on how AAFS members and the forensic science community can participate in the ASB process and the Consensus Bodies. Time for questions and discussion will allow participants to fully understand the standard development process and the Academy’s commitment to ensuring the quality of the standards development.
Las Vegas 2016

Pre-registration Not Required — Open to all Meeting Attendees

Wednesday
February 24, 2016 — 8:00 a.m. - 8:45 a.m.

The Academy Cup
A Quiz Game to Test Your Knowledge of AAFS

The AAFS 2016 Academy Cup will take place on Wednesday, February 24, 2016, before the Plenary Session. Teams meet at 8:00 a.m., an hour before the Plenary Session, for instructions and team strategy. The game will start at 8:15 a.m. and consists of multiple-choice and true-or-false questions projected onto a screen to test each section’s knowledge.

Each section’s team is comprised of up to 11 members, including Past President/Past Vice President, Board Member and/or Officer, Chair, Secretary, YFSF volunteers, and the section leader’s other strategic choices. The YFSF volunteers will be assigned to sections on Tuesday at the YFSF Special Session. Teams will have 15 minutes to answer questions. Once all sections have their answers turned in, the answers to the questions will be presented.

The winning team will be announced and the trophy presented at the AAFS Annual Business Meeting at 4:15 p.m. Teams should be present at the Annual Business Meeting to find out who won and be available at the conclusion to have a group photo taken.

If you just want to test your knowledge, the room is open for everyone. Feel free to join your section behind your flag to help cheer them on!

Points of Contact:
Chair: Laura L. Liptai, PhD
liptai@biomedicalforensics.com
Co-Chair: Carla M. Noziglia, MS
Co-Chair: Carol E. Henderson, JD
Co-Program Chair: Andrew M. Baker, MD
Co-Plenary Chair: Matthew R. Wood, MS
YFSF & Teams: Lara Frame-Newell, MA

Academy Cup Team Leaders:
Anthropology: Phoebe R. Stubblefield, PhD
Criminalistics: John J. Lentini, BA
Digital & Multimedia Sciences: Rhesa G. Gilliland, MS
Engineering Sciences: John Nixon, MBA
General: Claire E. Shepard, MS
Jurisprudence: Christine Funk, JD
Odontology: Iain A. Pretty, DDS, PhD
Pathology/Biology: Kathryn H. Haden-Pinneri, MD
Psychiatry & Behavioral Science: Karen B. Rosenbaum, MD
Questioned Documents: Thomas W. Vastrick, BS
Toxicology: Sarah Kerrigan, PhD

Program:
8:00 a.m. - 8:15 a.m. Instructions, Introductions of Team Leaders and Teams Strategize
8:15 a.m. - 8:30 a.m. PowerPoint® Questions and Team Answer Sheet Turned In
8:30 a.m. - 8:45 a.m. PowerPoint® Answers
PLENARY SESSION

Pre-Registration Not Required — Open to all Meeting Attendees

Wednesday

February 24 — 9:00 a.m. - 11:00 a.m.          2.0 CE Hours

Welcoming Remarks

Transformation: Embracing Change
An International Panel Discussion on the Impact of Recent Forensic Science Initiatives and the Response of the Global Community

Victor W. Weedn, MD, JD
President
American Academy of Forensic Sciences
George Washington University
Department of Forensic Sciences
Washington, DC

Plenary Session Chair:
Matthew R. Wood, MS
Ocean County Sheriff’s Department
Forensic Science Laboratory
Toms River, NJ

Plenary Session Co-Chair:
Joanna L. Collins, MFS
Linus Consulting Group, LLC
San Antonio, TX

Moderator:
John M. Butler, PhD
National Institute of Standards and Technology
Gaithersburg, MD
PLENARY SESSION

Pre-Registration Not Required — Open to all Meeting Attendees

Transformation: Embracing Change
An International Panel Discussion on the Impact of Recent Forensic Science Initiatives and the Response of the Global Community (continued)

Speakers

Willie E. May, PhD
National Institute of Standards and Technology
Gaithersburg, MD

Gillian Tully, PhD
United Kingdom Home Office
London, UNITED KINGDOM

Alastair Ross, AM
National Institute of Forensic Science, Retired
Docklands, Victoria, AUSTRALIA

Reinout Woittiez, PhD
Netherlands Forensic Institute
The Hague, NETHERLANDS

Sally Quillian Yates, JD
U.S. Department of Justice
Washington, DC
Overview:
In the 2009 National Academy of Sciences (NAS) Report, Strengthening Forensic Science in the United States: A Path Forward, the National Research Council (NRC) outlined a dozen recommendations and called for major reforms of forensic science meant to increase the reliability and validity of scientific evidence, analysis, and testimony. Two initiatives, the National Commission on Forensic Science (NCFS) and the Organization for Scientific Area Committees (OSAC) were established jointly by the United States Department of Justice (DOJ) and the National Institute of Standards and Technology (NIST) to address the recommendations of the National Science and Technology Council’s Subcommittee on Forensic Science and to generate guidance for professional forensic practitioners. Recently, the American Academy of Forensic Sciences (AAFS) applied to the American National Standards Institute (ANSI) to become an accredited Standards Developing Organization (SDO) in order to assist the OSAC subcommittees in the development of forensic science standards.

The field of forensic science is at a transformative time. Great efforts are being made to promote universal laboratory accreditation, to encourage analyst certification, to develop standards, and to reduce and eliminate sources of bias in evidence examination. The time has come for forensic practitioners to embrace change for the greater good of the field.

The 2016 AAFS Plenary Session will present an international panel of distinguished speakers who will discuss the impact of the NAS Report, the initiatives within the United States, and the global response to strengthening the field of forensic science. The forensic science community will hear from these policy leaders regarding the transformation taking place within their respective countries and forensic service providers.

Program:

9:00 a.m. - 9:05 a.m.  Welcoming Remarks  
**AAFS President Victor W. Weedn, MD, JD**

9:05 a.m. - 9:25 a.m.  The Department of Justice’s (DOJ’s) Role in Strengthening Forensic Science  
**Sally Quillian Yates, JD**

9:25 a.m. - 9:45 a.m.  Reconnecting Forensic Science in the Netherlands  
**Reinout Woittiez, PhD**

9:45 a.m. - 10:05 a.m.  Moving Forward in Forensic Science: The Role of Quality Standards  
**Gillian Tully, PhD**

10:05 a.m. - 10:25 a.m.  Forensic Science: Specialization vs. Generalization  
**Alastair Ross, AM**

10:25 a.m. - 10:45 a.m.  National Institute of Standards and Technology’s (NIST’s) Program in Forensic Science: What We Do and Why You Should Care  
**Willie E. May, PhD**

10:45 a.m. - 11:00 a.m.  Panel Discussion  
**Victor W. Weedn, MD, JD; Willie E. May, PhD; Alastair Ross, AM; Gillian Tully, PhD; Reinout Woittiez, PhD; Sally Quillian Yates, JD**
Pre-Registration Required — $50

Monday

#1  Death in a Bathtub: The Defense of Drew Peterson
February 22 — 7:00 a.m. - 8:30 a.m.  .75 CE Hour

Chair:
Jeffrey M. Jentzen, MD
University of Michigan
Ann Arbor, MI

Co-Chair:
Mary E.S. Case, MD
St. Louis, MO

Educational Objective(s): After attending this presentation, participants will better understand the courtroom procedures for admission of evidence and expert witness testimony. In addition, attendees will learn the factors involved in injury identification and analysis with an emphasis on the investigation of drowning.

Impact on the Forensic Science Community: This presentation will impact the forensic science community through the multidisciplinary reconstruction of one of the most riveting cases in recent American trial history. The presenters will detail the factors and evidence that influenced their decision process and assist future prosecutors, judges, and death investigators in the courtroom procedures.

In 2004, the body of Kathleen Savio, the third wife of policeman Drew Peterson, was found dead in the bathroom of her suburban Chicago home. Her body was found lying in an empty bathtub with a small laceration to the left back of the scalp. Froth oozed from her nostrils. There were some bruises to her left side. Toxicology analysis was negative for intoxicating drugs and alcohol. The initial investigation concluded that the death was the result of drowning and the coroner certified the death accidental. In 2007, Peterson’s fourth wife, Stacey Peterson, disappeared — her body was never recovered. In light of Stacey Peterson’s disappearance, authorities re-opened the investigation into Savio’s death. Savio’s body was disinterred in 2007 and re-examined in two separate autopsies performed by a group of forensic pathologists. The pathologist identified areas of hemorrhage over the left hip region, not appreciated at the initial examination. In light of the additional evidence, the experts concluded that Savio’s death was a homicide.

In criminal cases, there is a constitutional dimension to hearsay. The Sixth Amendment gives criminal defendants the right to confront witnesses; since a hearsay statement is made out of court, there is no opportunity for the defendant’s criminal defense attorney to cross-examine the witness, and thus no confrontation. This means hearsay statements are harder to get into evidence even via the traditional hearsay exceptions when they are used against a criminal defendant.

Prosecutors collecting evidence identified the fact that Stacey Peterson had confided with family and friends implicating her husband, Drew Peterson, as her murderer. Unable to question the dead witness, Stacey, prosecutors petitioned the Illinois legislature to create a new exemption to the hearsay rule, which became known as “Drew’s Law.” The law allowed for the admission of evidence in cases where the witness was not available to testify due to the actions of the defendant. Meanwhile, defense experts unsuccessfully attempted to exclude testimony related to Stacy Peterson’s disappearance in a 2010 evidentiary trial.

The trial into the death of Kathleen Savio began in August of 2012. For more than six weeks of grueling testimony, the media provided the day-to-day revelations of the case. Five forensic pathologists testified in the case that called into question the cause and manner of death. All the pathologists agreed that Savio died of drowning. The pathology testimony rested on questions of the pathological findings of concussion, postmortem artifacts, orientation of injuries, and causes of accidental drowning.

In light of new legislation, the prosecution was allowed to present incriminating verbal testimony against Drew Peterson. Peterson was eventually convicted and sentenced to 38 years in prison for his role in death of Kathleen Savio. The jurors said that the most
convincing testimony was the hearsay statements allowed into evidence under the new “Drew’s Law.” Prosecutors successfully fought to have statements made by Stacy Peterson and Savio to acquaintances admitted into evidence. In February 2013, the defense was denied a new trial. The trial left numerous questions unanswered and created a precedent of allowing indefensible hearsay testimony.

This presentation will provide courtroom presentation of evidence, expert testimony, the role of the medical witnesses, and criminalistic’s evaluation in the trial of Drew Peterson. Participation of attendees is encouraged and will bring to life the tension of the courtroom in this precedent-setting prosecution.
Tuesday

#2  Death From a Distance: The Etiology of Serial Sniper Homicides

February 23 — 7:00 a.m. - 8:30 a.m.  .75 CE Hour

Chair:  Robert J. Morton, MS  Fauquier County Sheriff’s Office  Warrenton, VA

Co-Chair:  Mary B. Collins-Morton, MS  FBI Academy  Quantico, VA

Educational Objective(s):  After attending this presentation, attendees will better understand the unusual nature of serial sniper homicides and the difficulties faced by law enforcement, forensic specialists, and prosecutors in dealing with these cases.

Impact on the Forensic Science Community:  This presentation will impact the forensic science community by highlighting the etiology of serial sniper homicides, the problems involved in determining case linkage between the different shootings, the circumstantial nature of the forensic evidence, and the difficulties involved in the prosecution of these infrequent crimes.

This presentation is designed to provide a historic overview of serial sniper homicides within the context of murder in general and serial murder, specifically. This presentation will also provide the statistical instances of serial sniper homicides compared to other types of murders as well as outline the investigative and forensic difficulties faced by law enforcement and the forensic community when dealing with one of these rare cases. Additionally, an extensive case study will be presented regarding a serial sniper case that took more than ten years to successfully convict the offender.

The Federal Bureau of Investigation’s (FBI’s) National Center for the Analysis of Violent Crime (NCAVC) is routinely consulted by federal, state, and local authorities in a variety of bizarre and repetitive violent crimes, especially homicides. NCAVC assistance was requested by local authorities regarding the case of a serial sniper. The four shooting incidents occurred during a highly contested divorce proceeding involving the offender. The first and second shootings were directed at the lawyer representing the offender’s wife and the judge presiding over the divorce hearing, both of whom were shot at while inside their residences. Both were uninjured. The lawyer representing the offender’s wife was shot at a second time while in his law office. The bullet struck him in the left eye, causing the loss of the eye; however, he survived the attack. The last attack occurred seven years later and targeted the male coworker with whom the offender’s wife had previously had an affair. The victim, who was now a married father of three, was shot and killed in the yard of his residence. The laboratory determined the recovered bullet fragments from the shootings were consistent with a .22 caliber centerfire bullet and were fired through a similar rifle.

The investigation quickly focused on the offender; however, a series of search warrants failed to locate the specific rifle or similar ammunition involved in the attacks. The lack of evidence emboldened the offender and he began a public campaign professing his innocence and crusading against the “corrupt” criminal justice system. After one of the search warrants had been served, the offender placed a written response on the front porch of the judge who had signed the warrant, even though he lived in a different jurisdiction located more than an hour away. Additionally, the offender became active in the local political party and attempted to exert pressure on the local authorities to stifle the investigation.

Based upon the highly charged nature of this case, the “fear factor” generated by the shootings, the defiant demeanor displayed by the offender, and the lack of direct evidence, the police department requested assistance from the FBI. Both the local FBI office and the NCVAC provided assistance. During the joint consultation with the NCAVC, it was decided to convene a grand jury to address the four shootings. The strategy involved calling the offender as the first witness and outlining the legal ramifications of contacting and/or intimidating other witnesses testifying before the grand jury. The offender subsequently interfered with several witnesses, was
charged and convicted of four counts of witness tampering, and was given a 21-year sentence. He was also indicted on numerous charges for the four sniper shootings, including murder and attempted murder.

The complex trial lasted more than two months. While there was no direct forensic evidence linking the offender, a variety of circumstantial evidence was presented outlining the unusual nature of the series of shootings, the relationship of the victims who were targeted, the offender’s skill with weapons, and the various statements made by the offender. During the trial, numerous witnesses were called including forensic experts, investigators, the shooting victims, the offender’s ex-wife, a member of the NCAVC, and a police department Special Weapons And Tactics (SWAT) sniper. The jury found the offender guilty of 31 separate counts and sentenced him to a life sentence plus 288 years.

This case highlights the complex nature of sniper murders, the value of circumstantial evidence, and the benefit of forensic experts, investigators, subject-matter experts, and prosecutors working cooperatively.
#3  A Primer on the Structure and Activity of the National Institute of Standards and Technology’s (NIST’s) Organization of Scientific Area Committees (OSAC)

February 24 — 7:00 a.m. - 8:30 a.m.  .75 CE Hour

Chair:
Barry K. Logan, PhD
NMS Labs/CFSRE
Willow Grove, PA

Co-Chair:
Marc A. LeBeau, PhD
FBI Laboratory
Quantico, VA

Co-Chair:
Sally S. Aiken, MD
Spokane, WA

Co-Chair:
Mark D. Stolorow, MS, MBA
NIST Special Programs Office
Organization of Scientific Area Committees
Gaithersburg, MD

Co-Chair:
Gregory G. Davis, MD
Jefferson County MEO
Birmingham, AL

Co-Chair:
Christian G. Westring, PhD
Willow Grove, PA

Educational Objective(s): After attending this presentation, participants will be able to discuss the structure and activities of the various committees and subcommittees that comply with the new NIST OSAC process established to develop standards and guidelines for the professional practice of forensic science.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by introducing the OSAC process, its accomplishments, and its plans to the forensic science community, AAFS members, and meeting attendees. Information will be presented to assist attendees in becoming involved with and contributing to the process.

This presentation is designed to provide a brief introduction to the new and important structure created and driven by the forensic science community in partnership with NIST to develop standards and guidelines for professional practice of forensic science. If you have heard about this new organization and its assignment but want to better understand how it works, its potential to create systemic change in the forensic sciences, and opportunities for everyone to be involved; this is the session for you.

In 2013, NIST, in consultation with the Department of Justice (DOJ), began the process of seeking input from the forensic science community to create a registry of standards that represented the priorities and consensus of the practitioners of forensic science, but that was also subject to review, scrutiny, and input from other stakeholders including the criminal justice community (lawyers and judges), researchers, statisticians, and the general public. The intent was to create an open, transparent, and accountable process that would reduce the risk of bad science being used in the courtroom and create a means for more consistent practice and continuous improvement in the application of scientific methods and practice to criminal investigations.

In 2014, NIST created the OSAC to take on this task and began recruiting members. The organization is structured with a governing board, the Forensic Science Standards Board (FSSB), and served by three resource committees (Human Factors, Legal Resources, and Quality Infrastructure) and five scientific area committees (Biology/DNA, Chemistry/Instrumental Analysis, Crime Scene/Death Investigation, Digital/Multimedia, and Physics/Pattern Interpretation) to manage and support the work of the subcommittees, and the subcommittees themselves. The OSAC currently has 24 subcommittees (enumerated on NIST’s web site) which either replaced or
augmented the previous Scientific Working Group’s (SWG’s) standards development activities. The subcommittees and their derivative task groups work on the creation of new or adoption of existing United States or international standards, developed in a manner consistent with the widely recognized ANSI standards development process, subject to public comment, and publication in OSAC’s approved standards and guidelines registries.

The process has been enthusiastically adopted by the forensic science community and, as of August 2015, standards were already in development for submission to the review and adoption procedure. In July 2015, the AAFS announced its intent to become an ANSI-approved Standards Development Organization (SDO) and to take a leadership role in support of this new process.

Although there are many OSAC events which take place during the AAFS meeting, this presentation is designed to act as a primer to AAFS members and meeting attendees wanting to quickly get up to speed with the new process and the organization. The presentation will feature brief discussions from members of the various levels of the OSAC organization who will describe their roles and their progress to date and answer questions about how to become involved in this critical new process in support of the future and continued professionalization of forensic science.
Thursday

#4 One Night in August: The I-35W Bridge Collapse in Minneapolis

February 25 — 7:00 a.m. - 8:30 a.m. .75 CE Hour

Chair: Andrew M. Baker, MD
Hennepin County ME
Minneapolis, MN

Co-Chair: Owen L. Middleton, MD
Hennepin County ME
Minneapolis, MN

Educational Objective(s): After attending this presentation, attendees will understand the role of, the challenges posed to, and the lessons learned by the medical examiner in a high-profile, multi-fatality mass disaster.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by providing deeper insights into the role of the medical examiner and forensic pathologist in managing a mass fatality incident. Special attention will be paid to techniques for identifying remains, communicating with families, informing the public, and working with other agencies and elected leaders.

On August 1, 2007, during the height of rush hour, the eight-lane I-35W Bridge in Minneapolis collapsed, sending scores of vehicles into the Mississippi River.

Bridge construction started in 1964 at a cost of ~ $5.2 million and the bridge opened in 1967. Originally striped for four lanes with an expected use of 66,000 vehicles per day, the bridge was restriped to eight lanes in 1988. At the time of the collapse, the 14-span, 1,907 feet long bridge carried an estimated 141,000 vehicles per day.

The medical examiner’s office was one of some 75 city, county, state, federal, and private organizations that were eventually involved in the recovery of bodies and investigation of the collapse. Water visibility, current speed, biohazards, and steel and concrete in the river made the recoveries of the victims difficult. The medical examiner’s office worked with law enforcement agencies and dive teams to develop a protocol for handling victims’ remains with as much dignity and privacy as possible, given the challenges of the recoveries and the intense media scrutiny. Medical examiner investigators proactively contacted the families of the missing to obtain as much antemortem identifying material as possible to facilitate victim identification when bodies were found. In all but one case, identifications and autopsies were completed, and remains released to the families, in less than one day following recovery.

The challenges of the disaster site led to an operation spanning approximately three weeks before the last victim was found. This presentation focuses on the role of the medical examiner in the days and weeks following the bridge collapse, with an emphasis on identification techniques; communications with families, the media, and elected leaders; a review of what did (and did not) go well; and a summary of lessons learned.
Pre-Registration Required — $50

Friday

#5 Back to the Future — A Journey Across the Timelines and Possible Realities for the Future of Forensic Sciences

February 26 — 7:00 a.m. - 8:30 a.m. .75 CE Hour

Chair: J.C. Upshaw Downs, MD
GBI ME
Savannah, GA

Co-Chair: Carla Miller Noziglia, MS
Engility
Aiken, SC

Educational Objective(s): After attending this presentation, attendees will have a better understanding of the history of the forensic sciences, including important dates and events. Additionally, attendees will learn how different sequences of events may have led to vastly alternate realities — allowing for an informed discussion about how to best guide the future course of forensic sciences.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by discussing important past dates and events and detailing how these events helped shape the present state of the forensic sciences. This knowledge will allow attendees to positively steer the future course of forensic science practice toward the best possible outcome.

Thirty years ago, a film about a time-traveling teenager and mad scientist explored the concept of parallel realities based on skewing past, present, and future timelines dependent on actions in the “then” present. In one journey to our present day (October 21, 2015), a radically different yet oddly familiar and plausible future greets the two partners in time. Unfortunately, the law of unintended consequences has led to a projected future with disastrous results, necessitating intervention in the past. Attempts to change events then lead to further future problems, requiring actions in the past to “correct” the altered future and…the rest, as they say, is history.

The history of forensic science dates to antiquity but a few key dates and events include 1194 (Articles of Eyre re-establishing the office of Coroner in the United Kingdom); 1248 (The Washing Away of Wrongs — medical investigation of death); 1609 (document examination); 1840 (arsenic poisoning); and 1888 (Jack the Ripper). The modern forensic era extends through Galton’s Fingerprints in 1892. Academic forensic science can be traced to 1902 at the University of Lausanne, Switzerland. Fingerprint evidence arrived in the United States by way of the 1904 World’s Fair, courtesy of Scotland Yard. Chief August Vollmer, credited by many as “the father of modern law enforcement” soon after (1907) created the first crime laboratories as part of the Berkley, California Police Department, an idea which expanded with his move to Los Angeles in 1923. The Bureau of Investigation (later FBI) created the first national forensic lab in 1926. State crime labs began to be developed in the early 1930s. The same decade saw criminalistics established as an academic discipline. Other developments ensued with the eventual creation of the American Academy of Forensic Sciences in 1948 and the National Association of Medical Examiners in 1966. Advances continued with the passage of time, including the creation of the Federal Rules of Evidence (1975), DNA application to forensics (1980s), National DNA Database (1994), National Commission on the Future of DNA Evidence (1998), Paul Coverdell National Forensic Science Improvement Act (1999), National Academy of Forensic Sciences Report — Strengthening Forensic Science in the United States: A Path Forward (2009), and National Commission on Forensic Science (2013).

Utilizing the time vehicle to consider past actions and consequent future timelines, attendees will be led through several key points: past, present, and future - in the forensic timeline, in order to illustrate where then-current thoughts and/or actions skew the chain of events leading the community astray to an undesired future. Recognizing that certain future consequences can be traced to intersections of significant persons and actions at critical points in time leads to the conclusion that strategy may allow a directed and desired future result. The ultimate goal is to stimulate consideration of alternatives and discussion about the most prudent course for present-day actions to assure the best possible future.
Breakfast Seminars

Pre-Registration Required — $50

#5 Back to the Future — A Journey Across the Timelines and Possible Realities for the Future of Forensic Sciences (continued)

“…[Y]our future hasn’t been written yet. No one’s has. Your future is whatever you make it. So make it a good one…”

Reference:
1 (Back to the Future, Part III) http://www.imdb.com/title/tt0099088/quotes
Pre-Registration Required — $50

**Friday**

**#6**  Thomas Krauss Memorial Bitemark Breakfast — Forensic Anthropology: Science Into Fiction

February 26 — 7:00 a.m. - 8:30 a.m.  
.75 CE Hour

**Chair:**  
Kathleen J. Reichs, PhD  
UNC - Charlotte  
Dept of Anthropology  
Charlotte, NC

**Co-Chair:**  
Laura C. Fulginiti, PhD  
Forensic Science Center  
Phoenix, AZ

**Educational Objective(s):** After attending this presentation, attendees will have a better understanding of the field of forensic anthropology and of the processes involved in creating fiction based on science. Emphasis will be on the writing of novels and screenplays.

**Impact on the Forensic Science Community:** This presentation will impact the forensic science community by providing an overview of the field of forensic anthropology and will describe techniques used in creating plausible fiction based on scientific procedures and principles.

Forensic anthropology is a sub-specialty within physical anthropology that combines knowledge of the human skeleton with skills in various areas of forensic protocol, including the recovery and analysis of modern human remains. A fully accredited forensic anthropologist will be certified by the American Board of Forensic Anthropology (ABFA). This requires achievement of a PhD, successful completion of a certification exam, adherence to a set of ethical standards, and regular reporting on continuing education requirements.

The forensic anthropologist analyzes compromised human remains — the decomposed, mummified, mutilated, burned, dismembered, and skeletal. She addresses questions of identity, manner of death, time since death, and, in some cases, postmortem body treatment.

The forensic anthropologist may function in any of a variety of contexts, including, but not limited to, medical examiner and coroner offices, government laboratories, disaster recovery teams, human rights efforts, law enforcement agencies, and the military. The forensic anthropologist does not operate in a vacuum but works with specialists in many other areas, including forensic odontology.

Over the past two decades, the analysis of crime scenes and crime victims has caught the attention of the general public. Forensic science has exploded onto the stage of pop culture, and practitioners have been portrayed in books and on the large and small screens. Dr. Temperance Brennan is the protagonist in 18 novels and the main character in the longest-running scripted drama in the history of the Fox network. Each of the Temperance Brennan books and the Young Adult (YA) *Virals* books and each episode of the television series *Bones* takes the reader or viewer into a context in which forensic investigators work. Each highlights a different area of expertise within the forensic sciences.

This presentation will discuss the process of fictionalizing forensic science by drawing upon the speaker’s experience as a forensic anthropologist, a writer, and a television producer. The writing of a novel will be compared to the writing of a screenplay.
**Thursday**

**#1  Working Stiff: Forensic Training & Public Relations in a Digital Age**

February 25 — 12:00 p.m. - 1:30 p.m.  
1.0 CE Hour

**Judy Melinek, MD**  
PathologyExpert, Inc.  
San Francisco, CA

**T.J. Mitchell, BA**  
PathologyExpert, Inc.  
San Francisco, CA

**Educational Objective(s):** After attending this presentation, attendees will understand: (1) how to write clearly and effectively about forensic science; and, (2) how to use public relations and social media to respond to breaking news.

**Impact on the Forensic Science Community:** This presentation will impact the forensic science community by helping forensic professionals understand how to effectively communicate difficult forensic cases to a lay public.

Just two months before the September 11th terrorist attacks, Dr. Judy Melinek began her training as a New York City forensic pathologist. With her husband, T.J., and their toddler, Daniel, holding down the home front, Dr. Melinek threw herself into the fascinating world of death investigation — performing autopsies, investigating death scenes, and counseling grieving relatives. *Working Stiff* chronicles Dr. Melinek’s two years of training, taking readers behind the police tape of some of the most harrowing deaths in the “Big Apple,” including a firsthand account of the events of September 11th, the subsequent anthrax bio-terrorism attack, and the disastrous crash of American Airlines Flight 587.

Lively, action-packed, and loaded with mordant wit, *Working Stiff* offers a firsthand account of daily life into one of America’s most arduous professions and the unexpected challenges of shuttling between the domains of the living and the dead. The body never lies — and through the murders, accidents, and suicides that land on her table, Dr. Melinek lays bare the truth behind the glamorized depictions of autopsy work on shows like *CSI* and *Law & Order* to reveal the secret story of the real morgue.

Dr. Melinek will discuss how she and her writer husband collaboratively turned her daily journal about her forensic fellowship training at the New York City Office of the Chief Medical Examiner into a *New York Times* bestselling book. Writing clearly and effectively about forensic science draws candidates to professional training programs, increases the credibility and public profile of forensic scientists, and has the potential to increase both local and federal funding. Dr. Melinek will emphasize that in the digital age, where Twitter®, Facebook®, Instagram™, TV news, and bloggers set the tone and control the narrative around breaking cases, forensic scientists cannot continue to hide from the press behind an autopsy table or lab bench. Offices need to develop a public relations profile and utilize media relations to respond independently to press and public inquiries consistently — not just when there is a scandal or a high-profile case.
Friday

#2  Operation Lima Sea — Unidentified Remains of a Human Torso in Queensland, Australia: Case Report on the Collaborative Investigative and Novel Anthropological (Forensic) Responses in the Establishment of Identification

February 26 — 12:00 p.m. - 1:30 p.m.  1.0 CE Hour

**Chair:**
Donna M. MacGregor, MSc
Queensland University of Technology
School of Biomedical Sciences
Faculty of Health, Gardens Point Campus
Brisbane, AUSTRALIA

**Co-Chair:**
Jon E. Birt, BA
Queensland Police Service
Homicide Investigation Unit
Brisbane, AUSTRALIA

**Educational Objective(s):** After attending this presentation, attendees will better understand: (1) the extensive contemporary investigative processes involved in the establishment of identification employed by the Queensland Police Service; and, (2) how the integration of novel anthropological and forensic processes assisted the investigation process.

**Impact on the Forensic Science Community:** This presentation will impact the forensic science community by demonstrating the tenacity of investigators from the Homicide Investigation Unit, Queensland Police Service to pursue all potential fields of inquiry to establish victim identification or victimology.

In October 2013 at a regional center in Southeast Queensland, Australia, Queensland Fire and Rescue (QFRS) were called to a grass fire. Once extinguished, QFRS located the remains of a human torso. The head and hands had been severed, and the lower body from the mid lumbar region had also been removed. The head, hands, and lower body have never been located. Due to the limited nature of the remains, standard confirmatory identification techniques of fingerprints and dental records could not be utilized in this matter. DNA was collected; however, it did not match any national database. Familial DNA was investigated; this too presented no matches. Toxicology was also conducted for a full drug screening and a number of prescription medications were identified. Investigators conducted exhaustive searches of mobile phone tower activity, Medicare files, immigration files, and interstate missing person searches in an attempt to identify the remains.

The investigators then engaged the services of their police anthropologist to assist in the identification process. Using Multi-Slice Computed Tomography (MSCT) Digital Imaging and Communications in Medicine (DICOM) data (0.5/0.3mm) of the torso collected during the standard pre-postmortem scanning procedure at the Brisbane Mortuary, 3D virtual reconstructions of the bone surfaces, also called isosurfaces, were created. The virtual isosurface models were uploaded into a specialized 3D software program, Geomagic® Design™ X, where virtual measurements were conducted to determine sex and stature. The measurements were conducted using a new and novel protocol developed by the Skeletal Biology and Forensic Anthropology Research Laboratory (SBFAR) at the Queensland University of Technology, Brisbane.1 The virtual measurements were collected from various bones within the torso including the humeri, scapula, and clavicle. An attempt was made to determine age of the individual using the sternal end of the fourth rib; however, the CT resolution and small surface area presented difficulties in age determination other than determining the individual was an adult. Subsequently, discussions between the anthropologist and investigators resulted in an application to the State Coroner of Queensland that was supported to have the sternal rib end of the fourth rib excised from the torso, then macerated (i.e., soft tissue removed from the bone) using dermestid beetles. A final age range, sex, and stature were provided to investigators.

Ultimately in July 2014, the prescription medication information collected from the toxicology report matched with the anthropological information obtained from the CT data and rib maceration and assisted in the identification.
The contributions of the “virtual” anthropological input into this matter were a first for Queensland. The utility of CT data proved extremely useful in providing a timely anthropological profile to the investigation team and in reducing the need to macerate the entire torso as would be warranted by traditional anthropological techniques to develop an anthropological profile. This matter also exemplifies the importance of collaboration between the various agencies and specialists involved in homicide investigations to achieve a successful outcome.

Reference:
WORKSHOPS

Pre-Registration Required — $100

#1 Information Does Exist Beyond the First Page of Your Google® Search!
Tools and Strategies for Forensic Science Literature Searching and Use

Monday, February 22, 2016  8:30 a.m. - 12:00 p.m.  3.25 CE Hours

Educational Objective(s): After attending this presentation, attendees will understand the value of forensic science literature and how to search and use the literature to research topics of work-related interest, such as, developing appropriate training materials and preparing for admissibility hearings.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by serving as a venue for understanding the importance and value of forensic science literature and tools for finding information of interest to practitioners, researchers, and students.

Chair: John M. Butler, PhD
NIST
Gaithersburg, MD

Co-Chair: Matthew R. Wood, MS
Ocean County Sheriff’s Dept
Forensic Science Laboratory
Toms River, NJ

Faculty:
Susan Makar, MA
NIST
Gaithersburg, MD

Melissa K. Taylor, BA
NIST
Gaithersburg, MD

Amanda Malanowski, BS
NIST
Gaithersburg, MD

Jeff Teitelbaum, MS
Seattle, WA

Program Description: This session will present current practices and tools for discovering, using, and analyzing forensics literature. It will include training on both free resources available to any practitioner and specialized literature databases for the researcher and student. Case examples will demonstrate the challenges of searching forensics literature with relevance to practitioners, researchers, and students. A vision of potential future information resources to address current limitations of accessibility of forensic science literature will be shared.

Program:

8:30 a.m. - 9:15 a.m.  Why Search and Read Forensic Science Literature?
  John M. Butler, PhD

9:15 a.m. - 9:45 a.m.  Free Forensic Science Information Resources for the Practitioner
  Jeff Teitelbaum, MS

9:45 a.m. - 10:15 a.m.  Tools for Searching and Analyzing Forensic Science Literature
  Susan Makar, MA; Amanda Malanowski, BS

10:15 a.m. - 10:30 a.m.  Break
WORKSHOPS

Las Vegas
2016

Pre-Registration Required — $100

#1 Information Does Exist Beyond the First Page of Your Google® Search! Tools and Strategies for Forensic Science Literature Searching and Use (continued)

Program cont.:

10:30 a.m.  -  11:10 a.m.  Case Examples
Jeff Teitelbaum, MS; Susan Makar, MA

11:10 a.m.  -  11:40 a.m.  ForSciPub: A Vision for the Future of Forensic Science Literature
Melissa K. Taylor, BA

11:40 a.m.  -  11:50 a.m.  Other Forensic Activities Regarding Forensic Literature: American Association for the Advancement of Science (AAAS), National Commission on Forensic Science (NCFS), and the Organization of Scientific Area Committees (OSAC)
John M. Butler, PhD

11:50 a.m.  -  12:00 p.m.  Discussion
John M. Butler, PhD; Jeff Teitelbaum, MS; Susan Makar, MA; Amanda Malanowski, BS; Melissa K. Taylor, BA

Targeted Audience: Anthropology, Criminalistics, Digital & Multimedia Sciences, Engineering Sciences, General, Pathology/Biology, Questioned Documents, Toxicology

Knowledge Level Required: Basic (little to no knowledge of subject presented)

Expected Handout Length: 100 Pages
WORKSHOPS

Pre-Registration Required — $100

#2 Advanced Mass Spectrometry (MS) Techniques for Forensic Analysis: What Does the Future Hold?

Monday, February 22, 2016  8:30 a.m. - 12:00 p.m.  3.0 CE Hours

Educational Objective(s): After attending this presentation, attendees will be better able to evaluate and select advanced mass spectrometric techniques for solving various analytical problems in forensic science including identification of unknowns, rapid throughput approaches to forensic sample preparation, novel ionization, and fragmentation approaches in hyphenated mass spectrometric techniques.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by introducing attendees to some of the most recent advances in mass spectrometry technology and their potential application to solve challenges in forensic investigations. This workshop has a strong interdisciplinary focus.

Chair: Sherri L. Kacinko, PhD
Willow Grove, PA

Co-Chair: Kenyon M. Evans-Nguyen, PhD
Tampa, FL

Faculty:

Adam B. Hall, PhD  David M. Schwope, PhD
Northeastern University  Aegis Sciences Corporation
Boston, MA  Nashville, TN

Jason E. Schaff, PhD  Jillian K. Yeakel, MS
Quantico, VA  Bethlehem, PA

Program Description: This session is a collaboration between two of the largest sections of the Academy and represents the first time in eight years that the sections have come together to discuss technology used in a wide range of forensic disciplines. Using various forensic science applications as examples, this session will focus on the use of MS for general unknown screening and new mass spectral analytical approaches in various forensic disciplines. These novel approaches include high resolution mass spectrometry, ultra high resolution mass spectrometry, isotope ratio mass spectrometry (IRMS), mass spectrometry multiplexing, and innovative uses of existing time-of-flight and tandem mass spectrometric (MS/MS) approaches. The session will include examples in forensic toxicology and forensic chemistry. The session also features a glimpse of the future regarding what to expect from mass spectrometry technology in the years ahead as the techniques move from the research laboratory to the forensic laboratory.

Program:

8:30 a.m. - 8:35 a.m.  Introductions and Overview
Sherri L. Kacinko, PhD

8:35 a.m. - 9:10 a.m.  Options for Screening by MS
Jason E. Schaff, PhD

9:10 a.m. - 9:45 a.m.  Use of Multiplexing and Alternative Sample Preparation Techniques for High Throughput Toxicological Screening
Jillian K. Yeakel, MS
#2  Advanced Mass Spectrometry (MS) Techniques for Forensic Analysis: What Does the Future Hold? (continued)

<table>
<thead>
<tr>
<th>Time</th>
<th>Session Title</th>
<th>Speaker(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:45 a.m.</td>
<td>What’s the Origin? Isotope Ratio Mass Spectrometry (IRMS) in Sports Doping and Other Forensic Casework</td>
<td>David M. Schwope, PhD</td>
</tr>
<tr>
<td>10:20 a.m.</td>
<td>Break</td>
<td></td>
</tr>
<tr>
<td>10:50 a.m.</td>
<td>Fieldable MS in Forensic Chemistry and Toxicology</td>
<td>Kenyon M. Evans-Nguyen, PhD</td>
</tr>
<tr>
<td>11:25 a.m.</td>
<td>Beyond Quadropole Time-of-Flight (Q-TOF) and Tandem Mass Spectrometry (MS/MS): Next Generation MS Techniques for Forensic Analysis</td>
<td>Adam B. Hall, PhD</td>
</tr>
</tbody>
</table>

**Targeted Audience:** Criminalistics, Toxicology

**Knowledge Level Required:** Intermediate (some knowledge)

**Expected Handout Length:** 125 Pages

**Supported by:** NMS Labs, The Center for Forensic Science Research and Education
#3 How and Why You Can and Should Integrate Advanced Imaging Techniques Into Your Daily Autopsy Practice

**Monday, February 22, 2016**

**8:30 a.m. - 12:30 p.m.**

**3.5 CE Hours**

**Educational Objective(s):**

- After attending this presentation, attendees will: (1) understand the concept of “disciplinary cross-over” within medicine; (2) understand the “toolbox” approach to modern forensic pathology; (3) review the core science behind plain film radiography, Postmortem Computed Tomography (PMCT), and Postmortem Magnetic Resonance (PMMR); (4) understand practical applications of imaging techniques as they apply to natural and non-natural deaths; (5) understand the concept of “Targeted Tissue Assessments” (TTA) in the context of whole body PMCT and why TTA is not a partial autopsy; and, (6) review administrative considerations as they pertain to the installation and routine utilization of advanced imaging techniques.

**Impact on the Forensic Science Community:**

This presentation will impact the forensic science community by exploring how forensic pathologists can and should take ownership of advanced imaging techniques in their daily practices.

**Chair:**

Keith Pinckard, MD, PhD
Travis County Medical Examiner’s Office
Austin, TX

**Co-Chair:**

Sam W. Andrews, MD
Travis County Medical Examiner’s Office
Austin, TX

**Faculty:**

Evan Matshes, MD
Academic Forensic Pathology, Inc
Calgary, AB, CANADA

Vivian Snyder, DO
Evanston, IL

**Program Description:**

This session will cover practical aspects of the installation, introduction, training, and utilization of advanced imaging technology into a system of death investigation. The focus will be on PMCT; PMMR and plain film radiography will also be reviewed as relevant.

**Program:**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
</table>
| 8:30 a.m. - 9:00 a.m. | Modern Death Investigation and the “Toolbox Approach to Forensic Pathology”  
  *Keith Pinckard, MD, PhD* |
| 9:00 a.m. - 9:30 a.m. | Fundamental Imaging Techniques: Radiography, PMCT, and PMMR  
  *Evan Matshes, MD; Sam W. Andrews, MD; Vivian Snyder, DO* |
| 9:30 a.m. - 9:45 a.m. | Break |
| 9:45 a.m. - 11:15 a.m. | Practical Applications of Imaging Techniques (Categorical Reviews of Imaging Within Modalities of Death)  
  *Evan Matshes, MD; Sam W. Andrews, MD; Vivian Snyder, DO* |
| 11:15 a.m. - 11:30 a.m. | Break |
| 11:30 a.m. - 12:00 p.m. | “Targeted Tissue Assessments” Are Not “Partial Autopsies” in the Context of PMCT  
  *Evan Matshes, MD* |
#3 How and Why You Can and Should Integrate Advanced Imaging Techniques Into Your Daily Autopsy Practice (continued)

Program cont.:

12:00 p.m. - 12:30 p.m.  Administrative Considerations and Conclusions
Keith Pinckard, MD, PhD; Evan Matshes, MD

Targeted Audience: Anthropology, General, Jurisprudence, Pathology/Biology

Knowledge Level Required: Intermediate (some knowledge)

Expected Handout Length: 30 Pages
Workshops

Las Vegas 2016

Pre-Registration Required — $100

#4 A Cloud Descends on the Courtroom: The Impact of Cloud Computing on Evidence in the Courtroom

Monday, February 22, 2016 8:30 a.m. - 12:30 p.m. 3.5 CE Hours

Educational Objective(s): After attending this presentation, attendees will have a better understanding of how the rapidly expanding technologies surrounding the storage and distribution of information and applications using what are commonly called “cloud computing” are impacting investigators, forensic examiners, and lawyers from the crime scene to the courtroom.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by providing a brief tutorial on these technologies, giving attendees an appreciation for the difficulties in acquiring, analyzing, introducing, authenticating, and evaluating information stored “in the cloud.” After attending this presentation, participants will be able to evaluate how these technologies are changing the practice of both law and forensic science.

Chair:
Mark Pollitt, PhD
Digital Evidence Professional Services, Inc.
Ellicott City, MD

Co-Chair:
Christopher J. Plourd, JD
Superior Court
El Centro, CA

Faculty:
Abagail Abraham, JD
AOL
Dulles, VA

Andrew Neal, MS
TransPerfect Legal Solutions
Dallas, TX

Josiah Dykstra, PhD
Severn, MD

Henry R. Reeve, JD
Denver District Attorney’s Office
Denver, CO

Mary F. Horvath, MFS
King George, VA

Program Description: This session will bring together computer scientists, forensic practitioners, information security practitioners, lawyers, and judges to discuss many of the emerging issues in this rapidly evolving field. Topics include: what is the cloud; legal and practical issues in evidence collection; foundation and admissibility of cloud-based evidence; and, security and privacy in the cloud.

Program:

8:30 a.m. - 8:35 a.m. Welcome and Introductions
Christopher J. Plourd, JD

8:35 a.m. - 9:20 a.m. What is Cloud Computing and How Does it Work?
Mary F. Horvath, MFS; Josiah Dykstra, PhD

9:20 a.m. - 10:05 a.m. Forensic Collection of Cloud-Based Evidence
Mary F. Horvath, MFS; Andrew Neal, MS

10:05 a.m. - 10:25 a.m. Break
#4  A Cloud Descends on the Courtroom: The Impact of Cloud Computing on Evidence in the Courtroom (continued)

Program cont.:

10:25 a.m. - 11:10 a.m.  Legal Process, Foundations, and Admission of Cloud-Based Evidence  
Henry R. Reeve, JD; Abagail Abraham, JD

11:10 a.m. - 11:45 a.m.  Forensic Science as a Consumer of Cloud Services — Security and Privacy Issues  
Mark Pollitt, PhD

11:45 a.m. - 12:30 p.m.  Panel Discussion  
Mark Pollitt, PhD; Christopher J. Plourd, JD; Abagail Abraham, JD; Josiah Dykstra, PhD; Mary F. Horvath, MFS; Andrew Neal, MS; Henry R. Reeve, JD

Targeted Audience: Digital & Multimedia Sciences, Engineering Sciences, General, Jurisprudence

Knowledge Level Required:  Basic (little to no knowledge of subject presented)

Expected Handout Length:  25 Pages
#5  UVIS Dental Identification Module (UDIM) — A Hands-On Workshop

Monday, February 22, 2016  8:30 a.m. - 12:30 p.m.  3.75 CE Hours

Educational Objective(s): After attending this presentation, attendees will: (1) become familiar with the functionality and features of the Unified Victim Identification System (UVIS), the UVIS Case Management System (UVIS-CMS), and the UDIM Stand Alone (UDIM-SA) software systems; and, (2) gain experience in order to enter, search, and compare antemortem and postmortem dental data utilizing the UDIM-SA software to identify a decedent.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by providing attendees with a working knowledge of the UVIS Dental Identification Module, a component of a complete forensic case management system.

Chair: Kenneth W. Aschheim, DDS
New York, NY
Co-Chair: Lawrence A. Dobrin, DMD
New York City OCME
Roselle Park, NJ

Faculty:
John Fudenberg, MBA
Las Vegas, NV

Frank DePaolo, BS
New York City OCME
New York, NY
Edward E. Herschaft, DDS
UNLV School of Dental Medicine
Las Vegas, NV

Davin Faulkner, DMD
Las Vegas, NV
Naeem Ullah, BS
New York, NY

Program Description: The UVIS is a browser-based fatality management system developed for the Office of Chief Medical Examiner of the City of New York (OCME) following the World Trade Center and American Airlines Flight 587 disasters. A key module to the system is the UDIM, which can serve as a stand-alone dental identification software program. Currently, it is used by multiple municipalities, including the OCME of the City of New York and the Clark County Office of the Coroner/Medical Examiner, Las Vegas, NV.

This session will be an introduction to the functions of the current version of the UVIS, the UVIS-CMS, and how the Dental Identification Module integrates into daily operations as well as Multiple Fatality Incidents (MFI). Participants will continue with an in-depth look at the features and functionally of the dental modules as well as hands-on training utilizing the UDIM-SA program.

Program:

8:30 a.m. - 8:45 a.m.  History and Funding of the UVIS/UDIM Project
Frank DePaolo, BS

8:45 a.m. - 9:00 a.m.  Multi-State Deployment
John Fudenberg, MBA

9:00 a.m. - 9:30 a.m.  UVIS/UDIM Theory and Features
Kenneth W. Aschheim, DDS
WORKSHOPS

Pre-Registration Required — $150

#5  UVIS Dental Identification Module (UDIM) — A Hands-On Workshop (continued)

Program cont.:

- 9:30 a.m. - 10:30 a.m.  Hands-On Computer Workshop
  Kenneth W. Aschheim, DDS; Naeem Ullah, BS; Lawrence A. Dobrin, DMD;
  Edward E. Herschaft, DDS; John P. Demas, DDS; Davin Faulkner, DMD

- 10:30 a.m. - 10:45 a.m.  Break

- 10:45 a.m. - 12:00 p.m.  Hands-On Computer Workshop
  Kenneth W. Aschheim, DDS; Naeem Ullah, BS; Lawrence A. Dobrin, DMD;
  Edward E. Herschaft, DDS; John P. Demas, DDS; Davin Faulkner, DMD

- 12:00 p.m. - 12:30 p.m.  Panel Questions and Answers
  Lawrence A. Dobrin, DMD

Targeted Audience:  Anthropology, General, Odontology, Pathology/Biology

Knowledge Level Required:  Basic (little to no knowledge of subject presented)

Expected Handout Length:  10 Pages

Restricted Audience Size:  40

Supported by:  Clark County Office of the Coroner/Medical Examiner, Office of the Chief Medical Examiners City of New York
#6 Frequency Occurrence in Handwriting and Hand Printing Characteristics

**Educational Objective(s):** After attending this presentation, attendees will have a significant understanding and appreciation of the statistical bases for handwriting comparisons and how to present such information in court.

**Impact on the Forensic Science Community:** This presentation will impact the forensic science community by providing information that can be used in court cases in which statistical foundation and probability become weight or admissibility issues.

**Chair:**
Thomas W. Vastrick, BS
Apopka, FL

**Co-Chair:**
Ellen M. Schuetzner, BA
Chicago, IL

**Faculty:**
Mark E. Johnson, PhD
University of Central Florida
Orlando, FL

**Program Description:** This session will provide a detailed education of the methodologies and results of a four-year study into frequency occurrences of numerous handwriting and hand printing characteristics. Attendees will study population sampling, development of characteristics for the study, quality control pilot studies, confidence levels, quantitative statistics for factors that affect handwriting, interdependence of characteristics, data entry, and use in casework and court.

**Program:**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:30 a.m.</td>
<td>History of Statistics and History of Frequency of Occurrence Project</td>
</tr>
<tr>
<td>9:00 a.m.</td>
<td>Ellen M. Schuetzner, BA</td>
</tr>
<tr>
<td>9:30 a.m.</td>
<td>Population Sampling and Quantitative Analyses of Factors That Affect Handwriting</td>
</tr>
<tr>
<td>10:00 a.m.</td>
<td>Thomas W. Vastrick, BS; Mark E. Johnson, PhD</td>
</tr>
<tr>
<td>10:30 a.m.</td>
<td>Break</td>
</tr>
<tr>
<td>10:30 a.m.</td>
<td>Pilot Studies and Quality Control Selection of Characteristics Database Development</td>
</tr>
<tr>
<td>11:00 a.m.</td>
<td>Thomas W. Vastrick, BS; Mark E. Johnson, PhD</td>
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<tr>
<td>11:00 a.m.</td>
<td>Lunch</td>
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<tr>
<td>1:00 p.m.</td>
<td>Product Rule in Handwriting and Hand Printing Confidence Limits</td>
</tr>
<tr>
<td>2:00 p.m.</td>
<td>Thomas W. Vastrick, BS; Mark E. Johnson, PhD</td>
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<tr>
<td>2:00 p.m.</td>
<td>Case Use and Query Reporting Casework Exercises: Part I</td>
</tr>
<tr>
<td>3:00 p.m.</td>
<td>Thomas W. Vastrick, BS; Ellen M. Schuetzner, BA</td>
</tr>
<tr>
<td>3:00 p.m.</td>
<td>Break</td>
</tr>
<tr>
<td>3:10 p.m.</td>
<td>Casework and Query Reporting Casework Exercises: Part II</td>
</tr>
<tr>
<td>4:00 p.m.</td>
<td>Thomas W. Vastrick, BS; Ellen M. Schuetzner, BA</td>
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</tbody>
</table>
Pre-Registration Required — $250

#6 Frequency Occurrence in Handwriting and Hand Printing Characteristics (continued)

Program cont.: 

4:00 p.m. - 4:30 p.m. Roundtable Discussion: Uses and Potential Misuses of Results of Research, Uses in Casework, and Uses in Court
Thomas W. Vastrick, BS; Ellen M. Schuetzner, BA; Mark E. Johnson, PhD

Targeted Audience: Questioned Documents

Knowledge Level Required: Advanced (highly technical)

Expected Handout Length: 50 Pages

Restricted Audience Size: 40

Workshop Requirements: Attendees will need to bring a laptop computer with the ability to run Microsoft Excel and Access as well as a calculator or app with a square root function.

Registration is limited to the first 40 registrants. Registration is limited to AAFS members until January 15, 2016.
Pre-Registration Required — $200

#7  Extreme Violence — Military vs. Civilian Crime Scene Investigation (CSI) Cases — Forensic Analysis and Disciplines in Practice

Monday, February 22, 2016     8:30 a.m. - 4:45 p.m.     6.0 CE Hours

Educational Objective(s): After attending this presentation, attendees will understand multiple crime scene investigation methods including injury pattern analysis, post-blast analysis, mass murder crime scene processing, and methods to solving an array of violent crimes.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by identifying detailed and relevant aspects into the dynamics of multiple violent crime scenes observed around the world. The crimes were investigated by the military criminal investigative organizations. The investigations will present multimodal approaches elaborating on crime scene processing, evidence collection, interrogation methodology, post-blast reconstruction, medicolegal death determinations, and judicial hurdles and findings.

Chair:       Co-Chair:
Brian L. Janysek, MFS     Ryan P. Brokaw, MFS
Oakton, VA     U.S. Army CID

Faculty:
Steven Geniuk, MS     Curtis E. Sparling, MA
Fort Huachuca, AZ     U.S. Army CID

Donald Hayden, MFS     Jessica Ann Veltri, MS
Richmond Hill, GA     U.S. Army CID

Scott Roeske, MFS
Belton, TX

Program Description: The session will focus on various case discussions of crimes investigated in a military and civilian environment, using various processing techniques.

Program:

8:30 a.m. - 8:45 a.m.  Introduction
  Brian L. Janysek, MFS; Ryan P. Brokaw, MFS

8:45 a.m. - 10:00 a.m.  Massacre in Afghanistan
  Ryan P. Brokaw, MFS; Scott Roeske, MFS

10:00 a.m. - 10:15 a.m.  Break

10:15 a.m. - 11:30 a.m.  Robbery/Homicide at Fort Leonard Wood, Missouri
  Scott Roeske, MFS; Donald Hayden, MFS
#7 Extreme Violence — Military vs. Civilian Crime Scene Investigation (CSI) Cases — Forensic Analysis and Disciplines in Practice (continued)

Program cont.:

11:30 a.m. - 1:00 p.m. Lunch
1:00 p.m. - 2:15 p.m. Crime Scene Investigation
Jessica Ann Veltri, MS; Steven Geniuk, MS; Curtis E. Sparling, MA;

2:15 p.m. - 3:15 p.m. Suicide Bomber
Brian L. Janysek, MFS; Jessica Ann Veltri, MS

3:15 p.m. - 3:30 p.m. Break

3:30 p.m. - 4:45 p.m. Murder Suicide at Fort Hood, Texas
Ryan P. Brokaw, MFS; Scott Roeske, MFS

Targeted Audience: Criminalistics, General, Jurisprudence, Odontology, Pathology/Biology, Psychiatry & Behavioral Science

Knowledge Level Required: Intermediate (some knowledge)

Expected Handout Length: 150 Pages
#8 From the Ashes — Transforming the Response to Mass Disasters

Monday, February 22, 2016
8:30 a.m. - 5:00 p.m.
6.25 CE Hours

**Educational Objective(s):** After attending this presentation, attendees will understand how different agencies integrate various areas of forensic science in mass fatality incidents and how various forensic service providers can collaborate within and with these agencies to prepare for mass disaster events. In addition, attendees will better understand how emerging technologies are being leveraged.

**Impact on the Forensic Science Community:** This presentation will impact the forensic science community by highlighting what has been learned from numerous natural and unnatural disasters, and how the forensic science community working together can prepare to respond to future incidents by teaching how to process and investigate mass disaster scenes and evidence.

**Chair:**
Anjali A. Ranadive, JD  
SciLawForensics, Ltd.  
Brookings, SD

**Co-Chair:**
Joanna L. Collins, MFS  
San Antonio, TX

**Faculty:**
Robert E. Barsley, DDS, JD  
LSU School of Dentistry  
New Orleans, LA

Edward Mazuchowski II, MD, PhD  
Dover AFB, DE

Mary B. Collins-Morton, MS  
FBI Academy  
Quantico, VA

Noelle J. Umback, PhD  
OCME  
Dept of Forensic Biology  
New York, NY

Dean M. Gialamas, MS  
Los Angeles County Sheriff’s Department  
Norwalk, CA

**Program Description:** This session will discuss how various agencies collaborate to respond to mass disasters of all types.

**Program:**

8:30 a.m. - 8:45 a.m.  
Introduction  
*Anjali A. Ranadive, JD*

8:45 a.m. - 9:15 a.m.  
Crime Scene  
*Mary B. Collins-Morton, MS*

9:15 a.m. - 10:15 a.m.  
Forensic Pathology  
*Edward Mazuchowski II, MD, PhD*

10:15 a.m. - 10:30 a.m.  
Break
#8 From the Ashes — Transforming the Response to Mass Disasters (continued)

**Program cont.:**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Speaker(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:30 a.m.</td>
<td>Identification Odontology</td>
<td>Robert E. Barsley, DDS, JD</td>
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<tr>
<td>11:00 a.m.</td>
<td>Identification DNA</td>
<td>Noelle J. Umback, PhD</td>
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<tr>
<td>12:00 p.m.</td>
<td>Lunch</td>
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<tr>
<td>1:30 p.m.</td>
<td>Management/Policy Preparedness</td>
<td>Dean M. Gialamas, MS</td>
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<tr>
<td>2:00 p.m.</td>
<td>Panel Discussion</td>
<td>Anjali A. Ranadive, JD; Robert E. Barsley, DDS, JD; Noelle J. Umback, PhD;</td>
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<td></td>
<td></td>
<td>Dean M. Gialamas, MS; Edward Mazuchowski II, MD, PhD; Mary B. Collins-Morton, MS</td>
</tr>
<tr>
<td>3:30 p.m.</td>
<td>Break</td>
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<tr>
<td>3:45 p.m.</td>
<td>Panel Discussion Continued</td>
<td>Anjali A. Ranadive, JD; Robert E. Barsley, DDS, JD; Noelle J. Umback, PhD;</td>
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<tr>
<td></td>
<td></td>
<td>Dean M. Gialamas, MS; Edward Mazuchowski II, MD, PhD; Mary B. Collins-Morton, MS</td>
</tr>
<tr>
<td>4:45 p.m.</td>
<td>Closing Remarks</td>
<td>Anjali A. Ranadive, JD</td>
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</tbody>
</table>

**Targeted Audience:** All Disciplines

**Knowledge Level Required:** Intermediate (some knowledge)

**Expected Handout Length:** 100 Pages

*Proceeds from this workshop will benefit the Forensic Sciences Foundation, Inc.*
WORKSHOPS

Pre-Registration Required — $200

#9 Strategies for Scientific Problem-Solving With Physical Evidence

Monday, February 22, 2016 8:30 a.m. - 5:00 p.m.  7.0 CE Hours

Educational Objective(s): After attending this presentation, participants will have better knowledge of and more insight into the development, underpinnings, and potential value of criminalistics from the perspective of experienced and knowledgeable forensic scientists.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by addressing the often-overlooked but crucial question of which examinations to perform for a given case, how that decision-making is currently organized, and how it might be improved.

Chair: Rebecca E. Bucht, PhD
Helsinki, FINLAND

Co-Chair: Patrick Buzzini, PhD
Sam Houston State University
Huntsville, TX

Faculty:
Peter R. De Forest, DCrim
Forensic Consultants
Ardsley, NY

Alastair M. Ross, AM
National Institute of Forensic Science, Retired
Docklands, Victoria, AUSTRALIA

Douglas M. Lucas, DSc
Burlington, ON, CANADA

Sheila Willis, PhD
Forensic Science Ireland
Dublin, IRELAND

Pierre A. J-L. Margot, PhD
University of Lausanne
Lausanne, SWITZERLAND

Program Description: This session will provide a wealth of knowledge and experience concerning the evolution of the forensic science industry in several countries. Along with a summary of how forensic science has evolved in their own jurisdictions, the presentations will introduce views on the key elements required for the optimization of the contribution of forensic science to criminal justice questions, particularly with regard to complex and non-routine cases and volume crime, providing guidance to criminal justice policymakers.

Program:

8:30 a.m. - 8:45 a.m. Welcome and Introduction
Rebecca E. Bucht, PhD; Patrick Buzzini, PhD

8:45 a.m. - 9:45 a.m. The Evolution of Forensic Science — The First Ten Thousand Years
Douglas M. Lucas, DSc

9:45 a.m. - 10:45 a.m. The Unfettered Criminalist
Peter R. De Forest, DCrim

10:45 a.m. - 11:00 a.m. Break
#9 Strategies for Scientific Problem-Solving With Physical Evidence (continued)

Program cont.:

11:00 a.m. - 12:00 p.m.  Rewarding “A” While Hoping for “B”  
_Sheila Willis, PhD_

12:00 p.m. - 12:30 p.m.  Practical Exercise

12:30 p.m. - 1:30 p.m.  Lunch

1:30 p.m. - 2:30 p.m.  Managing Inevitable Change  
_Alastair M. Ross, AM_

2:30 p.m. - 2:45 p.m.  Break

2:45 p.m. - 3:45 p.m.  Forensic Science: Where From, Where To?  
_Pierre A. J-L. Margot, PhD_

3:45 p.m. - 4:45 p.m.  Practical Exercise

4:45 p.m. - 5:00 p.m.  Closing Remarks  
_Rebecca E. Bucht, PhD; Patrick Buzzini, PhD_

Targeted Audience: Criminalistics, General, Jurisprudence

Knowledge Level Required: Intermediate (some knowledge)

Expected Handout Length: 75 Pages

Restricted Audience Size: 80
Pre-Registration Required — $200

#10  Practical Homicide Investigation®: An Evaluation of Homicides Involving Child Victims, Child Offenders, and Equivocal Death Investigations

Monday, February 22, 2016   8:30 a.m. ‑ 5:00 p.m.   6.25 CE Hours

Educational Objective(s): After attending this presentation, attendees will better understand the unique aspects of child homicides and the dynamics involved in cases where children are offenders. In addition, equivocal deaths and aquatic death investigations will be discussed as well as the application of professional homicide investigation and medicolegal analysis to these events.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by providing and familiarizing forensic scientists and investigators with the art and science involved in the professional investigation and medicolegal analysis in homicide investigations specifically as it relates to child homicides and equivocal death inquiries.

Chair: Vernon J. Geberth, MS, MPS  Co-Chair: Barbara C. Wolf, MD
Practical Homicide Investigation  District 5 MEO
Marco Island, FL  Leesburg, FL

Faculty:
Thomas C. McAndrew, BA  Andrea Zaferes, BA
Pennsylvania State Police  Shokan, NY
Orefield, PA

Program Description: This session will familiarize forensic scientists and investigators with the art and science involved in death investigation. The participants will benefit from more than 130 years of combined homicide and forensic pathology experience of the four presenters. This session will focus on the elements of homicide investigation, medicolegal analysis, and how follow-up procedures require close communication between prosecutors, criminalists, pathologists, and other forensic specialists. The session learning points are supported by detailed accounts of actual murder cases.

Program:

8:30 a.m. - 10:00 a.m.  Introduction to Practical Homicide Investigation®: Preliminary Investigation at the Scene and Equivocal Deaths  
Vernon J. Geberth, MS, MPS

10:00 a.m. - 10:30 a.m.  Break

10:30 a.m. - 12:00 p.m.  Medicolegal Evaluation of Child Abuse and Homicides  
Barbara C. Wolf, MD

12:00 p.m. - 1:15 p.m.  Lunch

1:15 p.m. - 3:00 p.m.  Case Histories of Juveniles Who Commit Murder  
Thomas C. McAndrew, BA

3:00 p.m. - 3:30 p.m.  Break
Pre-Registration Required — $200

#10 Practical Homicide Investigation®: An Evaluation of Homicides Involving Child Victims, Child Offenders, and Equivocal Death Investigations (continued)

Program cont.:

3:30 p.m. - 4:45 p.m.  
Aquatic Death Investigation — Child Abuse and Homicide  
*Andrea Zaferes, BA*

4:45 p.m. - 5:00 p.m.  
Discussion  
*Vernon J. Geberth, MS, MPS; Barbara C. Wolf, MD; Thomas C. McAndrew, BA; Andrea Zaferes, BA*

Targeted Audience: General, Pathology/Biology

Knowledge Level Required: Intermediate (some knowledge)

Expected Handout Length: 150 Pages

Restricted Audience Size: 125
Pre-Registration Required — $100

#11 Child Homicides: The Critical Role of Interdisciplinary Expert Collaboration

Monday, February 22, 2016  1:00 p.m. – 5:00 p.m.  3.5 CE Hours

Educational Objective(s): After attending this presentation, attendees will better understand the main types of pathology observed in child abuse cases, the problems of identifying time sequences and how injuries are inflicted based upon the pathology present, and how law enforcement agencies can use medical and scientific evidence to investigate allegations of child homicide. Attendees will also learn how evidence is presented and challenged in homicide trials in the Canadian criminal justice system and how the Canadian legal system has dealt with undercover police operations and its admissibility as evidence.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by providing information on different law enforcement techniques and how forensic medical evidence can be integrated into a complex investigation of a difficult and often contested area of the criminal justice system.

Chair: Chris Milroy, MD, LLB
Ottawa Hospital
Ottawa, ON, CANADA

Co-Chair: Jacqueline L. Parai, MD
Division of Anatomical Pathology
Ottawa, ON, CANADA

Faculty:
Michael Cavilla, BA
Calgary Police Service
Major Crimes Section
Calgary, AB, CANADA

Evan Matshes, MD
Academic Forensic Pathology, Inc.
Calgary, AB, CANADA

Program Description: This session will discuss the integration of child homicide analyzing the different roles of law enforcement and medical/scientific experts and the importance of the integration of these different roles in investigation while maintaining professional independence. The session will involve an examination of the general medical aspects of child homicides, including the typical pathology, and will then look at a major case using the Canadian “Mr. Big” technique used by law enforcement, a technique which has been the subject of examination by the Supreme Court of Canada.

Program:

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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</table>
| 1:00 p.m.  | Pathology of Child Homicide  
Evan Matshes, MD |
| 2:30 p.m.  | Open Discussion  
Evan Matshes, MD; Michael Cavilla, BA; Chris Milroy, MD, LLB; Jacqueline L. Parai, MD |
| 2:45 p.m.  | Break                                                                                           |
| 3:15 p.m.  | Integration of Expert Evidence With Law Enforcement Exercise  
Michael Cavilla, BA; Chris Milroy, MD, LLB |
| 4:45 p.m.  | Open Discussion  
Evan Matshes, MD; Michael Cavilla, BA; Chris Milroy, MD, LLB; Jacqueline L. Parai, MD |
Pre-Registration Required — $100

#11 Child Homicides: The Critical Role of Interdisciplinary Expert Collaboration (continued)

**Targeted Audience:** General, Jurisprudence, Pathology/Biology

**Knowledge Level Required:** Basic (little or no knowledge of subject presented)

**Expected Handout Length:** 70 Pages
Pre-Registration Required — $125

#12 Development of a Reasonable Minimum Documentation Standard for Latent Prints

Monday, February 22, 2016  1:00 p.m. - 5:00 p.m.  3.5 CE Hours

Educational Objective(s): After attending this presentation, attendees will have: (1) hands-on experience in the difficulties of creating a one-size-fits-all policy for assigning documentation requirements to latent print evidence based upon the difficulty of the image; (2) experiential first-hand knowledge of some of the key attributes that factor into latent difficulty classifications; and, (3) a better understanding of the arguments for enhanced documentation, as well as some practical suggestions on how to implement such a policy and the tools to design a policy that conforms to their own agency's operational needs.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by furthering the dialogue surrounding the need for and implementation of realistic documentation policies while providing attendees with the practical tools and advice necessary to successfully craft and implement needed minimum documentation standard for latent print comparison work policies in their own laboratories.

Chair:      Co-Chair:
Heidi Eldridge, MS     Jeri D. Ropero-Miller, PhD
RTI International      RTI International
Research Triangle Park, NC     Research Triangle Park, NC

Program Description: This session will review the arguments for implementing a minimum documentation standard for latent print comparison work, then will continue on to two hands-on exercises designed to help identify complexity, including visual training on complexity attributes and terminology. The session will include round-table discussions and culminate in practical suggestions for developing and implementing a policy at each participant's home laboratory.

Program:

1:00 p.m. - 1:10 p.m.  Welcome and Opening Remarks
   Jeri D. Ropero-Miller, PhD

1:10 p.m. - 1:40 p.m.  Discussion of Documentation Philosophy
   Heidi Eldridge, MS

1:40 p.m. - 2:30 p.m.  Exercise One — Gut-Reaction Categorizations of Latent Difficulty
   Heidi Eldridge, MS

2:30 p.m. - 3:00 p.m.  Visual Training on Attribute Terminology
   Heidi Eldridge, MS

3:00 p.m. - 3:15 p.m.  Break

3:15 p.m. - 4:15 p.m.  Exercise Two — Scoring Latents Based on Attributes
   Heidi Eldridge, MS

4:15 p.m. - 4:45 p.m.  Round-Table Discussion
   Heidi Eldridge, MS
Pre-Registration Required — $125

#12 Development of a Reasonable Minimum Documentation Standard for Latent Prints (continued)

Program cont.:

4:45 p.m. - 5:00 p.m. Closing Comments and Suggestions for Implementation of Documentation Policy

Heidi Eldridge, MS

Targeted Audience: Criminalistics, General

Knowledge Level Required: Basic (little to no knowledge of subject presented)

Expected Handout Length: 15 Pages

Restricted Audience Size: 30
Pre-Registration Required — $125

#14 Vaping: What You Didn’t Know About Electronic Cigarettes — And Why You Should Care

Monday, February 22, 2016

1:30 p.m. - 5:00 p.m.

2.75 CE Hours

Educational Objective(s): After attending this presentation, attendees will be able to: (1) understand the mechanism and advantage of aerosols as a drug delivery system; (2) articulate the history of electronic cigarette development, their operation, and components; (3) understand how electronic cigarettes are manipulated for abuse; and, (4) describe an analytical approach for e-cigarette components and e-liquid formulations to include real casework involving electronic cigarettes.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by providing an awareness of electronic cigarette use as an emerging and popular drug of choice and the abuse trend leading to an international criminal justice concern. This presentation will also provide a foundation for which controlled substances units, forensic toxicologists, death investigators, and medical examiners can develop analytical methodologies and refine interpretative opinions when electronic cigarettes are used as a Route of Administration (ROA).

Chair:       Co-Chair:
Michelle R. Peace, PhD     Justin L. Poklis, BS
Virginia Commonwealth University     Virginia Commonwealth University
Richmond, VA        Dept of Pharmacology & Toxicology
Richmond, VA

Faculty:
Richard N. Dalby, PhD     Matthew R. Wood, MS
University of Maryland     Ocean County Sheriff’s Dept
School of Pharmacy     Forensic Science Laboratory
Baltimore, MD        Toms River, NJ

Adam Polhemus, BA
New Jersey State Police
West Trenton, NJ

Program Description: This session will describe how electronic cigarettes work and their efficacy in drug delivery. This session will support analytical efforts in controlled substances units and support the findings and opinions of scientists, medical examiners, death investigators, and forensic toxicologists as they present analytical results. This session will also provide greater understanding in the court systems nationwide as to the nature of drug usage, abuse, and overdose cases in which electronic cigarettes were used to deliver an illicit drug.

Program:

1:30 p.m. - 1:45 p.m.  Introduction
Michelle R. Peace, PhD

1:45 p.m. - 2:30 p.m.  Basic Mechanism and Efficacy of Aerosols in Drug Delivery
Richard N. Dalby, PhD

2:30 p.m. - 3:15 p.m.  The E-Cig Evolution, Use, and Operation
Michelle R. Peace, PhD
Pre-Registration Required — $125

#14 Vaping: What You Didn’t Know About Electronic Cigarettes — And Why You Should Care (continued)

Program cont.:

3:15 p.m. - 3:45 p.m.  Break

3:45 p.m. - 4:30 p.m.  Manipulation and Analysis of the E-Cigs and E-Liquids 
Justin L. Poklis, BS

4:30 p.m. - 5:00 p.m.  Case Examples 
Matthew R. Wood, MS, Adam Polhemus, BA

Targeted Audience: Criminalistics, General, Pathology/Biology, Toxicology

Knowledge Level Required: Basic (little to no knowledge of subject presented)

Expected Handout Length: 60 Pages
Pre-Registration Required — $150

#15 Addressing Damaged Mobile Devices for Data Acquisition

Monday, February 22, 2016  1:30 p.m. - 5:00 p.m.  3.0 CE Hours

Educational Objective(s): After attending this presentation, attendees will have explored the topic of damaged mobile devices and reviewed the existing literature in this and peripheral research areas. Attendees will also complete hands-on activities including the examination of a ballistics-damaged mobile phone, documented the damage to the device in a written report and with photo documentation, disassembled a ballistics-damaged mobile phone, and employed a donor device via the “fraternal clone” method to repair the device for power on and data acquisition. Attendees will affect future direction of the damaged devices research by providing input into the damaged devices program.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by establishing that simply because the device is damaged does not mean the data is gone. Successful data acquisition is possible from damaged mobile devices. While each of the damaged device focus areas has the potential for catastrophic damage to the intact electronic device, the potential of data residing on the embedded flash memory of these devices still exists and presents a new research area with limited scientific research in the field of digital forensics.

Chair: Samuel I. Brothers, BBA
U.S. Customs and Border Protection
Springfield, VA

Co-Chair: Richard Ayers, MS
Gaithersburg, MD

Faculty:
Steven B. Watson, BA
Westminster, CO

Program Description: This session will review a series of research projects where mobile devices were damaged with scientific precision, and document the damage and remediation with the intent of publishing the results for the digital forensics community. The scope of the research projects includes liquid damage, thermal damage, impact damage, and ballistics damage. The goal of this damage devices session is to ask the questions, explore the answers, and provide real-time guidance to the field on addressing damaged mobile and embedded devices.

Program:

1:30 p.m. - 1:50 p.m.  Introduce the Damaged Devices Program
Steven B. Watson, BA

1:50 p.m. - 2:10 p.m.  Damage Areas Covered by Research
Steven B. Watson, BA

2:10 p.m. - 2:30 p.m.  Damage Factors Affecting the Ability to Retrieve Data
Steven B. Watson, BA

2:30 p.m. - 2:50 p.m.  Outline the Planned Hands-On Workshop Activity
Steven B. Watson, BA

2:50 p.m. - 3:20 p.m.  Break
Pre-Registration Required — $150

#15 Addressing Damaged Mobile Devices for Data Acquisition (continued)

Program cont.:

3:20 p.m. - 3:40 p.m.  Device Assessment
Steven B. Watson, BA; Samuel I. Brothers, BBA

3:40 p.m. - 4:00 p.m.  Documentation and Chain of Custody
Steven B. Watson, BA; Samuel I. Brothers, BBA

4:00 PM - 4:20 p.m.  Device Disassembly
Steven B. Watson, BA; Samuel I. Brothers, BBA

4:20 p.m. - 4:40 p.m.  Device Assembly Using Donor Phone
Steven B. Watson, BA; Samuel I. Brothers, BBA

4:40 p.m. - 5:00 p.m.  Prepping Phone for Connection to Acquisition Tools
Steven B. Watson, BA; Samuel I. Brothers, BBA

Targeted Audience: Digital & Multimedia Sciences

Knowledge Level Required: Intermediate (some knowledge)

Expected Handout Length: 80 pages

Restricted Audience Size: 40

Supported by: VTO, Inc.
Pre-Registration Required — $100

#16 The American Academy of Forensic Sciences (AAFS) Humanitarian and Human Rights Resource Center

Tuesday, February 23, 2016   8:30 a.m. ‑ 12:00 p.m.    3.0 CE Hours

Educational Objective(s): After attending this presentation, participants will understand the structure of the new AAFS Center and current developments. Attendees will also be informed about key issues and applications within different global regions.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by raising awareness of the new AAFS Center and important developments in global applications of humanitarian and human rights forensic science.

Chair:       Co-Chair:
Douglas H. Ubelaker, PhD    Morris V. Tidball-Binz, MD
Smithsonian Institution     Ferney Voltaire, FRANCE
Dept of Anthropology
Washington, DC

Faculty:
Sabra R. Botch-Jones, MS, MA    Dawn M. Mulhern, PhD
Boston University School of Medicine    Fort Lewis College
Biomedical Forensic Sciences    Dept of Anthropology
Boston, MA    Durango, CO

S. Cordner, MB    Michael S. Pollanen, MD
Victorian Institute of Forensic Medicine    Ontario Forensic Pathology Service
Southbank, AUSTRALIA    Toronto, ON, CANADA

Luis Fondebrider, PhD    Duarte Nuno Vieira, MSc, PhD, MD
Buenos Aires, ARGENTINA    Coimbra, PORTUGAL

Marilyn A. Huestis, PhD
Chemistry & Drug Metabolism    
Intramural Research, NIDA, NIH
Baltimore, MD

Program Description: This session will provide current information on the development, structure, and progress sustained with the AAFS Humanitarian and Human Rights Resource Center. It will also provide perspective from key practitioners regarding global developments and issues relating to humanitarian and human rights forensic science.

Program:

8:30 a.m. ‑ 8:45 a.m.    Introduction
Douglas H. Ubelaker, PhD

8:45 a.m. ‑ 9:05 a.m.    An Overview of Humanitarian and Human Rights Forensic Science
Morris V. Tidball-Binz, MD
#16  The American Academy of Forensic Sciences (AAFS) Humanitarian and Human Rights Resource Center (continued)

Program cont.:

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>9:05 a.m.</td>
<td>Publications and Documents Relating to Humanitarian and Human Rights Forensic Science</td>
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<tr>
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<td><em>Marilyn A. Huestis, PhD</em></td>
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<tr>
<td>9:25 a.m.</td>
<td>Laboratory and Analysis Protocols (LAP) Subcommittee: Scope and Resources</td>
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<td><em>Sabra R. Botch-Jones, MS, MA</em></td>
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<tr>
<td>9:45 a.m.</td>
<td>Integrating Humanitarian and Human Rights Into Forensic Science Education</td>
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<td><em>Dawn M. Mulhern, PhD</em></td>
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<td>10:05 a.m.</td>
<td>Break</td>
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<tr>
<td>10:20 a.m.</td>
<td>Issues and Applications in Latin America</td>
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<td><em>Luis Fondebrider, PhD</em></td>
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<td>10:40 a.m.</td>
<td>Capacity Development in Forensic Medicine in Low- and Middle-Income Countries</td>
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<td><em>Michael S. Pollanen, MD</em></td>
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<td>11:00 a.m.</td>
<td>The Istanbul Protocol and the Forensic Investigation and Documentation of Torture and Ill-Treatment</td>
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<td><em>Duarte Nuno Vieira, MSc, PhD, MD</em></td>
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<tr>
<td>11:20 a.m.</td>
<td>Humanitarian Forensic Science in the Asia Pacific — Recent Developments and Challenges</td>
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<td><em>S. Cordner, MB</em></td>
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<td>11:40 a.m.</td>
<td>Summary and Discussion</td>
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<td><em>Douglas H. Ubelaker, PhD</em></td>
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**Targeted Audience:** All Disciplines

**Knowledge Level Required:** Basic (little to no knowledge of subject presented)

**Expected Handout Length:** 80 Pages
#17 Postmortem Monocular Indirect Ophthamoscopy (PMIO)

**Tuesday, February 23, 2016**

**8:30 a.m. - 12:00 p.m.**

**3.25 CE Hours**

**Educational Objective(s):** After attending this presentation, attendees will be able to: (1) differentiate between direct and indirect ophthalmoscopy, noting advantages and limitations of each technique for the postmortem detection of fundal hemorrhages; (2) discuss the fundal location of retinal hemorrhages relative to their projected aerial image during monocular indirect ophthalmoscopy; and, (3) accurately draw retinal abnormalities observed during monocular indirect ophthalmoscopy with a simple ocular model on a fundal diagram.

**Impact on the Forensic Science Community:** This presentation will impact the forensic science community by providing an overview of PMIO, facilitating skill acquisition, and evaluating practical training and image acquisition with a smartphone.

**Chair:**

Patrick E. Lantz, MD
WFU School of Medicine
Dept of Pathology
Winston-Salem, NC

**Co-Chair:**

Candace H. Schoppe, MD
Southwestern Institute of Forensic Sciences
Dallas, TX

**Program Description:** This session will review the technique of PMIO. Attendees will have a realistic learning experience by practical hands-on training with a procedural headlamp, an aspheric indirect lens, and a simple ocular model containing a variety of retinal abnormalities observed at autopsy. Attendees with smartphones can practice still-image acquisition and video recording of the projected aerial produced during PMIO.

**Program:**

8:30 a.m. - 8:50 a.m.

Introduction to PMIO

*Patrick E. Lantz, MD*

8:50 a.m. - 9:10 a.m.

Introductory PMIO

*Candace H. Schoppe, MD*

9:10 a.m. - 9:20 a.m.

Break and Setup for Practicum

9:20 a.m. - 11:20 a.m.

Hands-On PMIO and Image Documentation

*Patrick E. Lantz, MD; Candace H. Schoppe, MD*

11:20 a.m. - 11:30 a.m.

Break

11:30 a.m. - 12:00 p.m.

Assessment of Skills and Evaluation

*Patrick E. Lantz, MD; Candace H. Schoppe, MD*

**Targeted Audience:** Pathology/Biology

**Knowledge Level Required:** Intermediate (some knowledge)

**Expected Handout Length:** 15

**Restricted Audience Size:** 30
WORKSHOPS

Pre-Registration Required — $100

#18 Improving Your Image: How to Get the Best Out of Your Expensive X-Ray Equipment

Tuesday, February 23, 2016 8:30 a.m. - 12:15 p.m.  3.5 CE Hours

Educational Objective(s): After attending this presentation, attendees will: (1) have a better understanding of basic imaging principles using either film or a digital recording media; and, (2) incorporate these fundamentals into image optimization.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by providing attendees with a better understanding of the association of basic radiographic principles, image acquisition, and optimization of image quality. The target audience for this presentation would include any individual involved in acquiring radiographs in a forensic setting. This would include, but is not limited to, medical examiners, forensic pathologists, dentists, anthropologists, autopsy technicians, and radiographers.

Chair: Gerald J. Conlogue, MHS
Quinnipiac University
Diagnostic Imaging Program
Hamden, CT

Co-Chair: Mark D. Viner, MSc
Cranfield Forensic Institute
Defence Academy of the UK
Inforce Foundation
Shrivenham, UNITED KINGDOM

Program Description: Medical imaging equipment and practices have advanced dramatically in the past decade; however, due to the rapidly developing technology, many of the practices have not been adapted into forensics. The faculty has had extensive experience in integrating technical advances with image optimization in a variety of settings including medical, anthropological, and forensics areas.

Program:

8:30 a.m. - 9:00 a.m.  Forensic Imaging Protocols
Gerald J. Conlogue, MHS

9:00 a.m. - 9:30 a.m.  Organization and Resourcing
Mark D. Viner, MSc

9:30 a.m. - 10:30 a.m.  Image Optimization — Film
Gerald J. Conlogue, MHS

10:30 a.m. - 10:45 a.m.  Break

10:45 a.m. - 11:30 a.m.  Image Optimization — Digital Recording Media
Mark D. Viner, MSc

11:30 a.m. - 11:45 a.m.  Image Projections — Routine Cases
Gerald J. Conlogue, MHS

11:45 a.m. - 12:00 p.m.  Image Projections — Non-Routine Cases
Mark D. Viner, MSc

12:00 p.m. - 12:15 p.m.  Employing Ancillary Equipment
Gerald J. Conlogue, MHS
Pre-Registration Required — $100

#18  Improving Your Image: How to Get the Best Out of Your Expensive X-Ray Equipment (continued)

**Targeted Audience:** Anthropology, General, Odontology, Pathology/Biology

**Knowledge Level Required:** Intermediate (some knowledge)

**Expected Handout Length:** 40 Pages
WORKSHOPS

Las Vegas
2016

Pre-Registration Required — $100

#19 Diversity and Inclusion at the Forensic Science Workplace

Tuesday, February 23, 2016 8:30 a.m. - 12:30 p.m.  3.5 CE Hours

Educational Objective(s): After attending this presentation, attendees will be equipped with the necessary knowledge and tools to reflect on the past, put it into the context of the present, and create the conditions for an inclusive and diverse work environment.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by helping attendees and their organizations better prepare to meet the evolving needs of a diverse and inclusion-focused workplace through the use of emerging trends, data, and practical application methodologies.

Chair: Nikolas P. Lemos, PhD
OCME, Forensic Lab Division
San Francisco, CA

Co-Chair: Daniel S. Isenschmid, PhD
NMS Labs
Willow Grove, PA

Faculty:
Cathy Tobin
Cathy Tobin, PHR
Seattle, WA

Chinyere M. Williams, BS
Oakland, CA

Program Description: This session will draw on the expertise and experience of forensic scientists and human resources professionals to provide a workplace diversity and inclusion framework that may be applied to the forensic science workplace.

Program:

8:30 a.m. - 8:45 a.m. Welcome and Introduction
Nikolas P. Lemos, PhD

8:45 a.m. - 9:15 a.m. Historical Review of Diversity and Inclusion
Chinyere M. Williams, BS

9:15 a.m. - 10:15 a.m. Maximizing Diversity and Inclusion — Are You Inclusive?
Cathy Tobin

10:15 a.m. - 10:30 a.m. Break

10:30 a.m. - 11:15 a.m. Overcoming Invisible Bias
Cathy Tobin

11:15 a.m. - 12:15 p.m. Diversifying Your Mind
Cathy Tobin

12:15 p.m. - 12:30 p.m. Questions and Answers
Nikolas P. Lemos, PhD; Daniel S. Isenschmid, PhD; Chinyere M. Williams, BS; Cathy Tobin
Pre-Registration Required — $100

#19 Diversity and Inclusion at the Forensic Science Workplace (continued)

Targeted Audience: All Disciplines

Knowledge Level Required: Basic (little to no knowledge of subject presented)

Expected Handout Length: 50 Pages
WORKSHOPS

Pre-Registration Required — $100

#20  On the Leading Edge of Forensic Science

Tuesday, February 23, 2016  8:30 a.m. - 1:00 p.m.  3.5 CE Hours

Educational Objective(s): After attending this presentation attendees will better understand new developments in forensic science that may have an impact on their work.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by providing an overview of some of the new developments in forensic science and by opening a forum for the discussion of issues that arise regarding such developments. A wide variety of developments that will soon impact forensic science have been identified within the Think Tank Committee of the Forensic Sciences Foundation, Inc. and will be discussed in this session.

Chair:       Co-Chair:  
Zeno J. Geradts, PhD     Laura L. Liptai, PhD
Netherlands Forensic Institute  BioMedical Forensics
Den Haag, NETHERLANDS     Moraga, CA

Faculty:  
Edward G. Bartick, PhD     Robert M. Thompson, BS
George Washington University    NIST
Dept of Forensic Sciences Special Programs Office-Forensic Sciences
Washington, DC      Gaithersburg, MD

Katrin Franke, PhD  
Arian C. van Asten, PhD
Gjovik University    Netherlands Forensic Institute
Gjovik, NORWAY      The Hague, NETHERLANDS

Matthew Henshon, AB, JD  
Victor W. Weedn, MD, JD
Henshon Klein LLP    George Washington University
Boston, MA        Washington, DC

Mehdi Moini, PhD  
Gwyn Winfield, MA
George Washington University    CBRNE World
Dept of Forensic Sciences    Falcon Communications
Washington, DC      Winchester, UNITED KINGDOM

Program Description: The goal of this session is to describe how new developments might impact forensic scientists in their work. Practical examples will be presented on lab automation, drones, robotics, instrumental mass spectrometry, 3D measurement techniques for firearm identification, bias in forensic science, nuclear forensics, cyber forensics, and integrated forensic platforms to portable field instruments.

Program:

8:30 a.m. - 9:00 a.m.  Welcome and Introduction  
Zeno J. Geradts, PhD; Laura L. Liptai, PhD

9:00 a.m. - 9:30 a.m.  3D Measurement Techniques for Firearm Identification  
Robert M. Thompson, BS
Program cont.:

<table>
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<tr>
<th>Time</th>
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</table>
| 9:30 a.m. - 10:00 a.m. | Cyber Investigation of Malware  
Katrin Franke, PhD |
| 10:00 a.m. - 10:30 a.m. | Twenty Minutes in a Space Suit: Prioritizing Evidence Collection in a Chemical, Biological, Radiological, and Nuclear (CBRN) Crime Scene  
Gwyn Winfield, MA |
| 10:30 a.m. - 11:00 a.m. | Break |
| 11:00 a.m. - 11:30 a.m. | Portable Field Instruments  
Victor W. Weedn, MD, JD; Edward G. Bartick, PhD; Mehdi Moini, PhD |
| 11:30 a.m. - 12:00 p.m. | Integrated Forensic Platforms  
Arian C. van Asten, PhD |
| 12:00 p.m. - 12:30 p.m. | Panel Drone Forensics  
Zeno J. Geradts, PhD; Katrin Franke, PhD; Arian C. van Asten, PhD;  
Matthew Henshon, AB, JD |
| 12:30 p.m. - 1:00 p.m. | Closing Remarks and Discussion  
Zeno J. Geradts, PhD |

Targeted Audience: Criminalistics, Digital & Multimedia Sciences, Engineering Sciences, General, Jurisprudence,  
Pathology/Biology, Questioned Documents, Toxicology

Knowledge Level Required: Intermediate (some knowledge)

Expected Handout Length: 80 Pages
#21  Crime Assessment: Solving Crime Beyond Profiling

Tuesday, February 23, 2016  
8:30 a.m. - 5:00 p.m.  
6.25 CE Hours

Educational Objective(s): After attending this presentation, attendees will understand that crime assessment is a method of crime investigation that utilizes key structures within the criminological continuum to examine the presence and/or absence of evidence found at the crime scene. Within this framework, there are four major classifications, referred to as the sub-types hereafter, which will be introduced and explained. These sub-types span the criminal spectrum and manifest in the expression of pathological constellations behaviors that can be recognized. Predicated upon these primary factors and coupled with additional principles, attendees will be able to grasp that understanding the crime scene through the crime continuum provides a critical understanding for the motives, methods, and opportunities of the crime.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by providing attendees with the understanding that, although the human experience is variable, crime patterns can be coded to reveal interlocking and separate vectors. By doing so, recurrent elements and themes are developed to group common factors for various desires, intentions, and plans. Ergo, dependent upon the intended outcome, the crimes can reveal differentiated power and anger issues, levels of intimacy, and necessary idiosyncrasies that must be avoided. Accordingly, while acting out crime, the criminal many times inadvertently leaves these pre-crime, crime, and post-crime clues for investigators to find and analyze.

Chair: Richard D. Walter, MA  
Co-Chair: Klaus C. Neudecker, MD  
Montrose, PA  
Landshut, GERMANY

Faculty:  
Amanda L. Farrell, PhD  
Patrick Zirpoli  
Marymount University  
Milanville, PA  
School of Education and Human Services  
Arlington, VA

Lurena A. Huffman, BS  
Suffolk Police Department  
Hampton, VA

Program Description: In contrast to the risks associated with traditional profiling efforts, crime assessment measures the crime by known major sub-type crime patterns (Power-Assertive type; Power-Reassurance type; Anger-Retaliation type; and Anger-Excitation type). These sub-types provide a structural foundation from which to analyze crimes, in effect becoming the DNA of crime. That is, the crime research has identified key elements of the crime which can shape the investigation and provide critical knowledge regarding the various elements of the crime, to include, but certainly not limited to, providing recommended methods of apprehension, interviewing strategies, and prosecutorial considerations. Most importantly, inasmuch as crime assessment is reflective in process, the investigators and experts can explain the process of the investigation without the perils of projection.

Program:

8:30 a.m. - 9:00 a.m.  
Introduction  
Lurena A. Huffman, BS

9:00 a.m. - 10:00 a.m.  
Historical Overview and Context  
Klaus C. Neudecker, MD; Amanda L. Farrell, PhD
Pre-Registration Required — $200

#21 Crime Assessment: Solving Crime Beyond Profiling (continued)

Program cont.:

10:00 a.m. - 10:15 a.m.         Break

10:15 a.m. - 11:15 a.m.         What Is Crime Assessment and How Does It Differ From Profiling?
                                Richard D. Walter, MA

11:15 a.m. - 12:15 p.m.         The Sub-Types: A Brief Overview
                                Patrick Zirpoli; Amanda L. Farrell, PhD

12:15 p.m. - 1:30 p.m.          Lunch

1:30 p.m. - 3:00 p.m.           Sexual Manifestations of the Sub-Types and Case Applications
                                Richard D. Walter, MA; Patrick Zirpoli

3:00 p.m. - 3:15 p.m.           Break

3:15 p.m. - 4:30 p.m.           Non-Sexual Manifestations of the Sub-Types and Case Applications
                                Richard D. Walter, MA; Patrick Zirpoli

4:30 p.m. - 5:00 p.m.           Moderated Discussion & Questions and Answers
                                Lurena A. Huffman, BS

Targeted Audience: General, Psychiatry & Behavioral Science

Knowledge Level Required: Basic (little to no knowledge of subject presented)

Expected Handout Length: 80 Pages

This workshop will use many cases, videos, and discussions points to illustrate the conceptual and applied understanding of crime assessment. Given the nature of the material, it is not recommended for those persons who are sensitive and/or in some form of crisis.

100
WORKSHOPS

Pre-Registration Required — $200

#22 Developing a Professional Code of Ethics in Digital Forensics

Tuesday, February 23, 2016  8:30 a.m. - 5:00 p.m.  6.0 CE Hours

Educational Objective(s): After attending this presentation, attendees will become aware of issues that constitute a need to generate support for a unified professional code of ethics in digital forensics and to identify the steps necessary to establish such a code.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by bringing together key stakeholders and representatives in the area of digital forensics, including academics, practitioners, and vendors to discuss the need for a professional code of ethics.

Chair: Kathryn C. Seigfried-Spellar, PhD
Purdue University
Computer and Information Technology
West Lafayette, IN

Co-Chair: Rhesa G. Gilliland, MS
U.S. Postal Inspection Service
Forensic Laboratory Services
Dulles, VA

Faculty:
James R. Dibble, BS
International Association of Computer Investigative Specialists
Spokane, WA

Marcus Rogers, PhD
Purdue University
West Lafayette, IN

Michael M. Losavio, JD
University of Louisville
Louisville, KY

Anthony Skjellum, PhD
Auburn University
Auburn, AL

Keith W. Miller, PhD
University of Missouri – St. Louis
St. Louis, MO

Program Description: Almost every criminal and civil investigation now involves some form of digital evidence, yet we are a profession that lacks a clearly articulated, consensus-based, code of ethics.

Program:

8:30 a.m. - 8:45 a.m.  Introduction
Kathryn C. Seigfried-Spellar, PhD

8:45 a.m. - 10:00 a.m.  Do We Need a Code of Ethics?
James R. Dibble, BS; Michael M. Losavio, JD; Keith W. Miller, PhD;
Marcus Rogers, PhD; Anthony Skjellum, PhD

10:00 a.m. - 10:15 a.m.  Break

10:15 a.m. - 11:30 a.m.  Models of Professional Codes of Ethics
James R. Dibble, BS; Michael M. Losavio, JD; Keith W. Miller, PhD;
Marcus Rogers, PhD; Anthony Skjellum, PhD
#22 Developing a Professional Code of Ethics in Digital Forensics (continued)

**Program cont.:**

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<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>Speakers</th>
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<tbody>
<tr>
<td>11:30 a.m.</td>
<td>Morning Wrap-Up &amp; Questions and Answers</td>
<td>Kathryn C. Seigfried-Spellar, PhD; Rhesa G. Gilliland, MS</td>
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<tr>
<td>12:00 p.m.</td>
<td>Lunch</td>
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<tr>
<td>1:15 p.m.</td>
<td>Challenges to Developing a Code of Ethics</td>
<td>James R. Dibble, BS; Michael M. Losavio, JD; Keith W. Miller, PhD; Marcus Rogers, PhD; Anthony Skjellum, PhD</td>
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<tr>
<td>2:15 p.m.</td>
<td>Identify Core Items/Language</td>
<td>James R. Dibble, BS; Michael M. Losavio, JD; Keith W. Miller, PhD; Marcus Rogers, PhD; Anthony Skjellum, PhD</td>
</tr>
<tr>
<td>3:30 p.m.</td>
<td>Break</td>
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<tr>
<td>3:45 p.m.</td>
<td>Next Steps to Implementing a Code of Ethics?</td>
<td>James R. Dibble, BS; Michael M. Losavio, JD; Keith W. Miller, PhD; Marcus Rogers, PhD; Anthony Skjellum, PhD</td>
</tr>
<tr>
<td>4:30 p.m.</td>
<td>Afternoon Wrap-Up &amp; Questions and Answers</td>
<td>Kathryn C. Seigfried-Spellar, PhD; Rhesa G. Gilliland, MS</td>
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</table>

**Targeted Audience:** Digital & Multimedia Sciences, General, Jurisprudence

**Knowledge Level Required:** Basic (little to no knowledge of subject presented)

**Expected Handout Length:** 20 Pages
**WORKSHOPS**

*Pre-Registration Required — $250*

#23  **Considerations for Implementing Next Generation Sequencing (NGS) Technologies Into a Forensic Laboratory**

**Tuesday, February 23, 2016   8:30 a.m. - 5:00 p.m.   7.0 CE Hours**

**Educational Objective(s):** After attending this presentation, attendees will understand NGS methodologies that can be applied to typical forensic specimens as well as appreciate the considerations specific to the validation of NGS technologies.

**Impact on the Forensic Science Community:** This presentation will impact the forensic science community by discussing the benefits and challenges of implementing NGS into a forensic laboratory.

**Chair:**
Timothy P. McMahon, PhD
Armed Forces DNA Identification Laboratory
Dover Air Force Base
Dover, DE

**Co-Chair:**
Charla Marshall, PhD
Armed Forces DNA Identification Laboratory
Dover Air Force Base
Dover, DE

**Faculty:**
Kimberly S. Andreaggi, MFS
ARP/AFDIL
Dover AFB, DE

Christina M. Neal, MS
Armed Forces DNA Identification Laboratory
Dover Air Force Base
Dover, DE

Alice Briones, DO
Magnolia, DE

Walther Parson, PhD
Innsbruck, AUSTRIA

Katherine B. Gettings, PhD
NIST
Gaithersburg, MD

Michelle A. Peck, MFS
Armed Forces DNA Identification Laboratory
Dover Air Force Base
Dover, DE

Erin M. Gorden, MFS
Armed Forces DNA Identification Laboratory
Dover Air Force Base
Dover, DE

Joseph D. Ring, MS
Dover AFB, DE

Richard A. Guerrieri, MS
Stafford, VA

Peter M. Vallone, PhD
Gaithersburg, MD

Jennifer L. Higginbotham, MFS
Dover AFB, DE

**Program Description:** This session will provide a snapshot of the current progress of forensic DNA laboratories in the implementation of NGS technologies. First, a historical perspective on DNA typing technologies will be presented to position NGS within the context of methodological advancement. The session will follow with an overview of NGS methods available to the forensic community and a discussion of laboratory infrastructure as it transitions to meet NGS requirements. Several presentations will focus on data generated from NGS workflows, including an evaluation of quantification systems as well as Short Tandem Repeat (STR) sequencing kits. The session will then turn to mitochondrial DNA sequencing, data analysis, and interpretation. Considerations surrounding the selection of
#23  Considerations for Implementing Next Generation Sequencing (NGS) Technologies Into a Forensic Laboratory (continued)

NGS workflows and the challenges to the validation of NGS technology will be discussed. The final portion of this session will take the pulse of the broader forensic DNA community as it works to adopt NGS technologies in the laboratory.

Program:

8:30 a.m. - 8:35 a.m.  Opening Remarks  
*Kimberly S. Andreaggi, MFS*

8:35 a.m. - 8:55 a.m.  Historical Perspective of Forensic DNA Typing  
*Peter M. Vallone, PhD*

8:55 a.m. - 9:25 a.m.  Overview of NGS Technologies  
*Kimberly S. Andreaggi, MFS*

9:25 a.m. - 9:35 a.m.  Quantitation Methods Used for NGS  
*Joseph D. Ring, MS*

9:35 a.m. - 10:05 a.m.  Laboratory Considerations Before Implementing NGS  
*Timothy P. McMahon, PhD*

10:05 a.m. - 10:20 a.m.  Break

10:20 a.m. - 10:50 a.m.  Single Nucleotide Polymorphism (SNP) and STR Multiplexes for NGS  
*Katherine B. Gettings, PhD*

10:50 a.m. - 11:20 a.m.  Preparation of Low-Quality Samples for NGS  
*Erin M. Gorden, MFS*

11:20 a.m. - 11:50 a.m.  Development of a Custom Tool and Interpretation Thresholds for Mitochondrial DNA (mtDNA) NGS Data Analysis  
*Micelle A. Peck, BS*

11:50 a.m. - 12:15 p.m.  Optimization of NGS Workflows in the Laboratory  
*Joseph D. Ring, MS*

12:15 p.m. - 1:15 p.m.  Lunch

1:15 p.m. - 1:35 p.m.  Characterization of Candidate Reference Materials by NGS  
*Peter M. Vallone, PhD*

1:35 p.m. - 2:05 p.m.  Application of the Forensic Guidelines to NGS  
*Charla Marshall, PhD*
Pre-Registration Required — $250

#23 Considerations for Implementing Next Generation Sequencing (NGS) Technologies Into a Forensic Laboratory (continued)

Program cont.:

2:05 p.m. - 2:35 p.m.  A Developmental Validation of mtDNA Capture and Illumina® Sequencing for Severely Compromised Human DNA Samples
Jennifer L. Higginbotham, MFS

2:35 p.m. - 3:00 p.m.  Final Hurdles for Implementing NGS in a Forensic Laboratory
Christina M. Neal, MS

3:00 p.m. - 3:15 p.m.  Break

3:15 p.m. - 3:45 p.m.  NGS: Battelle’s Implementation Initiatives for Forensic DNA Analysis
Richard A. Guerrieri, MS

3:45 p.m. - 4:15 p.m.  NGS in Forensics: Why, When, and Where?
Walther Parson, PhD

4:15 p.m. - 4:45 p.m.  Application of NGS to the Medical Examiner’s Mission
Alice Briones, DO

4:45 p.m. - 5:00 p.m.  Panel Discussion and Closing Remarks
Kimberly S. Andreaggi, MFS; Alice Briones, DO; Katherine B. Gettings, PhD;
Erin M. Gorden, MFS; Richard A. Guerrieri, MS; Jennifer L. Higginbotham, MFS;
Christina M. Neal, MS; Walther Parson, PhD; Michelle A. Peck, BS; Joseph D. Ring, MS;
Peter M. Vallone, PhD; Charla Marshall, PhD; Timothy P. McMahon, PhD

Targeted Audience: Criminalistics

Knowledge Level Required: Intermediate (some knowledge)

Expected Handout Length: 100 Pages
Pre-Registration Required — $100

#24 Elder Abuse and Neglect: What’s Happening to Grandma?
Tuesday, February 23, 2016  1:00 p.m. ‑ 4:30 p.m.  3.25 CE Hours

Educational Objective(s): After attending this presentation, attendees will: (1) recognize the different forms of Elder Abuse (EA); (2) understand the motivation behind EA; (3) identify specific types of trauma found in EA; (4) recognize the injuries that may mimic trauma in the elderly; (5) understand the process of law enforcement response and death investigation in EA; and, (6) distinguish the similarities and differences between intentional neglect and self-neglect.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by increasing the ability to detect the different forms of EA, to distinguish abuse from neglect, and to increase the awareness of the law enforcement response in cases of criminal abuse and death investigation.

Chair: Amy Y. Carney, PhD  Co-Chair: Stewart D. Ryckman, MD
San Marcos, CA  Mansfield, OH

Faculty:
Mark Carroll, BA  Debi Spencer, MFS
Summit County Sheriff’s Office  APO, AE
Akron, OH

Program Description: This session will assist attendees in recognizing the different types of elder abuse, understanding the motivation behind elder maltreatment, and provide specific case examples of abuse and neglect which will assist the forensic professional in identifying and intervening in elder maltreatment. It will also provide tips and techniques for documentation, assists the forensic professional in distinguishing between accident and criminal acts, and discusses the difficulties in prosecution in cases of EA.

Program:
1:00 p.m.  - 1:30 p.m.  Introduction to EA: Scope and Breadth
Amy Y. Carney, PhD

1:30 p.m.  - 2:00 p.m.  Examples of EA
Debi Spencer, MFS; Stewart D. Ryckman, MD

2:00 p.m.  - 2:30 p.m.  Skin Trauma: Mr. Bruise Meet Miss Contusion
Amy Y. Carney, PhD

2:30 p.m.  - 2:45 p.m.  Break

2:45 p.m.  - 3:15 p.m.  The Medical Response to EA: The View From the ER
Stewart D. Ryckman, MD

3:15 p.m.  - 3:45 p.m.  Elder Abuse vs. Elder Neglect: How Do You Know?
Debi Spencer, MFS; Stewart D. Ryckman, MD
Pre-Registration Required — $100

#24 Elder Abuse and Neglect: What’s Happening to Grandma? (continued)

Program cont.:

3:45 p.m. - 4:15 p.m.  Law Enforcement Perspective: Summit, Ohio
                      Mark Carroll, BA

4:15 p.m. - 4:30 p.m.  Conclusions and Implications: What Have We Learned?
                        Amy Y. Carney, PhD; Stewart D. Ryckman, MD; Mark Carroll, BA;
                        Debi Spencer, MFS;

Targeted Audience: Criminalistics, General, Jurisprudence, Psychiatry & Behavioral Science

Knowledge Level Required: Intermediate (some knowledge)

Expected Handout Length: 150 Pages
American Society of Forensic Odontology

46th Annual Scientific Session

Registration can be accomplished on the ASFO website at www.asfo.org beginning in November.

Research, Recovery, Identification, and Repatriation: The Lost Graves of Tarawa

Tuesday

February 23 — 7:00 a.m. – 5:30 p.m.

Program:

7:00 a.m. - 8:00 a.m.  Registration and Breakfast

8:00 a.m. - 8:20 a.m.  Welcome
  Roger D. Metcalf, DDS, JD
  President, American Society of Forensic Odontology

8:20 a.m. - 8:30 a.m.  Program Introduction
  David R. Senn, DDS
  President-Elect, American Society of Forensic Odontology

8:30 a.m. - 10:00 a.m.  Battle of Tarawa and the Role of History Flight, Inc: History of the Burials, Document, and Archive Research
  Mark Noah

10:00 a.m. - 10:15 a.m.  Break

10:15 a.m. - 11:30 a.m.  Locating the Missing Servicemen
  Mark Noah; Chester P. Walker, PhD

11:30 a.m. - 12:00 p.m.  Luncheon and Annual Business Meeting

12:00 p.m. - 1:45 p.m.  Recovery of the Missing Servicemen
  Kristen Baker, MA, RPA

1:45 p.m. - 2:30 p.m.  Anthropological Analysis Procedures and Summary
  Kristen Baker, MA, RPA; Hillary R. Parsons, MA

2:30 p.m. - 3:15 p.m.  Odontological Analysis Procedures and Summary
  Corinne D’Anjou, DMD; James F. Goodrich, BDS

3:15 p.m. - 3:30 p.m.  Break

3:30 p.m. - 4:15 p.m.  Odontological Analysis Procedures and Summary
  Corinne D’Anjou, DMD; James F. Goodrich, BDS
Research, Recovery, Identification, and Repatriation: The Lost Graves of Tarawa

Program cont.:

4:15 p.m. - 5:00 p.m. DNA Testing Procedures and Summary
*Edwin F. Huffine, PhD*

5:00 p.m. - 5:30 p.m. Family Perspective
*Clay Bonnyman Evans*
UUUggh! The Unexpected, Unexplained, and Often Undetermined

Tuesday
February 23 — 12:55 p.m. – 5:15 p.m.

This program will include the discussion of: (1) current research trends related to Sudden Cardiac Death (SCD), Sudden Unexpected Death in Epilepsy (SUDEP), Sudden Unexplained Death in Childhood (SUDC), and sudden unexpected death in infancy; (2) current issues related to genetic testing of cardiac channelopathies in postmortem cases; (3) mechanisms of cardiorespiratory collapse after seizures; (4) Centers for Disease Control and Prevention (CDC) efforts and updates from the Sudden Unexpected Infant Death (SUID) Case Registry and the Sudden Death in the Young (SDY) Registry; (5) International Classification of Diseases (ICD) codes relevant to cases of sudden unexplained deaths; (6) needs of the research community, public health, and Next of Kin (NOK) from the Medicolegal Death Investigation (MDI) process; and, (7) resources available to medical examiners when investigating unexpected natural deaths. The program will be constructed to allow for CME and SAMs credits.

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<td>Welcome</td>
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<td>1:00</td>
<td>Opening Remarks</td>
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<td>1:05</td>
<td>Redefining SCD: Insights From the San Francisco P0stmortem Systematic InvesTigation (POST) SCD Study</td>
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<td>1:35</td>
<td>The State of the Molecular Autopsy for Sudden Death in the Young</td>
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<td>2:05</td>
<td>SUDEP and SUDC: An Overview</td>
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<td>2:25</td>
<td>When Life Support Fails — Insights Into the Mechanisms of Cardiorespiratory Collapse After Seizures</td>
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<tr>
<td>2:55</td>
<td>Cardiac Pathology (CP) and Neuropathology (NP) Investigations of Unexpected Death — The 2016 SDY Perspective</td>
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<td>3:20</td>
<td>Break</td>
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| 3:40 p.m. - 4:00 p.m. | CDC Efforts in SUID Case Registry and SDY Registry  
Carrie Shapiro-Mendoza, PhD, MPH |
Robert Anderson, PhD |
| 4:15 p.m. - 5:00 p.m. | Death Certification and Death Stratification Panel Discussion — Panel to Address the Following: (1) Specific Needs of Research, Public Health vs. Families From the MDI Process and Death Certification (DC); (2) After DC Ramifications for NOK and Clinicians Caring for Them; (3) Resources Available to MEs for Unexpected Natural Deaths; and, (4) Moving Forward for a Better Understanding and Identification of the Cases That Elude Forensic Science  
Keith Pinckard, MD, PhD; Margaret Warner, PhD; Laura Crandall, MA; David R. Fowler, MD; Zian Tseng, MD; Ellen Moffatt, MD; Michael Ackerman, MD, PhD; Orrin Devinsky, MD; George Richerson, MD; Jennifer L. Hammers, DO; Carrie Shapiro-Mendoza, PhD, MPH; Robert Anderson, PhD |
| 5:00 p.m. - 5:15 p.m. | Questions & Answers |

**CME STATEMENTS FOR JOINTLY SPONSORED ACTIVITIES**

This activity has been planned and implemented in accordance with the Essential Areas and policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint sponsorship of MedChi, The Maryland State Medical Society, and the National Association of Medical Examiners. MedChi is accredited by the ACCME to provide continuing medical education for physicians.

MedChi designates this live activity for a maximum of 3.5 *AMA PRA Category 1 Credits™*. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

**Continuing Education Administration Fee**
There is an administrative charge ($75 pre-registration, $100 on-site registration) for persons wishing to receive this credit. It will be necessary for you to complete a program evaluation as well as pay the administrative fee to receive CME credit for this meeting.

**Self-Assessment Module**
The American Board of Pathology has deemed the National Association of Medical Examiners to be an approved provider of Self-Assessment Modules (SAMs) for the Life-Long Learning and Self-Assessment Requirement (Part II) for Maintenance of Certification in Forensic Pathology. This activity has been planned and implemented in accordance with those guidelines and qualify for a maximum of 3.5 hours of SAMs. There is an administrative charge of $35 for Members and $105 for Non-Members.

**Registration Fee**
There is a registration fee of $100 pre-registration and $150 on-site registration. Registration for this event is separate from the AAFS registration process. Contact Denise McNally at 660-734-1891 or email name@thename.org to receive a registration form.
National Institute of Justice
Forensic Science Research and Development Symposium
American Academy of Forensic Sciences 68th Annual Scientific Meeting

The NIJ Forensic Science Research and Development Symposium is a free and open meeting where attendees can learn about NIJ-funded research across a variety of forensic science areas. Feel free to stop by and listen to specific presentations or stay all day and learn about the diverse NIJ forensic science R&D portfolio.

Registration information will be available at www.forensicCOE.org.

Tuesday
February 23 — 8:30 a.m. – 5:15 p.m.

Program:

8:30 a.m. - 8:40 a.m.  Welcome and Opening Remarks  
Gerald M. LaPorte, MSFS  
Office of Investigative and Forensic Sciences

Morning Session I — Impression, Pattern, and Trace Evidence

8:40 a.m. - 9:05 a.m.  Mobile, Automated Tool Mark Characterization/Comparison System  
Scott Chumbley

9:05 a.m. - 9:30 a.m.  ACEware™ Latent Fingerprint Identification Research and Software Development  
Austin Hicklin

9:30 a.m. - 9:55 a.m.  Isotope Analyses of Hair as a Trace Evidence Tool to Reconstruct Human Movements: Establishing the Effects of the “Human Ecosystem” on Strontium and Oxygen Isotope Ratios  
Brett J. Tipple, PhD

9:55 a.m. - 10:10 a.m.  Break

Morning Session II — Forensic Biology/DNA

10:10 a.m. - 10:35 a.m.  A Hybrid Machine-Learning Approach for DNA Mixture Interpretation  
Michael Marciano, MS

10:35 a.m. - 11:00 a.m.  Delivery of a Microfluidic Acoustic Sperm Cell Trapping Prototype for Rapid Processing of Sexual Assault Evidence  
James P. Landers, PhD

11:00 a.m. - 11:25 a.m.  Isolation of Sperm DNA Through Protamine Capture  
Michael Gerdes

11:25 a.m. - 11:35 a.m.  Break
Program cont.:

11:35 a.m. - 12:00 p.m.  Robust Short Tandem Repeat (STR) Calling From High-Throughput Sequencing Technologies
   Yaniv Erlich

12:00 p.m. - 12:25 p.m.  Measuring Rates of Mitochondrial DNA (mtDNA) Heteroplasmy and Assessing Transmission of Variants
   Mitchell M. Holland, PhD

12:25 p.m. - 1:45 p.m.  Lunch

Afternoon Session I — Anthropology and Microbial Forensics

1:45 p.m. - 2:10 p.m.  The Transformation of Data Collection Procedures for Forensic Skeletal Material: Evaluating Osteometric Data in Forensic Anthropology
   Natalie R. Langley, PhD

2:10 p.m. - 2:35 p.m.  A Multidisciplinary Validation Study of Non-Human Animal Models for Human Decomposition Research
   Dawnie W. Steadman, PhD

2:35 p.m. - 3:00 p.m.  Transforming Techniques: A Validation Study of Assessing the Postmortem Interval of Humans Using a Statistical Model — Replacing the Observation Approach
   Joan A. Bytheway, PhD

3:00 p.m. - 3:25 p.m.  Postmortem Changes and Translocation of Bacterial Community Structure and Function for Use in Criminal Investigations
   Heather R. Jordan, PhD

3:25 p.m. - 3:35 p.m.  Break

Afternoon Session II — Controlled Substances and Toxicology

3:35 p.m. - 4:00 p.m.  Dried Blood Spot Analysis as an Emerging Technology for Application in Forensic Toxicology
   Nichole Bynum

4:00 p.m. - 4:25 p.m.  Characterization and Abuse of Electronic Cigarettes: The Efficacy of “Personal Vaporizers” as an Illicit Drug Delivery System
   Tyson R. Baird, MSFS

4:25 p.m. - 4:50 p.m.  Should Forensic Laboratories Embrace Ultra High-Performance Supercritical Fluid Chromatography as a Separation Technique for the Analysis of Seized Drugs?
   Ira S. Lurie, PhD

4:50 p.m. - 5:15 p.m.  A New Approach to Drug Screening in Forensic Toxicology: Paper Spray Mass Spectrometry
   Nicholas E. Manicke
Due to potential changes in the program, the AAFS encourages you to access the most up-to-date schedule on the AAFS website at www.aafs.org.
**Wednesday**

**Poster Session**

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<th>Presentation</th>
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<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>A1</td>
<td>Quantification of Radiologic Identification: Development of a Population Frequency Data Repository</td>
<td>Angi M. Christensen, PhD*; Gary M. Hatch, MD*</td>
</tr>
<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>A2</td>
<td>Systematic Bias in Estimating Body Mass of Korean Samples With the Morphometric Method of Ruff et al. (2005)</td>
<td>Yangseung Jeong, PhD*; Eun Jin Woo, PhD</td>
</tr>
<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>A3</td>
<td>A Two-Pronged Approach to the Identification of Deceased Unidentified Border Crossers in North Carolina: 3D-ID and Geochemical Analysis</td>
<td>Chelsey A. Juarez, PhD*; Ann H. Ross, PhD</td>
</tr>
<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>A4</td>
<td>Commingling Among Disinterred Remains of Unknown United States Service Members From the Korean War</td>
<td>Mary S. Megyesi, PhD*; Nicholas V. Passalacqua, PhD; Popi Chrysostomou, MSc; Michael R. Dolski, PhD</td>
</tr>
<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>A5</td>
<td>Death Along the United States/Mexico Border: A Comparative View of Policy and Practice in Arizona and Texas</td>
<td>Kate Spradley, PhD*; Robin C. Reineke, PhD; Mercedes Doretti; Bruce E. Anderson, PhD</td>
</tr>
<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>A6</td>
<td>Sex Determination Using Discriminant Analysis of Upper and Lower Extremity Bones: A New Approach Using the Volume and Surface Area of Digital Models</td>
<td>Dong-Ho Eddie Kim, BSc*; U-Young Lee, MD; In-Beom Kim, PhD; Dai-Soon Kwak, PhD</td>
</tr>
<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>A7</td>
<td>3D Analysis of Computed Tomography (CT)-Derived Lumbar Spine Models for the Estimation of Sex</td>
<td>Robert Foley, MS; Joshua M. Hazelton, BS; Summer J. Decker, PhD*; Jonathan M. Ford, PhD*</td>
</tr>
<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>A8</td>
<td>Estimation of Stature From Footprints in a North Indian Population</td>
<td>Kewal Krishan, PhD*; Tamij Kanchan, MD</td>
</tr>
<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>A9</td>
<td>Sexual Dimorphism in Mandibular Morphology Between Dentate and Edentate Individuals — Implications for Sex Estimation</td>
<td>Heli Maijanen, PhD*; Beatrix Dudzik, PhD; Kathleen Hauther</td>
</tr>
<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>A10</td>
<td>Evaluating Elongated Pubic Bones as a Potential Sexing Method for Juveniles</td>
<td>Cassie E. Skipper, BS*</td>
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<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>A11 Meghan Price*, James Pokines, PhD; Jonathan D. Bethard, PhD</td>
<td>Age Estimation Using the Sternal End of the Clavicle: A Test of the Falys and Prangle Archaeological Method for Forensic Application</td>
</tr>
<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>A12 Sierra Santana, BA*; Jonathan D. Bethard, PhD; Tara L. Moore, PhD</td>
<td>Accuracy of Dental Age in Non-Adults: A Comparison of Two Methods for Age Estimation Using Radiographs of Developing Teeth</td>
</tr>
<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>A13 A. Midori Albert, PhD*; Kate D. Sherwood</td>
<td>A Test of Cervical Vertebral Ring Union for Age-at-Death Estimation Using the Albert-Sherwood Method</td>
</tr>
<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>A14 Jacob Griffin, BS*; Stephen D. Ousley, PhD</td>
<td>Age Estimation Using Osteophytic Activity on the Lumbar Vertebrae and Partial Least Squares Regression</td>
</tr>
<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>A15 Kristina B. Altes, MA*</td>
<td>The First Thoracic Vertebral Centrum as an Adult Age Estimation Site</td>
</tr>
<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>A16 George R. Miñer, PhD; Jesper L. Boldsen, PhD; Stephen D. Ousley, PhD*; Svenja Weise, PhD; Sara M. Getz, MS; Peter Tarp, MS</td>
<td>Improved Adult Age Estimation Using New Skeletal Traits and Transition Analysis</td>
</tr>
<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>A17 Brianna L. Robinson*, Kathleen A.S. Blake, PhD*</td>
<td>Effects of Scavenging Birds and Insects on Decomposition Time of Pig Carcasses at the Rice Creek Field Station</td>
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<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>A18 Christiane Baigent, MSc*; Gary T. Scott, MA*</td>
<td>The Mummy in the Microwave: The Efficacy of the Microwave Method for the Maceration of Desiccated Tissue</td>
</tr>
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<td>11:30 a.m. - 1:00 p.m.</td>
<td>A19 Chloe P. McDaneld*, Daniel J. Wescott, PhD</td>
<td>The Effect of Plastic Tarps on the Rate of Human Decomposition During the Spring/Summer in Central Texas</td>
</tr>
<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>A20 Lindsey G. Roberts, MA*; Jessica R. Spencer, MA</td>
<td>Effect of Body Size on the Rate of Outdoor Human Soft Tissue Decomposition</td>
</tr>
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<td>11:30 a.m. - 1:00 p.m.</td>
<td>A21 Melodi Ghui*; Constantine Eliopoulos, PhD; Matteo Borrini, PhD</td>
<td>A Methodology in Differentiating Between Knives From Cut Marks on Bone</td>
</tr>
<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>A22 Yann Delannoy, MD*; Thomas Colard, DDS, PhD; Tania Delabarde, PhD; Jocelyn Pollard, MD; Valéry C. Hedouin, MD, PhD; Didier Gosset, MD, PhD</td>
<td>Traumatic and Congenital Anomalies of the Atlas: A Forensic Identification Case Report</td>
</tr>
<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>A23 Luisa Marinho, MSc*; Hugo Cardoso, PhD</td>
<td>Comparison Between Peri-Mortem Blunt Force Trauma Identified in Bone During an Autopsy and During an Anthropological Examination of 21 Skeletonized Remains Several Years After Death</td>
</tr>
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11:30 a.m. - 1:00 p.m.  A24  Reassessing Blunt Force Trauma to True Rib Heads Utilizing Tension-Compression Theory  
Kelsey A. Carpenter, BS*; Kena Ihle, BA*; Steven A. Symes, PhD

11:30 a.m. - 1:00 p.m.  A25  Comparability of Macroscopic, Microscopic, and Radiologically Defined Pediatric Antemortem Healing Stages  
Cliff Boyd, PhD*; Donna C. Boyd, PhD; Sharon Roller; David Foley, BS

Thursday

New Perspectives and Techniques in Sex and Ancestry Estimation

Moderator:  Alexandra R. Klales, PhD  
Mercyhurst University  
Dept of Applied Forensic Sciences  
Erie, PA

Co-Moderator:  Alexis C. Goots, BS  
North Olmsted, OH

8:30 a.m. - 8:45 a.m.  A26  A New Statistical Approach to Morphological Sexing of South African Remains  
Samuel R. Rennie, BSc*; Margaret Clegg, PhD; Silvia Gonzalez, PhD

8:45 a.m. - 9:00 a.m.  A27  Estimating Ancestry in South Africa: A Comparison of Geometric Morphometries and Traditional Cranioantropometrics  
Rebecca King, MS*; Jonathan D. Bethard, PhD; Donald F. Siwek, PhD

9:00 a.m. - 9:15 a.m.  A28  Spatial Analysis on a Global Scale: Cranial Non-Metric Trait Variability  
Joseph T. Hefner, PhD*; Caitlin C.M. Vogelsberg, MS

9:15 a.m. - 9:30 a.m.  A29  Examining Inter-Observer Reliability of Metric and Morphoscopic Characteristics of the Mandible  
Jennifer F. Byrnes, PhD*; Michael W. Kenyhercz, PhD; Samantha C. Torres, BA; Gregory E. Berg, PhD

9:30 a.m. - 9:45 a.m.  A30  Decision Trees and Non-Metric Traits: A More Accurate Approach for Sex Estimation of the Skull  
Natalie R. Langley, PhD; Alesia Cloutier, MS; Cade Lampley, MS; Beatrix Dudzik, PhD*

9:45 a.m. - 10:00 a.m.  A31  Sex Assessment — The Utility of Endocranial Landmark Data  
Sean Y. Carlson-Greer, BA*; Stephen D. Ousley, PhD

10:00 a.m. - 10:15 a.m.  A32  Femoral Neck Axis Length (FNAL): Use in Sex and Ancestry Estimation of Hispanic Populations  
Audrey Murchland, BS*; Lori E. Baker, PhD; Rebecca Meusen, MS

10:15 a.m. - 10:30 a.m.  A33  A Multiple Classifier System Approach to Determining Ancestry of Fragmentary Remains: A Preliminary Study  
Amber M. Plemons, BS*; Nicholas P. Herrmann, PhD; Edward F. Harris, PhD

10:30 a.m. - 10:45 a.m.  Break

*Presenting Author
The Importance of Sociocultural Anthropology Within Forensic Anthropological Investigations

**Moderator:** Erin H. Kimmerle, PhD  
University of South Florida  
Dept of Anthropology  
Tampa, FL

**Co-Moderator:** Hailey A. Duecker, MA  
Gainesville, FL

10:45 a.m. - 11:00 a.m.  
**A34 Widening the Scope and Expanding the Field: An Argument for Sociocultural Anthropology's Seat at the Table**  
*Sarah Wagner*

11:00 a.m. - 11:15 a.m.  
**A35 The Social Process of a Forensic Identification**  
*Hugh H. Tuller, MA*

11:15 a.m. - 11:30 a.m.  
**A36 The Social Side of Human Identification**  
*Robin C. Reineke, PhD*

11:30 a.m. - 11:45 a.m.  
**A37 Family Opposition to Human Rights Exhumations: The Need for Interdisciplinary Research on a Question of Science, Politics, and Consent**  
*Adam R. Rosenblatt, PhD*

11:45 a.m. - 1:30 p.m.  
**Lunch**

**Poster Session**

11:30 a.m. - 1:00 p.m.  
**A38 Morphological and Metric Study of the Nose and Ear in a North Indian Population: Forensic Anthropological Context**  
*Kewal Krishan, PhD*; *Tanuj Kanchan, MD*; *Manojit Chakraborty, MSc*

11:30 a.m. - 1:00 p.m.  
**A39 Morphologic Analysis of the Location of the Lens on the Orbit Using 3D Reconstructed Models**  
*Dong-Ho Eddie Kim, BSc*; *Yi-Suk Kim, MD*; *Dae-Kyoon Park, MD, PhD*; *In-Beom Kim, PhD*; *U-Young Lee, MD*

11:30 a.m. - 1:00 p.m.  
**A40 A Challenging Case of Facial Reconstruction of a Suicide by Jumping From a Height**  
*Luigi Cipolloni, MD, PhD*; *Alessandro di Luca, MD*; *Laura Donato*

11:30 a.m. - 1:00 p.m.  
**A41 The Perceived Accuracy of 3D Facial Reconstructions**  
*Eileen M. Schilling, MSc*

11:30 a.m. - 1:00 p.m.  
**A42 Application of Enhanced Point Estimators on a Sample of In Vivo Computed Tomography (CT)-Derived Facial Soft Tissue Thicknesses**  
*Kelsey Kyllonen, MA*; *Connie L. Parks, MA*; *Keith L. Monson, PhD*

11:30 a.m. - 1:00 p.m.  
**A43 Evaluation of the Facial Soft Tissue Thickness in the Living in a Brazilian Population: Pilot Study**  
*Antonio A. Antunes, PhD*; *Hugo L. Albuquerque*; *Evelyne P. Soriano, PhD*; *Marcus Vitor D. Carvalho, PhD*; *Reginaldo I.C. Campello, PhD*; *Gabriela G. Porto, PhD*

*Presenting Author*
11:30 a.m. - 1:00 p.m.  A44  Applications of 3D Technology in Forensic Anthropology
Helen Cho, PhD*; Eun Jin Woo, PhD*; Hae Joung Cho*; Yu Ryang Jang, PhD*; Nahyok Im, PhD*

11:30 a.m. - 1:00 p.m.  A45  Automated Anthropometric Measurements of Long Bones Using Point Cloud Data
Lisa M.M. Van Den Broek*; Thera McAvoy, MSc; Roland Wessling, MSc; Jessica Bolton, MSc; Jelana Belvalac, MSc; Anja Leipner; Michael Thali, MD

11:30 a.m. - 1:00 p.m.  A46  Introducing Standardized Anthropological Measurement Protocols for Postcranial Bones Using 3D Surface Reconstructions in Computed Assisted Design (CAD) Software
Mikaela S. Reynolds, MSc*; Donna M. MacGregor, MSc; Mark D. Barry, MS; Nicole Lottering, BS; Laura S. Gregory, PhD

11:30 a.m. - 1:00 p.m.  A47  Virtual Skeletal Analysis (ViSA) — One Possible Future for Osteometrics
Roland Wessling, MSc*; Sophie Beckett, PhD; Jessica Bolton, MSc; Alice Jenny Butler, BSc; Lisa M.M. Van Den Broek; Thera McAvoy, MSc

11:30 a.m. - 1:00 p.m.  A48  Incorporating the “Black Bone” Magnetic Resonance Imaging (MRI) Technique: A Radiation-Free Alternative to Computed Tomography (CT) for Biological Profiling in the Living
Janamarie Truesdell, MSc*; Karen A. Eley, DPhil; Anthony McIntyre, BS; Nicholas Márquez-Grant, PhD

11:30 a.m. - 1:00 p.m.  A49  DCP 2.0: Changes in Data Collection Procedures for Forensic Skeletal Material
Natalie R. Langley, PhD*; Lee Meadows Jantz, PhD; Shauna McNulty, MA; Heli Maijanen, PhD; Stephen D. Ousley, PhD; Richard Jantz, PhD

11:30 a.m. - 1:00 p.m.  A50  Scanning Electron Microscopy/Energy Dispersive X-Ray (SEM/EDX): A Rapid Diagnostic Tool to Aid the Identification of Burnt Bone and Contested Cremains
Sarah Ellingham, MSc*

11:30 a.m. - 1:00 p.m.  A51  Reconstructing the Biological Profile of Cremated Human Remains
Anthony W. Hudson, BS*

11:30 a.m. - 1:00 p.m.  A52  Experimental Analysis of Burned Human Remains
Amanda Williams, MA*; Elayne J. Pope, PhD; Marin A. Pilloud, PhD

11:30 a.m. - 1:00 p.m.  A53  Patterns of Ossification in Macerated Thyroid Cartilages: Implications for Age and Sex Determination
Katelyn L. Bolhofner, MA*; Laura C. Fulginiti, PhD

11:30 a.m. - 1:00 p.m.  A54  Age Estimation of Adolescent and Post-Adolescent Children Via Radiographs of the Shoulder
Maureen Schaefer, PhD*; Gerald Aben, MD

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11:30 a.m. - 1:00 p.m.  A55  A Grading System to Assess the Sex and Parity Status for the Preauricular Sulcus
Sarah E. Canty, PhD*; Matteo Borrini, PhD*; Constantine Eliopoulos, PhD; Silvia Gonzalez, PhD

11:30 a.m. - 1:00 p.m.  A56  Bioarchaeological Investigations Discovered Intraindividual Bilateral Ossification Differences of the Medial Clavicle — Implications for Age Estimation of the Living
Fabian Kanz, PhD*; Philipp Konermann, MD; Sandra Lösch, PhD

11:30 a.m. - 1:00 p.m.  A57  The Use of the Sustentaculum Tali in Estimating Sex
Christine Bailey, BA*; Kristen A. Broehl, BA*; Amy Z. Mundorff, PhD; Renee C. Kosalka, MA

11:30 a.m. - 1:00 p.m.  A58  The Roaming Arm: A Literal Outlier
Shana Ott*; Gary T. Scott, MA*

11:30 a.m. - 1:00 p.m.  A59  No Fly Zone: Decomposition in the Absence of Insects
Michael S. Woolf, BS*; Tal Simmons, PhD*; Baneshwar Singh, PhD

11:30 a.m. - 1:00 p.m.  A60  White-Tailed Deer as a Taphonomic Agent: Photographic Documentation of White-Tailed Deer Gnaing on Human Bone
Daniel J. Wescott, PhD*; Lauren Alyssa Meckel, BS*; Chloe P. McDaniel; Michelle D. Hamilton, PhD; Sophia Mavroudas, MA; Kate Spradley, PhD

11:30 a.m. - 1:00 p.m.  A61  Examining the Persistence of Human DNA in Soil During Cadaver Decomposition
Alexandra L. Emmons, MA*; Jennifer DeBruyn, PhD; Amy Z. Mundorff, PhD; Kelly L. Cobaugh, MS; Graciela S. Cabana, PhD

11:30 a.m. - 1:00 p.m.  A62  Using the Geographic Information System (GIS) to Distinguish Between Human and Non-Human Cranial Bone Fragments
Brigida Corrieri, MSc*; Nicholas Márquez-Grant, PhD*; Jessica Bolton, MSc; Roland Wessling, MSc

Geolocation, Novel Techniques, and Virtual Technologies

Moderator: Cate E. Bird, PhD
Pima County Office of the Medical Examiner
Tucson, AZ

Co-Moderator: Sean D. Tallman, MA
Knoxville, TN

1:30 p.m. - 1:45 p.m.  A63  Application of Stable Isotope Forensics for Predicting Region-of-Origin of Unidentified Border Crossers Found Deceased in the United States
Eric J. Bartelink, PhD*; Heather L. MacInnes, BS; Julia R. Prince, BA; Amy T. MacKinnon, BA; Lesley A. Chesson, MS; Brett J. Tipple, PhD; Krista E. Latham, PhD; Gregory E. Berg, PhD

*Presenting Author
## ANTHROPOLOGY

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<td>1:45 p.m.</td>
<td>A64</td>
<td>What Level of Biogeographical Information Is Available From 18O and 13C Signatures in Late-Erupting Molars of Modern Humans?</td>
<td>Anastasia Holobinko, MS*; Wolfram Meier-Augenstein, PhD; Helen F. Kemp, PhD; Susan M. Ford; Philip Turk, PhD</td>
</tr>
<tr>
<td>2:00 p.m.</td>
<td>A65</td>
<td>Dental Non-Metric Analysis as an Aid to Undocumented Border Crossers (UBCs) Region-of-Origin Estimation</td>
<td>Rebecca L. George, MA*; Jorge Gómez-Valdés, PhD</td>
</tr>
<tr>
<td>2:15 p.m.</td>
<td>A66</td>
<td>Comparative Study of Human and Non-Human Long Bones by Anatomical and Radiological Methods</td>
<td>Piyush Sharma, MD*; Tabin Millo, MD</td>
</tr>
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<td>2:30 p.m.</td>
<td>A67</td>
<td>Manipulation and Analysis of Virtual Bones: A Novel Method of Sex Estimation From the Mandible</td>
<td>Alice J. Butcher, BSc*; Roland Wessling, MSc; Jessica Bolton, MSc; Jelana Bekvalac, MSc</td>
</tr>
<tr>
<td>2:45 p.m.</td>
<td>A68</td>
<td>Calcium and Phosphorus Detection Using Benchtop vs. Hand-Held X-Ray Fluorescence (XRF) Spectrometers</td>
<td>Aaron R. Kuzel, BS*; Angi M. Christensen, PhD; Susan M. Marvin, PhD</td>
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<tr>
<td>3:00 p.m.</td>
<td>A69</td>
<td>Osteometric Reassociation Through Quantifying Long Bone Size and Shape and Prediction Using Bayesian Regression Via Hamiltonian Markov Chain Monte Carlo (MCMC)</td>
<td>Kyle A. McCormick, MA*</td>
</tr>
<tr>
<td>3:15 p.m.</td>
<td>A70</td>
<td>A Simple Method for Estimating Subject-to-Camera Distance for Legitimate Craniofacial Superimpositions</td>
<td>Carl N. Stephan, PhD*</td>
</tr>
<tr>
<td>3:30 p.m.</td>
<td>A71</td>
<td>Texture Mapped Average Skulls Created From Standardized Photographs Using the Perception Lab’s Psychomorph</td>
<td>Jodi M. Caple, BS*; Carl N. Stephan, PhD</td>
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<tr>
<td>3:45 p.m.</td>
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<td>Break</td>
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### Remote Sensing, Archaeological Techniques for Vehicle Fires, and Burned Human Remains Analysis

**Moderator:** Krista E. Latham, PhD  
University of Indianapolis  
Biology Dept  
Indianapolis, IN

**Co-Moderator:** Justin R. Maiers, BS  
Indianapolis, IN

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<tr>
<td>4:00 p.m.</td>
<td>A72</td>
<td>New Forensic Archaeological Recovery Protocols for Fatal Vehicle Fires</td>
<td>Alexandra R. Klales, PhD*; Dennis C. Dirkmaat, PhD; Luis L. Cabo, MS</td>
</tr>
</tbody>
</table>
ANTHROPOLOGY

4:15 p.m. - 4:30 p.m.  A73  Forensic Examination of Burned Human Skeletal Remains: Shifting the Paradigm
David Gonçalves, PhD; João Pedro Valente de Oliveira Coelho, MSc; Calil Makhoul, MSc; Inês Santos, MSc; Ana Vassalo, MSc; Maria Teresa Ferreira, PhD; Luis A.E. Batista de Carvalho, PhD; Eugenia Cunha, PhD*

4:30 p.m. - 4:45 p.m.  A74  Remote Sensing of Human Burials
Katie Corcoran, BS*; Amy Z. Mundorff, PhD; Devin White, PhD; Whitney Emch, PhD

4:45 p.m. - 5:00 p.m.  A75  The Use of Near-Infrared Remote Sensing in the Detection of Clandestine Human Remains
Marilyn Isaacks, BA*; Daniel J. Wescott, PhD

Friday

Trauma Etiology and Modeling

Moderator: Ginesse A. Listi, PhD
LSU Geography & Anthropology
Baton Rouge, LA

Co-Moderator: Caitlin C.M. Vogelsberg, MS
Michigan State University
Dept of Anthropology
East Lansing, MI

8:45 a.m. - 9:00 a.m.  A76  The Interpretation of Human Pediatric Cranial Fracture Patterns Using Experimentally Generated Porcine Ground-Truth Data
Jennifer M. Vollner, MS*; Caitlin C.M. Vogelsberg, MS; Patrick E. Vaughan, BS; Todd W. Fenton, PhD; Steven C. Clark, PhD; Roger C. Haut, PhD

9:00 a.m. - 9:15 a.m.  A77  Pediatric Antemortem Healing Standards Based on Microscopic Analysis of Fractures in Known Forensic Child Abuse Cases
Donna C. Boyd, PhD*; Sharon Roller; Cliff Boyd, PhD

9:15 a.m. - 9:30 a.m.  A78  Understanding the Role of Contact Area in Adult Cranial Fracture Variation
Mariyam I. Isa, BS*; Todd W. Fenton, PhD; Patrick E. Vaughan, BS; Roger C. Haut, PhD

9:30 a.m. - 9:45 a.m.  A79  Dismemberment Injuries: The Contribution of Bone and Soft Tissue Histology
Tania Delabarade, PhD*; Catherine Cannet; Annie Geraut, MD; Marc Taccoen, MD; Bertrand P. Ludes, MD, PhD; Jean-Sébastien Raul

9:45 a.m. - 10:00 a.m.  A80  Evaluating Timing of Injury in Central Florida: Examining the Transition of Fracture Characteristics From Wet to Dry in Long Bones
Ashley Green, MA*; John J. Schultz, PhD*

10:00 a.m. - 10:15 a.m.  Break

*Presenting Author
## New Methods to Increase Accuracy and Precision in Age Estimation

Moderator: Debra Prince Zinni, PhD  
JPAC  
Central Identification Lab  
Joint Base Pearl Harbor-Hickam, HI  

Co-Moderator: Jieun Kim, MA  
Knoxville, TN

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<tr>
<td>10:15 a.m. - 10:30 a.m.</td>
<td>A81</td>
<td>A Test of the Transition Analysis Method for Estimating Adult Age-at-Death</td>
<td>Jessica L. Campbell, MS*; Stephen P. Nawrocki, PhD</td>
</tr>
<tr>
<td>10:30 a.m. - 10:45 a.m.</td>
<td>A82</td>
<td>Examining the Accuracy of Age Estimates From New Histological Sampling Strategies at the Femoral Midshaft</td>
<td>Timothy P. Gocha, PhD*; Sam D. Stout, PhD; Amanda M. Agnew, PhD</td>
</tr>
<tr>
<td>10:45 a.m. - 11:00 a.m.</td>
<td>A83</td>
<td>Increasing Precision in Age Estimation From the Female Os Pubis: A Composite Technique With &gt;80% Accuracy to Within Ten Years of Actual Age</td>
<td>Janamarie Truesdell, MSc*; Andreas Duering, MA, MS; Nicholas Márquez-Grant, PhD</td>
</tr>
<tr>
<td>11:00 a.m. - 11:15 a.m.</td>
<td>A84</td>
<td>Apophyseal Ossification of the Iliac Crest in Forensic Age Estimation: New Standards for Modern Australian Subadults Using Computed Tomography</td>
<td>icolene Lottering, BS*; Mikaela S. Reynolds, MSc; Donna M. MacGregor, MSc; Maree T. Izatt; Caroline Grant, PhD; Clayton Adam, PhD; Laura S. Gregory, PhD</td>
</tr>
<tr>
<td>11:15 a.m. - 11:30 a.m.</td>
<td>A85</td>
<td>DNA Methylation Markers as a Novel Tool for Age-at-Death Estimation in Teeth</td>
<td>Sara C. Zapico, PhD*; Bram Bekaert, PhD; Aubeline Kamalandua, MS; Wim Van de Voorde, MD; Ronny Decorte, PhD</td>
</tr>
<tr>
<td>11:30 a.m. - 1:30 p.m.</td>
<td>Lunch</td>
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### Poster Session

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<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>A86</td>
<td>A Novel Method for Recording Palate Shape in the Estimation of Ancestry</td>
<td>Christopher A. Maier, MA*</td>
</tr>
<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>A87</td>
<td>Ancestral Variation in Orbital Rim Shape: A 3D Pilot Study</td>
<td>Katie M. Rubin, MS*; Valerie DeLeon, PhD</td>
</tr>
<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>A88</td>
<td>Missing Data Imputation Methods Using Morphoscopic Traits and Their Performance in the Estimation of Ancestry</td>
<td>Michael W. Kenyhrecz, PhD*; Nicholas V. Passalacqua, PhD; Joseph T. Hefner, PhD</td>
</tr>
<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>A89</td>
<td>Skeletal Sex Estimation in a Modern Cuban Sample</td>
<td>Meredith L. Tise, PhD*</td>
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*Presenting Author
11:30 a.m. - 1:00 p.m.  A90  Sexual Dimorphism of the Radial Tuberosity: Geometric Morphometric Approach With a Structured-Light 3D Scanning System  
Go-Un Jung, BS*; Byoung-Ha Kim, BS; U-Young Lee, MD; Deog-Im Kim, PhD; Dae-Kyoon Park, MD, PhD; Yi-Suk Kim, MD, PhD

11:30 a.m. - 1:00 p.m.  A91  Cranial Morphological Sexing Trait Patterns Differ Across Populations  
Monica M. Thompson*; Kaitlyn A. Lopez*; Kanya Godde, PhD*

11:30 a.m. - 1:00 p.m.  A92  An Analysis of Sexual Dimorphism Using Geometric Morphometrics (GM) of the Femur and Tibia: The Use of GM in Assessing Sex of Fragmented Remains  
Amanda K. Costello, MS*

11:30 a.m. - 1:00 p.m.  A93  Metric Assessment of the Pubic Bone to Determine the Accuracy of Known and Novel Data Points for Sex Estimation  
Kathleen A.S. Blake, PhD*; Hallie Gaffney*; Kristen Hartnett-McCann, PhD*

11:30 a.m. - 1:00 p.m.  A94  An Assessment of Sexual Dimorphism in the Sternal Fourth Rib: A 2D Morphometric Approach  
Andrew C. Seidel, MA*; Laura C. Fulginiti, PhD

11:30 a.m. - 1:00 p.m.  A95  A Geometric Morphometric Comparison of Pelvic and Cranial Sexual Dimorphism  
Kaleigh C. Best, MS*; Luis L. Cabo, MS; Heather M. Garvin, PhD

11:30 a.m. - 1:00 p.m.  A96  A Reassessment of Walker Cranial Non-Metric Traits on Undocumented Border Crossers Along the South Texas Border  
Brittany S. McClain, BA*; Cassie E. Skipper, BS; Marilyn Isaacks, BA

11:30 a.m. - 1:00 p.m.  A97  Stable Isotope Investigation of Mother-Infant Pairs and the Implication for Forensic Casework  
Inga Siebke*; Fabian Kanz, PhD; Carsten Witzel, PhD; Sandra Lösch, PhD

11:30 a.m. - 1:00 p.m.  A98  Bone Histology Sampling Sites for the Identification of Undocumented Border Crossers Along the United States/Mexico Border  
Lauren Alyssa Meckel, BS*; Sophia Mavroudas, MA; Victoria M. Domínguez, MA; Kate Spradley, PhD

11:30 a.m. - 1:00 p.m.  A99  Estimation of Age-at-Death Using Femoral Cortical Thickness, Biomechanical, and Histological Variables  
Megan E. Ingvoldstad, PhD*; Christine M. Pink, PhD

11:30 a.m. - 1:00 p.m.  A100  Transformation of the Department of Defense’s (DoD’s) Central Identification Laboratory (CIL): A Historical Review of Its Scientific Personnel and Primary Architects as It Embraces the Tides of Change  
MariaTeresa A. Tersigni-Tarrant, PhD*; Denise To, PhD

11:30 a.m. - 1:00 p.m.  A101  Thirty Years of the Forensic Data Bank and Data Collection Procedures (DCP) 2.0: Continuity and Transformation  
Stephen D. Ousley, PhD*; Richard Jantz, PhD; Natalie R. Langley, PhD; Kate Spradley, PhD; Beatrix Dudzik, PhD
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<tr>
<td>11:30 a.m.</td>
<td>A102</td>
<td>Multidisciplinary Approach of Forensic Science in Historical Study: St. Fortunato of Serracapriola (Italy)</td>
<td>Francesco Sessa, MS*; Gabriela Perilli, MD; Christian Zammit, MD; Santina Cantatore; Fabrice F. Dedouit; Giuseppe Guglielmi, PhD; Cristoforo Pomara, MD, PhD</td>
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<tr>
<td>11:30 a.m.</td>
<td>A103</td>
<td>Infant Bone Health: An Evaluation of Quantitative Ultrasound</td>
<td>Miriam E. Soto Martinez, MA*; Jennifer C. Love, PhD*; Weilu Han, MPH</td>
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<tr>
<td>11:30 a.m.</td>
<td>A104</td>
<td>Reliability of Biomechanical Descriptors to Assess Blunt Force Injuries in the Cranium</td>
<td>Ericka N. L’Abbe, PhD*; Steven A. Symes, PhD; Michael W. Kenyhercz, PhD; Kyra E. Stull, PhD; Gabriele C. Kruger, MSc; Marie Christine Dussault, PhD; Leandi Liebenberg, MS; Erin Chapman, MS, MA; Jolandie Myburgh, MSc</td>
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<tr>
<td>11:30 a.m.</td>
<td>A105</td>
<td>Semi-Automated Volumetric Quantification of the Frontal Sinuses: Sexual Dimorphism in a Contemporary Australian Subadult Population</td>
<td>Reanna J. Morris*; Nicolene Lottering, BS; Mikaela S. Reynolds, MSc; Laura S. Gregory, PhD; Donna M. MacGregor, MSc</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>A106</td>
<td>Estimating Age in Juvenile Crania Using Cranial Vault Thickness (CVT)</td>
<td>Kelly R. Kamnikar, BS*; Nicholas P. Herrmann, PhD; Pierre M.M. Guyomarc’h, PhD; Molly K. Zuckerman, PhD</td>
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<tr>
<td>11:30 a.m.</td>
<td>A107</td>
<td>Correlation Between Body Size and Intranal Capacity in Korean Youth</td>
<td>Jae gul Suh, MD; Yesel Kim, MD; Dasom Kim, BA; In Sung Park, PhD; Nam Joon Lee, MD, PhD; Im Joo Rhyu, PhD*</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>A108</td>
<td>Estimating Body Composition From Stature and Bi-Iliac Breadth in Modern Young Adult United States Populations (NHANES III)</td>
<td>William C. Schaffer, MA*</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>A109</td>
<td>Estimation of Stature From the Foramen Magnum Region in an American Population: A Validation Study</td>
<td>Margarita M. Villarreal, BS*</td>
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<tr>
<td>11:30 a.m.</td>
<td>A110</td>
<td>Examining Four Potential Proxies for Standard Cranio metrics: A Statistical Analysis for Significance and Demographic Correlations</td>
<td>Jacob L. Cheramie*; Maranda A. Kles, PhD</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>A111</td>
<td>The Effects of Household Corrosive Chemicals on Pig Bones and Human Tissue</td>
<td>Gina E. Baglieri*</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>A112</td>
<td>Direct and Indirect Blunt Force Trauma on the Cranium: Any Visible Differences</td>
<td>Kathryn Sloper, BS*; Constantine Eliopoulos, PhD; Matteo Borrini, PhD</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>A113</td>
<td>A Method of Sex Determination From the Scapula in Modern American Forensics</td>
<td>Melissa K. Kuhn*; Ismail M. Sebetan, MD, PhD*; Amy Zimmer, MS</td>
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11:30 a.m. - 1:00 p.m.  A114  
Sex Classification in a Sample of American Whites Using Interlandmark Distances of the Zygomatic Bone and Standard Cranial Measurements  
Sarah M. Furnier*; Stephen D. Ousley, PhD

11:30 a.m. - 1:00 p.m.  A115  
Differential Taphonomy Based on Microenvironment: The Case of Botanical Boy  
Kevin M. Lougee, DO*; James Louis Caruso, MD; Meredith A. Lann, MD; Laura A. Regan, PhD

11:30 a.m. - 1:00 p.m.  A116  
Students in the Forensic Laboratory: Fostering Education While Maintaining Quality  
Christiane Baigent, MSc; Catherine M. Gaither, PhD*

Decomposition, Accumulated Degree Days, and Seasonality

Moderator: Franklin E. Damann, PhD  
DPAA CIL  
Offutt AFB, NE

Co-Moderator: Derek C. Benedix, PhD  
Nicosia, CYPRUS

1:30 p.m. - 1:45 p.m.  A117  
Not All Degree Days are Equal in the Rate of Decomposition: The Effect of Season of Death on the Relationship Between Gross Postmortem Decomposition and Accumulated Degree Days  
Lennon N. Bates, MA; Daniel J. Wescott, PhD*

1:45 p.m. - 2:00 p.m.  A118  
A Comparison of Seasonal Decomposition Patterns Between Human and Non-Human Animal Models  
Angela M. Dautartas, MA*; Dawnie W. Steadman, PhD; Amy Z. Mundorff, PhD; Lee Meadows Jantz, PhD; Giovanna M. Vidoli, PhD

2:00 p.m. - 2:15 p.m.  A119  
Around the World in Accumulated Degree Days  
Tal Simmons, PhD*; Colin Moffatt, PhD; Ozgur Bulut, PhD; Natnipoon Rattanarungruang, BA; Amanda L. Roe, PhD; Donald F. Siwek, PhD

2:15 p.m. - 2:30 p.m.  A120  
Comparing Decomposition Assessments From Digital Images to In Situ Observations  
Gretchen R. Dabbs, PhD*; Joan A. Bytheway, PhD; Melissa A. Connor, PhD

2:30 p.m. - 2:45 p.m.  A121  
Volatile Organic Sulphur Compounds (VOSCs) and Accumulated Degree Days (ADD): Timing the Switch From Anaerobic to Aerobic Putrefaction  
Philip E. Houldsworth, MSc*; Tal Simmons, PhD

2:45 p.m. - 3:00 p.m.  A122  
An External Validation of the Citrate Content Postmortem Interval (PMI) Method  
Michael A. Brown, PhD*; Charles Froome, BS; Shawn Hennessy; Rebecca Gerling; Jeffrey Ellison, BS; Ann W. Bunch, PhD
ANTHROPOLOGY

Las Vegas
2016

3:00 p.m. - 3:15 p.m.  A123  Differentiating Between Sharp Force Trauma (SFT) Defects and Insect Invasion of Skin of Human Cadavers Throughout the Decomposition Process
Joan A. Bytheway, PhD*; Kevin R. Derr; Zachary Lueck, BS; Lyndsi S. Turner, BS; Kandace D. Schakelford, BA; Erica N. Fisher, BS; Luis Dominguez, BS

3:15 p.m. - 3:30 p.m.  Break

Scientific Bias, Cold Case Resolution, and Accreditation

Moderator: Jennifer C. Love, PhD
Co-Moderator: Katie M. Rubin, MS
OCME
CA Pound Human ID Laboratory
Washington, DC
Gainesville, FL

3:30 p.m. - 3:45 p.m.  A124  The “Science of Science”: Examining Bias in Forensic Anthropology
Alexandra R. Klales, PhD*; Kate M. Lesciotto, JD, MS

3:45 p.m. - 4:00 p.m.  A125  A Reanalysis of Korean War Anthropological Records to Support the Resolution of Cold Cases
Emily K. Wilson*

4:00 p.m. - 4:15 p.m.  A126  The Status of Unidentified Decedent Cold Cases at the Harris County Institute of Forensic Sciences (HCIFS) From 1957 to 2015
Cate E. Bird, PhD*; Sharon M. Derrick, PhD; Deborrah C. Pinto, PhD; Jason M. Wiersema, PhD; Jennifer C. Love, PhD

4:15 p.m. - 4:30 p.m.  A127  The ANSI-ASQ National Accreditation Board (ANAB) Accreditation of the Harris County Institute of Forensic Sciences’ Forensic Anthropology Division
Christian Crowder, PhD*; Michal L. Pierce, MS; Luis A. Sanchez, MD

Saturday

Taphonomic Signatures of Marine and Terrestrial Agents

Moderator: Timothy P. Gocha, PhD
Co-Moderator: Shauna McNulty, MA
The Ohio State University
University of Tennessee
Columbus, OH
Knoxville, TN

10:00 a.m. - 10:15 a.m.  A128  Differential Raccoon Scavenging Among Pig, Rabbit, and Human Subjects
Dawnie W. Steadman, PhD*; Angela M. Dautartas, MA; Amy Z. Mundorf, PhD; Giovanna M. Vidoli, PhD; Lee Meadows Jantz, PhD

10:15 a.m. - 10:30 a.m.  A129  Analysis of Taphonomic Changes to Juvenile Pig Bone Exposed to a Marine Environment Using Non-Destructive Raman Spectroscopy
Jennifer L. McDowell, MSc*; Lynne S. Bell, PhD; Keith C. Gordon

*Presenting Author
10:30 a.m. - 10:45 a.m.  A130  The Skeletal Histo-Taphonomy of Deep Coastal Marine Submersion and Exposure  
Lynne S. Bell, PhD*; Gail S. Anderson, PhD

10:45 a.m. - 11:00 a.m.  A131  Taphonomy of the Perinate Skeleton: Redefining Structural Norms and Building Analytical Models  
Christiane Baigent, MSc*

11:00 a.m. - 11:15 a.m.  A132  Using Satellite Telemetry to Study Vultures and Other Scavengers in Taphonomic Research  
Lauren R. Pharr, PhD*

11:15 a.m. - 11:30 a.m.  A133  Postmortem Intervals in Mice Submerged in Aqueous Environments at 20°C  
Elizabeth N. Celata, MS*
Wednesday

Poster Session

11:30 a.m. - 1:00 p.m.  B1 Investigating the Use of MicroRNAs (miRNAs) for the Identification of Forensically Relevant Body Fluids
Kelsie R. Weir, BA*; Claire Glynn, PhD

11:30 a.m. - 1:00 p.m.  B2 The Effectiveness of Various Strategies to Improve DNA Analysis of Formaldehyde-Damaged Tissues From Embalmed Cadavers for Human Identification (HID) Purposes
Natalia Czado, MS*; Bobby L. LaRue, Jr., PhD; Amanda Wheeler, BS; Rachel M. Houston, BS; Amy E. Sorensen, MSFS; David A. Gangitano, PhD; Sheree R. Hughes-Stamm, PhD

11:30 a.m. - 1:00 p.m.  B3 Tertiary Transfer of DNA by Examination Gloves Between Evidentiary Items at Crime Scenes
Marisa Teal Ketchum, BS*; Erin L. Vollmer, BA*; Jenna Carnes; Krista E. Latham, PhD; Cynthia Cale, BS; Gay L. Bush, PhD

11:30 a.m. - 1:00 p.m.  B4 Optimization and Validation of the ForensicGEM™ Rapid Extraction Method for High-Throughput Processing of Cotton Buccal Swabs
Kyleen Elizabeth Elwick, BS*; Sheree R. Hughes-Stamm, PhD; Kimberly S. Andreaggi, MFS; Michelle A. Peck, MFS

11:30 a.m. - 1:00 p.m.  B5 Investigating Simultaneous Extraction of RNA and DNA From Forensically Relevant Body Fluids
Sarah L. Markland; Kelsie R. Weir, BA; Claire Glynn, PhD*

11:30 a.m. - 1:00 p.m.  B6 Investigating the Use of Raman Spectroscopy for the Differentiation of Mixed Body Fluid Samples
Tyler J. Schlagetter*; Brooke W. Kammrath, PhD; Claire Glynn, PhD

11:30 a.m. - 1:00 p.m.  B7 The Identification of Biological Fluids Based on DNA Methylation Differences Using High Resolution Melt Curve Analysis
Susan Cheng, BS*; K. Joy Karnas, PhD

11:30 a.m. - 1:00 p.m.  B8 Analysis of Attenuated Total Reflectance/Fourier Transform Infrared (ATR/FTIR) Spectra to Differentiate Menstrual and Venous Blood on Various Substrates
Alicia Quinn, BS*; Kelly M. Elkins, PhD*

11:30 a.m. - 1:00 p.m.  B9 Touch DNA Recovered From Fired and Unfired Shotgun Shells
Anthony J. Saitta*; Peter R. Valentin, MSFS

11:30 a.m. - 1:00 p.m.  B10 Use of Massively Parallel Sequencing to Assist With Deconvolution of Short Tandem Repeat (STR) Mixture Profiles
Kelly Grisedale, PhD*; Jessica Bradley, BS; Brittania J. Bintz, MSc; Mark R. Wilson, PhD

*Presenting Author
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<th>Title and Abstract</th>
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<tr>
<td>B11</td>
<td>Absolute Quantitation of Semen-Specific Biomarkers From Post-Coital Samples</td>
<td>Catherine O. Brown, BA*; Masha Signaevsky, BS; Heather E. McKiernan, MSFS; Kevin M. Legg; Phillip Danielson, PhD</td>
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<td>B12</td>
<td>Rapid Direct Polymerase Chain Reaction (PCR) of a Y-Chromosomal Short Tandem Repeat (Y-STR) Multiplex as a Screening Tool for the Presence of Male DNA</td>
<td>Bruce R. Mc Cord, PhD; Georgiana C. Gibson-Daw, MS*</td>
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<td>B13</td>
<td>Determining the Most Efficient Location for Collecting DNA Samples From Hand Guns</td>
<td>Kaitlyn M. Redman, BS*; Kathryn E. Hoodenpyle, MS; Jill Therriault, BS; Arielle Van Deusen, BS; Jessica Best, MSFS; Michael S. Adamowicz, PhD</td>
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<tr>
<td>B14</td>
<td>Secondary or Tertiary Transfer Semen DNA Stains?</td>
<td>Ka-Man Pun*; Giuliana Grimoldi, MSc; Gianfranco Foglia; Ilaria Monico, MS; Emilio Scossa Baggi</td>
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<td>B15</td>
<td>Differentiation of Commercial Ammunition Sources of Unburned and Corresponding Burned Smokeless Powders Based on Chemical Composition Using Mass Spectrometry (MS) and Principal Component Analysis (PCA)</td>
<td>Kristen L. Reese, BA*; A. Daniel Jones, PhD; Ruth Waddell Smith, PhD</td>
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<td>B16</td>
<td><em>In Vitro</em> Experiments Using Human Cadaver Head Hairs to Investigate the Formation Mechanism of Postmortem Hair Root Bands (PMRBs)</td>
<td>Jamie N. Fleming, BS*; Hilda S. Castillo, PhD; Ernest J. Drummond, MS; Rabih Jabbour; Samir Deshpande; Dawnie W. Steadman, PhD; Lee Meadows Jantz, PhD; Kathleen Hauther; Jack Hietpas, PhD; Stephen D. Shaw, MS; JoAnn Buscaglia, PhD; Brian Eckenrode, PhD; Joseph Donfack, PhD</td>
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<td>B17</td>
<td>Forensic Soil Analysis by Morphologically Directed Raman Spectroscopy (MDRS)</td>
<td>Andrew C. Koutrakos, MS*; Brooke W. Kammrath, PhD*</td>
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<td>B18</td>
<td>Postmortem Identification From Physiological Biometrics: A Study of Fingerprints, Irises, and Facial Images</td>
<td>Tiffany B. Saul, MS*; Kelly Sauerwein, MA*; Dawnie W. Steadman, PhD; Chris Boehmen, PhD</td>
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<td>B19</td>
<td>Stability Study of Heroin in Four Common Solvents</td>
<td>Melanie A. Schade*; Thomas A. Brettell, PhD</td>
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<td>B20</td>
<td>The Utility of Ultra High-Performance Supercritical Fluid Chromatography (UHPSFC) for the Chiral Analysis of Seized Drugs</td>
<td>Stephanie R. Breitenbach, BS*; Ira S. Lurie, PhD</td>
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<td>B21</td>
<td>Analysis of Black Electrical Tapes by Direct Thermal Extraction-Gas Chromatography/Mass Spectrometry (TE-GC/MS)</td>
<td>Emily Prisaznik, BS*; Thomas A. Brettell, PhD</td>
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<th>Time</th>
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<tr>
<td>11:30 a.m.</td>
<td>B22</td>
<td>Think Outside the Box: External Human Factors on the Analysis, Comparison, Evaluation-Verification (ACE-V) Methodology</td>
<td>Francisco Valente Gonçalves, MSc*; Lisa L. Smith, PhD; Doug Barrett, PhD</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>B23</td>
<td>Liquid Chromatography/Mass Spectrometry (LC/MS) Method Development for the Identification of Route-Specific 3,4-Methylenedioxymethamphetamine (MDMA) Impurities</td>
<td>Rebecca F. Dunn*; Heather L. Harris, MFS, JD</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>B24</td>
<td>Forensic Analysis of Human Autopsy Tissue for the Presence of Polydimethylsiloxane (Silicone) and Volatile Cyclic Siloxanes Using Macro Fourier Transform Infrared (FTIR) Spectroscopy, Micro-FTIR Spectroscopic Imaging, and Headspace/Gas Chromatography With Mass Spectrometric Detection (HS/GC/MS)</td>
<td>Caroline Machal Kelley, BS*; Adam C. Lanzarotta, PhD</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>B25</td>
<td>Breaking Forensic Boundaries: Developing International Standards</td>
<td>Soraya McClung*; Kermit B. Channell II, BS*</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>B26</td>
<td>Human Scent Evidence — Volatile Organic Compounds (VOCs): A Unique Trace From Science to Criminal Investigation</td>
<td>Marcello Rendine*; Cristoforo Pomara, MD, PhD; Alessandro Bellifemina; Dania De Carlo, MD; Carmela Fiore, MD; Palmira Fortarezza, MS; Margherita Neri, MD, PhD; Irene Riezzo, MD, PhD</td>
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<tr>
<td>11:30 a.m.</td>
<td>B27</td>
<td>Chemical and Canine Analysis as Complementary Techniques for the Identification of Active Odors in a Biothreat Agent</td>
<td>Alison Simon, BS*; Julian L. Mendel, MSc; Kenneth G. Furton, PhD; DeEtta Mills, PhD</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>B28</td>
<td>Investigating the Use of New Psychoactive Substances (NPS) Using Sewage-Based Epidemiology (SBE): Detection and Identification of Transformation Products (TPs) of Methylene and Methylenedioxypyrovalerone in Sewage Using Accurate-Mass Mass Spectrometry (MS)</td>
<td>Juliet Kinyua, MSc*; Noelia Negreira, PhD; Ann-Kathrin McCall, MSc; Christoph Ort, PhD; Adrian Covaci, PhD; Alexander van Nuijs, PhD</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>B29</td>
<td>Updates From the Drug Enforcement Administration National Forensic Laboratory Information System (NFLIS): Opiates and Related Drugs Reported in NFLIS — 2009-2014</td>
<td>DeMia P. Pressley, MS; Artisha Polk, MS; Liqun Wong, MS; Kevin Strom, PhD; Katherine N. Moore, MS*; David Heller, BS; Jeffrey M. Ancheta, BS; BeLinda J. Weimer, MA; Hope Smiley-McDonald, PhD; Jeri D. Ropero-Miller, PhD</td>
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<tr>
<td>11:30 a.m.</td>
<td>B30</td>
<td>Statistical Analysis of Firearms: A Comparison Between the 2D and 3D Integrated Ballistic Identification System (IBIS®)</td>
<td>Keith B. Morris, PhD*; Roger Jefferys, BS*; Eric F. Law, BS*</td>
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<tr>
<td>11:30 a.m.</td>
<td>B31</td>
<td>“I Dropped Acid.” “No, You Didn’t.” A Retrospective Study of NBOMe Emergence in Harris County, Texas</td>
<td>Warren C. Samms, PhD*; Donna E. Williams, BS; Kay McClain, BS</td>
</tr>
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11:30 a.m. - 1:00 p.m. **B32** A Study of Microcrystal Tests for Emerging Psychoactive Substances
Sean Brady*; Monica Joshi, PhD

11:30 a.m. - 1:00 p.m. **B33** Sample Introduction Studies for Direct Analysis in Real-Time (DART®) Systems
Rachel Masek, BS; Amelia Hartman; David Cunningham, PhD*

11:30 a.m. - 1:00 p.m. **B34** The Detection of Bleach (Sodium Hypochlorite) in Dialysis Blood Lines and Syringes in a Serial Murder Investigation
S. Frank Platek, MS; John B. Crowe, BS; David S. Jackson, BS*

11:30 a.m. - 1:00 p.m. **B35** Comparison of the Restek Rtx®-5, Rxi®-1ms, and Rxi®-1HT Gas Chromatography (GC) Columns for the Qualitative Analysis of Synthetic Cannabinoids
Laurel A. Hardy, BS*; Carrie J. Kirkpatrick, BS; Pamela J. Staton, PhD; Lauren L. Richards-Waugh, PhD

11:30 a.m. - 1:00 p.m. **B36** Colorimetric-Based Paper Microfluidic Devices for the Presumptive Determination of Seized Drugs
Ling Wang, MS*; Bruce R. McCord, PhD; Giacomo Musile, PhD; Jashaun Bottoms; Franco Tagliaro, PhD, MD

11:30 a.m. - 1:00 p.m. **B37** Evaluation of Microscopy and Vibrational Spectroscopy for the Discrimination of Purple and Blue Nail Polishes
Brianna Kroon*; Elaine M. Pagliaro, JD; Brooke W. Kammrath, PhD

11:30 a.m. - 1:00 p.m. **B38** Characterization by Scanning Electron Microscopy With Energy-Dispersive X-Ray Spectroscopy (SEM/EDX) of Nail and Gel Polishes and Its Real-World Applications
Audriana M. Wagner*; R. Christopher O’Brien, PhD; Elaine M. Pagliaro, JD; Brooke W. Kammrath, PhD

11:30 a.m. - 1:00 p.m. **B39** The Analysis and Classification of Tire Rubber Deposits Using Pyrolysis-Gas Chromatography/Mass Spectrometry (Py-GC/MS)
Rebecca Thielen, BS*

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**Thursday — Session I**

**Current Events in Forensic Policy**

*Presenting Author*
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<tr>
<td>8:40 a.m. - 9:10 a.m.</td>
<td>B40</td>
<td>Organization of Scientific Area Committees (OSAC) Activities Impacting Laboratory Operations</td>
<td>John P. Jones II, MBA*</td>
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<tr>
<td>9:10 a.m. - 9:40 a.m.</td>
<td>B41</td>
<td>Organization of Scientific Area Committees (OSAC) — Increasing Visibility of Standards in Forensic Science and the Potential Impact in the Laboratory and the Courtroom</td>
<td>Mark D. Stolorow, MS, MBA*</td>
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<tr>
<td>9:40 a.m. - 10:00 a.m.</td>
<td>B42</td>
<td>Fire Debris and Explosives</td>
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<td>10:00 a.m. - 10:30 a.m.</td>
<td>B42</td>
<td>Chemometric Analysis of Gasoline Samples Utilizing Direct Analysis in Real-Time Mass Spectrometry (DART*-MS)</td>
<td>Ashley Davis, MS; Matthew Pavlovich, PhD; Joseph H. LaPointe, BSc; Brian Musselman, PhD; Adam B. Hall, PhD*</td>
</tr>
<tr>
<td>10:30 a.m. - 10:45 a.m.</td>
<td>B43</td>
<td>Using Atmospheric Pressure Chemical Ionization/Mass Spectrometry (APCI/MS) and Flow Injection for the Screening of Arson Accelerants</td>
<td>Clare M. Fried, BS*; Thomas H. Pritchett, MS; Michelle Shortell, MS</td>
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<tr>
<td>10:45 a.m. - 11:00 a.m.</td>
<td>B44</td>
<td>Practical Methods for Prohibiting Microbial Degradation of Ignitable Liquids in Soil Samples</td>
<td>James Hoult, BS*; Katherine D. Hutches, PhD</td>
</tr>
<tr>
<td>11:00 a.m. - 11:15 a.m.</td>
<td>B45</td>
<td>The Surprising Effect of Temperature on the Weathering of Gasoline</td>
<td>Heather Birks, BS*; Ashley Cochran, BS*; Tyler Williams; Glen P. Jackson, PhD</td>
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<tr>
<td>11:15 a.m. - 11:30 a.m.</td>
<td>B46</td>
<td>Mathematically Modeling Chromatograms of Evaporated Ignitable Liquids for Fire Debris Applications</td>
<td>Rebecca J. Brehe, BS; John W. McIlroy, PhD; Ruth Waddell Smith, PhD*; Victoria L. McGuffin, PhD</td>
</tr>
<tr>
<td>11:30 a.m. - 11:45 a.m.</td>
<td>B47</td>
<td>Characterization of Aluminum (Al) Powders in Explosives Utilizing Particle Micromorphometry</td>
<td>JenaMarie Baldaino, BS*; Danica Ommen, MS; Joshua Dettman, PhD; Raleigh Parrott II; Jack Hietpas, PhD; JoAnn Buscaglia, PhD</td>
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<tr>
<td>11:45 a.m. - 12:00 p.m.</td>
<td>B48</td>
<td>Identification and Separation of Nitrate Esters Using Both Liquid Injection Gas Chromatography/Mass Spectrometry (GC/MS) and Total Vaporization Solid Phase Microextraction (TV-SPME) GC/MS</td>
<td>Jordan Ash, BA*; John V. Goodpaster, PhD</td>
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*Presenting Author
12:00 p.m. - 12:15 p.m.  B49  High-Sensitivity Detection and Separation of High Explosives in Environmental Samples  
Christopher M. Rollman, BS*; Karen A. Brensinger, MFS; Christine Copper, PhD; Ashton Genzman, BS; Jacqueline Rine, BS; Ira S. Lurie, PhD; Mehdi Moini, PhD

12:15 p.m. - 1:00 p.m.  Lunch

**Poster Session**

11:30 a.m. - 1:00 p.m.  B50  Application of a Linear-Targeted Approach in Multiplex Amplification of the Mitochondrial Genome  
Maureen Hickman, MS*; Kelly Grisedale, PhD

11:30 a.m. - 1:00 p.m.  B51  Assessment of Low-Level Error in Massively Parallel Sequencing (MPS) Data Sets Generated Using the Illumina® MiSeq® Platform and Synthesized Human Mitochondrial DNA Oligonucleotides  
Brittania J. Bintz, MSc*; Timothy Driscoll, PhD; Mark R. Wilson, PhD

11:30 a.m. - 1:00 p.m.  B52  Evaluation of Collection Protocols for the Recovery of Biological Samples From Crime Scenes  
Dina Al Oraer, BS*

11:30 a.m. - 1:00 p.m.  B53  Single Molecule Forensic DNA Characterization With Laser-Induced Nanopore Heating  
Sarah J. Seashols Williams, PhD*; Christopher Angevine, BS; Nicole Auka; Joseph E. Reiner, PhD

11:30 a.m. - 1:00 p.m.  B54  Forensic Application of Massively Parallel Sequencing (MPS) With the Ion Torrent™ Multiplex Mitochondrial Genome Panel and Hi-Q™ Sequencing Chemistry  
Jennifer D. Churchill, PhD*; Jonathan King, MS; Joseph P. Chang, BS; Sharon C. Wootton, PhD; Chien-Wei Chang, PhD; Robert Lagacé, BS; Bruce Budowle, PhD

11:30 a.m. - 1:00 p.m.  B55  From Fragment Isolation to DNA Amplification: A Detailed Protocol for Using Plant and Insect Material in Forensics  
Megan L. Jackson, BS*; Kelly A. Meiklejohn, PhD; Jack Hietpas, PhD; Libby A. Stern, PhD; James M. Robertson, PhD

11:30 a.m. - 1:00 p.m.  B56  Investigation of the Genomics of Cannabinoid Biosynthesis in Cannabis Sativa  
Robert W. Allen, PhD*; Lindsey N. Allen, BS; Jane Ketner Pritchard, BS; Jun Fu, PhD; Rachel Wellendorf, BS; Lindsey Yoder, MSFS

11:30 a.m. - 1:00 p.m.  B57  Current Efforts on Developmental Aspects of Forensic Botany in Brazil  
Renato T. Ferreira de Paranaiba, BA*; Carlos B. Carvalho, PhD; Jorge Freitas, PhD; Gustavo Chemale, PhD; Kattia Michelin, MSc

*Presenting Author
11:30 a.m. - 1:00 p.m.  B58  Inferring Geographical Origin of Forensic Evidence Via DNA Barcodes
Jack N. Lane, MS; Michael N. Parsons, MS*; Donia Slack, MS

11:30 a.m. - 1:00 p.m.  B59  Botanical DNA Evidence in a Case of Robbery and Property Crime:
Application of High Resolution Melting Analysis of *Triticum Aestivum* L. Grains
Alejandra Figueroa, BSc*; Jaime H. Solano, PhD; Leonardo I. Anabalon;
David A. Gangitano, PhD

11:30 a.m. - 1:00 p.m.  B60  Using DNA Barcoding to Detect Fish Substitutions in Brazil
Carlos B. Carvalho, PhD*

11:30 a.m. - 1:00 p.m.  B61  Effects of Bacterial DNA on Human Profiles
Kevin G. Smolar, MS; Gina Dembinski, MS*; Christine J. Picard, PhD

11:30 a.m. - 1:00 p.m.  B62  Optimal Time for Forensic Screening of Evidence Based on Fluorescent Variation
of Seminal Fluid
Jack N. Lane, MS*; Donia Slack, MS

11:30 a.m. - 1:00 p.m.  B63  The Identification and Analysis of Burnt Bloodstains
Rebecca Nelson, BS; Maranda M. Hirst; Peter Bilous, PhD*

11:30 a.m. - 1:00 p.m.  B64  Migration of Seminal Fluid Components and Spermatozoa in Semen Stains
Exposed to Moisture
Lyndsey T. Brown, BS*; Robin W. Cotton, PhD; Amy N. Brodeur, MFS

11:30 a.m. - 1:00 p.m.  B65  “Who Is My Father?” The Role of Forensic Genetics in the Resolution of a
Paternity Case
Ciro Di Nunzio, MFS, PhD*; Isabella Aquila, MD*; Michele Di Nunzio, BS;
Matteo Borrini, PhD; Maurizio Saliva, MD; Flavio Saia, BS; Pietrantonio Ricci

11:30 a.m. - 1:00 p.m.  B66  Human Remains in Southern Italian Cemeteries: When the Type of Burial
Influences the Results of DNA Extraction
Ciro Di Nunzio, MFS, PhD*; Isabella Aquila, MD*; Maurizio Saliva, MD;
Michele Di Nunzio, BS; Francesco P. Busardo, MD; Vittorio Fineschi, MD, PhD;
Pietrantonio Ricci

11:30 a.m. - 1:00 p.m.  B67  Development of a Portable Detection and Image-Processing System for Latent
Fingerprints Using Time-Resolved Spectroscopy
Hidetoshi Kakuda*; Norimitsu Akiba, PhD; Daisuke Imoto, MS; Ken’ichi Tsukita, PhD;
Kenji Kuwosawa; Kenro Kuroki, PhD; Shigeki Takeuchi, PhD; Osamu Shimoda, BS

11:30 a.m. - 1:00 p.m.  B68  Fingerprint Ridge Drift: An Undescribed Phenomenon
Josep De Alcaraz-Fossoul, PhD*; Carme Barrot, PhD; Luke McGarr, BSc;
Karen Stow, MSc; Katherine A. Roberts, PhD; Gregory G. Hogrebe, BS; Manel Genè, PhD

11:30 a.m. - 1:00 p.m.  B69  Fingerprint Detection by Two-Photon Excitation With a Femtosecond Fiber Laser
Norimitsu Akiba, PhD*; Ryoya Takahashi, MS; Fumihiko Ichikawa; Akira Torao;
Naohiro Ishizawa, BS; Atsushi Nakamura; Takayuki Sota; Hidetoshi Kakuda;
Daisuke Imoto, MS; Ken’ichi Tsukita, PhD; Kenji Kuwosawa; Kenro Kuroki, PhD
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<td>B70</td>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>Method Validation Parameters for Drugs and Explosives in Ion Mobility Spectrometry (IMS)</td>
<td>A. Bakarr Kanu, PhD*</td>
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<tr>
<td>B71</td>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>Quantitation of Major Cannabinoids Found in Seized Marijuana Using Automated Headspace/Solid-Phase Microextraction Coupled With Gas Chromatography/Mass Spectrometry (HS/SPME-GC/MS)</td>
<td>Anastasia M. Brown, BS*; James D. Sweet, PhD; Jorn Chi-Chung Yu, PhD</td>
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<tr>
<td>B72</td>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>Analysis of Seized Hypodermic Syringes for Drug Content</td>
<td>Thomas A. Brettell, PhD*; Robyn Pyle, MS; Linda Burdick, BS</td>
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<tr>
<td>B73</td>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>The Development of a Novel Color Test for Improved Detection of Synthetic Cathinones</td>
<td>Charles R. Cornett, PhD*; Nicole Kloepfer; Brooke Tashner, BS; Tsunghsueh Wu, PhD</td>
</tr>
<tr>
<td>B74</td>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>Further Characterization of Opiates in Poppy Pod Tea Preparations</td>
<td>Angela S. Mohrhaus, BS*; Heather A. McCauley, BS; Jill M. Robinson, MFS; Samuel R. Gratz, PhD</td>
</tr>
<tr>
<td>B75</td>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>Rapid Screening of Seized Drugs Using Direct Analysis in Real-Time Mass Spectrometry (DART*-MS)</td>
<td>Yuriy Uvaydov, MS*</td>
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<tr>
<td>B76</td>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>Evaluation of a Direct Analysis Portable Mass Spectrometer (MS) for the Detection of Drugs and Related Substances</td>
<td>Nichole D. Bynum, MS*; Katherine N. Moore, MS; Zachary E. Lawton, BS; Christopher C. Mulligan, PhD; Megan Grabenauer, PhD; Jeri D. Ropero-Miller, PhD</td>
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<td>B77</td>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>Analysis of Cannabis for the Presence of Pesticides and Adulterants With High Resolution Tandem Mass Spectrometry</td>
<td>Werner Bernhard, DSc*; Stefan Koenig, PhD; Susanne Nussbaumer, PhD; Wolfgang Weinmann, PhD</td>
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<tr>
<td>B78</td>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>Differentiation of Seized Marijuana Samples Using Automated Headspace/Solid-Phase Microextraction Coupled to Gas Chromatograph/Mass Spectrometer/Flame Ionization Detector (HS/SPME-GC/MS/FID) and Principal Component Analysis (PCA)</td>
<td>Jessica Winborn, BS*; James D. Sweet, PhD; Jorn Chi-Chung Yu, PhD</td>
</tr>
<tr>
<td>B79</td>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>The Effects of Ultraviolet (UV) Radiation on Time-Dependent Changes in the Composition of Latent Fingerprints</td>
<td>Allyson K Digmann, BS*; James W. McGill, PhD</td>
</tr>
<tr>
<td>B80</td>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>Effects of Donor Age and Water Exposure on the Quality of Oil Red O-Stained, Water-Exposed Latent Prints</td>
<td>Kitrina D. Skaggs, BA*; James W. McGill, PhD; Madalyn R. Robinson, BA</td>
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<td>11:30 a.m. - 1:00 p.m.</td>
<td>B81</td>
<td>Fingerprint Loss in a Cancer Patient With No Side Effects</td>
<td>Luciano Garofano, PhD*; Francesca Negri, MD, PhD; Annamaria De Giorgi, MD; Luigi Bisogno</td>
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<td>11:30 a.m. - 1:00 p.m.</td>
<td>B82</td>
<td>Pyrolysis Products of BK-2C-B and BK-2C-I, Beta-Keto Analogs of 2,5-Dimethoxy-4-Bromophenethylamine</td>
<td>Pierce V. Kavanagh, PhD; Kelly B. Texter, BS; Rachel Waymack; Elizabeth A. Gardner, PhD*</td>
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**Materials**

**Moderator:** Shirly Berends-Montero, PhD  
**Co-Moderator:** Tiffany Eckert Lumsdon, MS  
**University of Colorado**  
**Dept of Computer Science**  
**Boulder, CO**

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<td>1:00 p.m. - 1:30 p.m.</td>
<td>B83</td>
<td>Assessing the Utility of Detrital Quartz Surface Textures and Feldspar Mineral Chemistry for Forensic and Intelligence Applications</td>
<td>Jack Hietpas, PhD*; JenaMarie Baldaino, BS; JoAnn Buscaglia, PhD; Garrett McMahon, BS; Libby A. Stern, PhD</td>
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<td>1:30 p.m. - 1:45 p.m.</td>
<td>B84</td>
<td>Chemical Pattern Recognition: What Can Be Extracted From Geo-Located Spectroscopic Data Sets?</td>
<td>Sergey Mamedov, PhD*</td>
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<tr>
<td>1:45 p.m. - 2:00 p.m.</td>
<td>B85</td>
<td>Differential Sampling of Footwear to Separate Alternative Particle Signals</td>
<td>David A. Stoney, PhD*; Paul L. Stoney, MBA</td>
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<td>2:00 p.m. - 2:15 p.m.</td>
<td>B86</td>
<td>Total Imaging Analysis of Paint</td>
<td>Roger Kahn, PhD; William M. Davis, PhD*</td>
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<td>2:15 p.m. - 2:30 p.m.</td>
<td>B87</td>
<td>When Are Variations in Duct Tape the Result of True Differences? A Cautionary Tale</td>
<td>Diana M. Wright, PhD*</td>
</tr>
<tr>
<td>2:30 p.m. - 2:45 p.m.</td>
<td>B88</td>
<td>Intra-Roll and Intra-Product Variations in Duct Tapes</td>
<td>Andria H. Mehlretter, MSFS*; Diana M. Wright, PhD; Michael A. Smith, PhD</td>
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<td>2:45 p.m. - 3:05 p.m.</td>
<td>B89</td>
<td>Hair Analysis: Learning From the Past and Moving Toward the Future</td>
<td>Sandra Koch, MS*</td>
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<td>3:05 p.m. - 3:20 p.m.</td>
<td>Break</td>
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*Presenting Author*
The Trials and Troubles of Transitioning New Technology Into the Forensic Laboratory

Moderator: Christopher S. Palenik, PhD  
Microtrace  
Elgin, IL

Co-Moderator: Gerald M. LaPorte, MSFS  
National Institute of Justice  
Office of Inv & Forensic Science  
Washington, DC

3:20 p.m. - 3:40 p.m.  B90  Introducing New Instrumental Technologies in the Forensic Drug Laboratory — Learning From Past Experiences  
Sandra E. Rodriguez-Cruz, PhD*

3:40 p.m. - 4:00 p.m.  B91  Embracing Change: Transitioning Pattern Evidence Research Into Forensic Science Operations  
JoAnn Buscaglia, PhD*

4:00 p.m. - 4:20 p.m.  B92  Implementing 3D Technology Into a 2D Philosophy  
Heather J. Seubert, MS*

4:20 p.m. - 4:40 p.m.  B93  The Transition From Research to Routine Use in the Forensic Chemistry Laboratory  
Jose R. Almirall, PhD*

4:40 p.m. - 5:00 p.m.  B94  The Future of Forensic Instrumental Methods of Analysis  
Glen P. Jackson, PhD*

5:00 p.m. - 5:30 p.m.  Discussion

Thursday — Session II

DNA Mixtures: Part I

Moderator: Jamie Daughetee, MS  
Los Angeles, CA

Co-Moderator: Matthew J. Gamette, MS  
Meridian, ID

8:40 a.m. - 9:10 a.m.  B95  Multi-Software Interpretation of Complex Mixture DNA Profiles: A Comprehensive Approach to Explaining DNA Interpretation Results in Courtrooms  
Eugenio Alladio, MS*; Paolo Garofano, MD, PhD*; Roberto Testi, MD, PhD; Marco Vincenti, MS; Denise Caneparo, MS; Giuseppina D’amico

9:10 a.m. - 9:30 a.m.  B96  Threshold to Probabilistic DNA Profile Interpretation: Why Change?  
Stuart Cooper, MSc*; Catherine E. McGovern, MSc; Jo-Anne Bright;  
Duncan Taylor, PhD; Damien Abarno, PhD; John S. Buckleton, PhD

9:30 a.m. - 9:50 a.m.  B97  Questioning the Unquestioned — Rethinking and Rejecting Traditional Mixture Concepts and Assumptions  
Charles H. Brenner, PhD*
9:50 a.m. - 10:10 a.m.  B98  Demystifying Mixture Interpretation Software Tools (MIST) — Practical Applications and Implementation Strategies for DNA MIST  
Patricia A. Foley-Melton, PhD*; Jeri D. Ropero-Miller, PhD; Lyndsie N. Ferrara, MS

10:10 a.m. - 10:30 a.m.  Break

DNA Mixtures: Part II

Moderator:  Tuan K. Nguyen, BS  
Walnut Creek, CA  
Co-Moderator: Joana Antunes, MS  
Florida International University  
Miami, FL

10:30 a.m. - 10:55 a.m.  B99  A Hybrid Machine Learning Approach (MLA) for DNA Mixture Interpretation  
Michael Marciano, MS*; Jonathan Adelman, MS*

10:55 a.m. - 11:15 a.m.  B100  Separating DNA Mixtures by Computer to Identify and Convict a Serial Rapist  
Mark W. Perlin, PhD, MD*; Garett Sugimoto, MS*

11:15 a.m. - 11:30 a.m.  B101  Conceptual and Cultural Limitations Delaying the Transition to Probabilistic Genotyping in Forensic DNA Analysis  
Mark R. Wilson, PhD*

11:30 a.m. - 11:45 a.m.  B102  Massively Parallel Sequencing — A Revolution for Complex Mixture Interpretation?  
David Ballard, PhD*; Laurence A.E. Devesse, MA; Athina Vidaki, PhD; Gabriella Mason-Buck, MSc; Denise Syndercombe Court, PhD

11:45 a.m. - 12:00 p.m.  B103  The Power of Massively Parallel Sequencing for Complex Mixture Deconvolution and Other Forensic Applications  
Sarah Cavanaugh; Katie Kennedy, BS; Michael N. Parsons, MS; Andrew B. Feldman, PhD; Jeffrey Lin, MS; Jeffrey Becker, MS; Jon Davoren, MS; Donia Slack, MS*

12:00 p.m. - 1:00 p.m.  Lunch

No More Mixtures

Moderator:  Uyen N. Henson, MS  
Garland, TX  
Co-Moderator: Sarah E. Hardy, BS  
Colorado Springs PD Metro Lab  
Colorado Springs, CO

1:00 p.m. - 1:30 p.m.  B104  Differentiation of Individual Contributors in Contact Epidermal Cell Mixtures Using Fluorescently Labeled Antibody Probes, High Resolution Microscopy, and Flow Cytometry  
Cristina E. Stanciu, BS; Kate Philpott, JD; Ye Jin Kwon, MS; Eduardo E. Bustamante, BS; Tracey Dawson Cruz, PhD; Christopher J. Ehrhardt, PhD*
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<th>Time</th>
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<th>Authors</th>
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<tbody>
<tr>
<td>1:30 p.m.</td>
<td>B105</td>
<td>Cell Separation of Multiple Contributor Samples to Facilitate DNA Mixture Analysis</td>
<td>Nancy A. Stokes, MS*; Cristina E. Stanciu, BS; Christopher J. Ehrhardt, PhD; Susan Greenspoon, PhD</td>
</tr>
<tr>
<td>1:45 p.m.</td>
<td>B106</td>
<td>Separation of Compromised Blood Mixtures Using Fluorescence-Activated Cell Sorting (FACS) for Single-Source Short Tandem Repeat (STR) Profiling</td>
<td>Cristina E. Stanciu, BS*; Ye Jin Kwon, MS; Sarah R. Ingram, BS; Christopher J. Ehrhardt, PhD</td>
</tr>
<tr>
<td>2:00 p.m.</td>
<td>B107</td>
<td>Development of a New DNA Screening System of Criminal Samples Using ForensicGEM™ and Adhesive Sheets</td>
<td>Shinichiro Akase, PhD*; Gregory S. Hummel, MS; Yasuhide Iwata; Yuki Kariya, MS; Takeshi Yoshikawa; Kazumasa Sekiguchi, PhD</td>
</tr>
<tr>
<td>2:15 p.m.</td>
<td>B108</td>
<td>Optimized Methods for Collection and Extraction of DNA From Archived Latent Fingerprints</td>
<td>April D. Solomon, BS*; Madison Hytinen; Aryn M. McClain, BS; Marilyn T. Miller, EdD; Tracey Dawson Cruz, PhD</td>
</tr>
<tr>
<td>2:30 p.m.</td>
<td>B109</td>
<td>Comparison of DNA Yield and Short Tandem Repeat (STR) Success Rates From Various Tissues in Embalmed Bodies</td>
<td>Amanda Wheeler, BS*; Natalia Czado, MS; David A. Gangitano, PhD; Sheree R. Hughes-Stamm, PhD</td>
</tr>
<tr>
<td>2:45 p.m.</td>
<td>B110</td>
<td>Standardized Kinship Data Test Set for Rapid DNA Validation</td>
<td>Stephanie DeDore, BS*; Yvette Crandall, MS; Daniele S. Podini, PhD; Amanda C. Sozer, PhD</td>
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<tr>
<td>3:00 p.m.</td>
<td></td>
<td>Break</td>
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**New Advances in DNA Processing**

**Moderator:** Christie T. Davis, PhD  
Helix Analytical, Inc  
San Francisco, CA

**Co-Moderator:** Rhonda R. Carter, BS  
Illinois State Police  
Springfield, IL

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<tr>
<td>3:20 p.m.</td>
<td>B111</td>
<td>Development of a Microfluidic Differential Extraction Module and Refinement of Infrared (IR) -Mediated Short Tandem Repeat (STR) Amplification for a Rotation-Driven Microdevice</td>
<td>Kemper Gibson*; Jordan Cox, MS; Kimberly Jackson; James P. Landers, PhD; Tracey Dawson Cruz, PhD</td>
</tr>
<tr>
<td>3:45 p.m.</td>
<td>B112</td>
<td>Direct Amplification and Commonly Encountered Crime Scene Substrates</td>
<td>Katelyn M. Gigl, BS*; Reena Ray, PhD</td>
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**CRIMINALISTICS**

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<tr>
<td>4:00 p.m. - 4:15 p.m.</td>
<td>B113</td>
<td>Tissue Preservation With Direct-to-Polymerase Chain Reaction (PCR) for DNA Profiling: An Alternative Disaster Victim Identification (DVI) Approach</td>
<td>Amy E. Sorensen, MSFS*; Clare Berry, BAS; David Bruce, PhD; Michelle Gahan, PhD; Sheree R. Hughes-Stamm, PhD; Dennis McNevin, PhD</td>
</tr>
<tr>
<td>4:15 p.m. - 4:30 p.m.</td>
<td>B114</td>
<td>Enhanced DNA Extraction Via the Reduction and Alkylation of Disulfide Bonds by Iodoacetamide (IAM) and Tris(2-carboxyethyl)phosphine (TCEP)</td>
<td>Megan E. Grimes, MFS*; Leah E. Willis, PhD; Jodi A. Irwin, PhD; Tamyra Moretti, PhD; Mark F. Kavlick, BS</td>
</tr>
<tr>
<td>4:30 p.m. - 4:45 p.m.</td>
<td>B115</td>
<td>The New Kit on the Block: Optimization of the QIAGEN® Investigator® 24plex GO! Kit for Direct Amplification</td>
<td>Daniel Watsula, MS*; Jon Davoren, MS; Jangbir Sangha, MA</td>
</tr>
<tr>
<td>4:45 p.m. - 5:00 p.m.</td>
<td>B116</td>
<td>Increasing DNA Mixture Analysis Quality and Efficiency</td>
<td>George R. Riley, PhD*; Robert M. Goor, PhD; Douglas Hoffman, MS; Stephen Sherry, PhD</td>
</tr>
<tr>
<td>5:00 p.m. - 5:15 p.m.</td>
<td>B117</td>
<td>Using Bayesian Networks for the Interpretation of Low-Template DNA Profiles at the Activity Level</td>
<td>Ka-Man Pun*; Christophe Champod, PhD</td>
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**Friday — Session I**

**Drug Chemistry: Part I**

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<tr>
<td>8:25 a.m. - 8:40 a.m.</td>
<td>B118</td>
<td>2016 Update From the Scientific Working Group for the Analysis of Seized Drugs (SWGDRUG)</td>
<td>Sandra E. Rodriguez-Cruz, PhD*</td>
</tr>
<tr>
<td>8:40 a.m. - 8:55 a.m.</td>
<td>B119</td>
<td>Analysis and Extraction of Fentanyl in Seized Heroin Samples</td>
<td>Charles A. Richardson-Gongora*; Michael M. Healy, MBA; Gerald Mattson, PhD</td>
</tr>
<tr>
<td>8:55 a.m. - 9:10 a.m.</td>
<td>B120</td>
<td>Analysis of Prescription Drugs With Abuse-Deterrent Properties</td>
<td>Robert P. Bianchi, BS*</td>
</tr>
<tr>
<td>9:10 a.m. - 9:25 a.m.</td>
<td>B121</td>
<td>The Prevalence of Promethazine Dimerization in Forensic Samples of “Purple Drank”</td>
<td>Tyler Williams*; James T. Miller, BS; Glen P. Jackson, PhD</td>
</tr>
<tr>
<td>9:25 a.m. - 9:40 a.m.</td>
<td>B122</td>
<td>Adulteration of Psychoactive Herbal Supplements Revealed by Direct Analysis in Real-Time Mass Spectrometry (DART®-MS)</td>
<td>Ashton D. Lesiak*; Robert B. Cody, PhD; Masaaki Ubukata, PhD; Rabi A. Musah, PhD</td>
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*Presenting Author*
**CRIMINALISTICS**

9:40 a.m. - 9:55 a.m. **B123** Toward On-Site, Real-Time, Confirmatory Analysis of Drugs and Their Optical Isomers Using a Battery-Operated, Portable, Ultra-Fast Capillary Electrophoresis/Mass Spectrometry (UFCE/MS)
Mehdi Moini, PhD*; Christopher M. Rollman, BS

9:55 a.m. - 10:10 a.m. **B124** Single Crystal X-Ray Diffraction in Forensic Drug Analysis
Matthew R. Wood, MS*; Thomas A. Brettell, PhD; Ivan Bernal, PhD; Hugh W. Thompson, PhD; Roger A. Lalancette, PhD

10:10 a.m. - 10:25 a.m. **B125** Microcrystalline Tests in Conjunction With Vibrational Spectroscopy for the Analysis of Illicit Drugs and Their Metabolites
Brooke W. Kammrath, PhD*; Shannon Tilly; Kara Kovacev; Natasha L. Kuegler, BS; Pauline E. Leary, PhD; John A. Reffner, PhD

10:25 a.m. - 10:40 a.m. Break

**Drug Chemistry: Part II**

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<th>Time</th>
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<tr>
<td>10:40 a.m.</td>
<td><strong>B126</strong></td>
<td>Using Climate Modeling to Predict the Origin of Seized Cannabis</td>
<td>Jurian A. Hoogewerff, PhD*; Shaerii Sarker, MSc; Alan Hayman, PhD; Russell Frew, PhD</td>
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<tr>
<td>11:00 a.m.</td>
<td><strong>B127</strong></td>
<td>Applicability of Ultra-High-Performance Supercritical Fluid Chromatography (UHPSFC) as a Separation Technique for Synthetic Cannabinoids and Synthetic Cathinones</td>
<td>Ira S. Lurie, PhD*; Stephanie R. Breitenbach, BS; Walter F. Rowe, PhD; Mike Hitchcock, MS; Ioan Marginean, PhD; Stacey L. O'Brien, BS; Bruce R. McCord, PhD</td>
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<tr>
<td>11:15 a.m.</td>
<td><strong>B128</strong></td>
<td>Identification of Regioisomers Via Gas Chromatography Coupled With Vapor-Phase Infrared Detection (GC-IRD)</td>
<td>Janice L. Aleman, BS*; Jesse M. Zavala, MS; Kyle E. Vrcks, MS; Warren C. Samms, PhD</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td><strong>B129</strong></td>
<td>Capillary Electrophoresis/Mass Spectrometry (CE/MS) as an Effective Tool for Identification of Illicit Drugs and Their Optical Isomers</td>
<td>Mehdi Moini, PhD*; Christopher M. Rollman, BS; Mike Hitchcock, MS; Ioan Marginean, PhD</td>
</tr>
<tr>
<td>11:45 a.m.</td>
<td><strong>B130</strong></td>
<td>Characterization of Synthetic Phenethylamines Using High Resolution Mass Spectrometry (HRMS)</td>
<td>Alexandria Anstett, BS*; Fanny Chu, BS; Ruth Waddell Smith, PhD</td>
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<tr>
<td>12:00 p.m.</td>
<td>B131</td>
<td>Differentiation of Cathinone Isomers Using High Resolution Collision-Induced Dissociation Mass Spectrometry (CID/MS)</td>
<td>Cynthia Kaeser, MS*; A. Daniel Jones, PhD; Ruth Waddell Smith, PhD</td>
</tr>
<tr>
<td>12:15 p.m.</td>
<td></td>
<td><strong>Lunch</strong></td>
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<tr>
<td>11:30 a.m.</td>
<td>B132</td>
<td>The Effects of Water Immersion on the Recovery of DNA From Human Remains</td>
<td>Ema H. Graham*; Shanae J. Armstrong, MS; Michael S. Adamowicz, PhD</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>B133</td>
<td>Comparison of Three Filtration Devices for Recovery of Low Level and Degraded DNA</td>
<td>Nichole M. Tuscher, MFS*; Ismail M. Sebetan, MD, PhD*; Paul Stein, PhD*</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>B134</td>
<td>Selective Degradation Using the Erase™ Sperm Isolation Kit and PrepFiler® Purification</td>
<td>Melissa D. Moore, BS*; Richard A. Gustilo; Mary M. Hong, BS; Ruth H. Ikeda, PhD; Stacy Vallercamp; Ismail M. Sebetan, MD, PhD*; Paul Stein, PhD*</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>B135</td>
<td>Evaluation of the QIAGEN® Investigator 24Plex Polymerase Chain Reaction (PCR) Kit for Amplification of Forensic Samples</td>
<td>Clinton D. Buchanan, PhD*; Joel D. Sutton, MSFS</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>B136</td>
<td>Working With Challenging Samples: An Independent Assessment of the Relative Performance of the Promega® Fusion™ and InnoGenomics® InnoTyper™ Kit With Probative Samples</td>
<td>James Anstead, PhD*; Erica Reynaga, MS; Kelsy Lowther, MS; Brandi G. Cassidy, PhD</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>B137</td>
<td>Faux-Dis: An Online, Searchable DNA Database Available for Educational Purposes</td>
<td>Ashley Hall, PhD*</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>B138</td>
<td>Human Short Tandem Repeat (STR) Profiles From Blood-Fed Mosquitos</td>
<td>Jared Latiolais, MSc; Dane T. Plaza, BS*; Andrew B. Feldman, PhD; Mobolaje Okulate, PhD; Nirbhay Kumar; Robert A. Bever, PhD</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>B139</td>
<td>Examining the Contribution of Sampling to Peak Height Imbalance in Low Template DNA Samples Using a Single-Tube Extraction Protocol</td>
<td>Thutrang Nguyen, BA*; Robin W. Cotton, PhD</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>B140</td>
<td>Working to Solve Compatibility Issues Between Impression Enhancement and DNA Analysis</td>
<td>Jessica Zarate, MS; Jodi Lynn Barta, PhD*</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>B141</td>
<td>Updates to the Forensic Research/Reference on Genetics Knowledge Base (FROG-kb) Database</td>
<td>Kenneth Kidd, PhD; Haseena Rajeevan, PhD; Katherine N. Moore, MS*; Richard Satcher, MS; Patricia A. Foley-Melton, PhD; Jeri D. Ropero-Miller, PhD</td>
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| 11:30 a.m.   | B142 Examination of 20 Retrotransposable Polymorphic Insertion/Null (INNUL) Markers for Their Utility in Kinship Testing Using the Commercial Software Program LSAM  
  AnniLauri Villeme, BS*; Gretchen E. Bartzal; Becky Hill, MS; Michael D. Coble, PhD |
| 11:30 a.m.   | B143 Complex Mixtures and the Minimum Number of Contributors: A Case Study  
  Nathaniel D. Adams, BS; Ranajit Chakraborty, PhD; Carrie Rowland, MSc; Dan Krane, PhD* |
| 11:30 a.m.   | B144 A Single Multiplex Polymerase Chain Reaction (PCR) Assay of Rapidly Mutating (RM) Y-Chromosomal Short Tandem Repeat (Y-STR) Loci to Complement Current Sets of Markers Used in Forensic Y-Chromosome Analysis  
  Daniela Lacerenza, PhD; Giancarlo Di Vella, MD, PhD*; Carlo Robino |
| 11:30 a.m.   | B145 Utility of InnoTyper™ 21 in Analysis of Degraded Human DNA Recovered From Maggot Crop Contents  
  Sharon E. Zeller, BS*; Kyle S. Williams; Sudhir K. Sinha, PhD; Gina M. Murphy, MS; Hiromi Brown, PhD; Daniel J. Wescott, PhD; Tracey Dawson Cruz, PhD; Baneshwar Singh, PhD* |
| 11:30 a.m.   | B146 Differentiation of Sand Grains From Different Locations Using Image Analysis and Multivariate Statistics  
  Jacob Hock*; Walter F. Rowe, PhD |
| 11:30 a.m.   | B147 Development of Paper Microfluidic Devices for the Detection of Low-Explosives Residue  
  Kathryn R. Chabaud, BS*; Bruce R. McCord, PhD |
| 11:30 a.m.   | B148 Crude Oil Characteristics for Identifying Petroleum Distillates in Fire Debris  
  Jeanet Hendrikse, MSc* |
| 11:30 a.m.   | B149 Forensic Analysis of Textile Fibers Exposed to Laundry Detergents Using Fluorescence Excitation-Emission Spectroscopy  
  Nirvani Mujumdar, MS* |
| 11:30 a.m.   | B150 Investigative Predictions of Smokeless Powder Manufacturers  
  Dana-Marie K. Dennis, PhD; Mary R. Williams, MS*; Michael E. Sigman, PhD |
| 11:30 a.m.   | B151 Modern Methodology for Explosives Tagging and Encoding Based on Luminescent Metal Organic Frameworks  
  Filipe Gabriel B. Mauricio, MSc*; Ingrid T. Weber, PhD; Adauto Z. Pralon, MSc; Marcio Talhavini, PhD |
| 11:30 a.m.   | B152 Do the Bulk Area and the Exterior Surface of Modern Container Glass Exhibit Differences in Refractive Index (RI) Measurements?  
  Joseph Insana*, Patrick Buzzini, PhD |
| 11:30 a.m.   | B153 Comparison of Cosmetic Foundations by Analysis of Preservative Content Using Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS)  
  Thomas A. Brettell, PhD*; Emily A. Myers, BS* |

*Presenting Author
11:30 a.m. - 1:00 p.m. B154 Development of a Sample Clean-Up Procedure for the Recovery of Trace Quantities of Organic Explosives in Soil and Sand
Erin Waddell, PhD*; Jennifer Thomas, PhD; Christopher C. Donnelly; Mark L. Miller, PhD

11:30 a.m. - 1:00 p.m. B155 Analysis of Inks Via a Microfluidics Extraction Device With a Quadrupole Time-of-Flight Mass Spectrometer (qTOF/MS)
Emily Lichtenberger, BS*; Nelson R. Vinueza, PhD

11:30 a.m. - 1:00 p.m. B156 Gas Chromatography/Mass Spectrometry (GC/MS) Measurement of Gasoline Vapor Absorption on Clothing in a Confined Space
Charles R. Cornett, PhD*; Sara C. Karp, BS; Ruth M. Henk, BS; Kristy Stowe, BS; Raymond G. Lenz, BS

11:30 a.m. - 1:00 p.m. B157 Observations on the Incidence of Transfer of Fibers to Knives During Penetration Cuts
Barbara Doupe, MSc*; Vanessa Londero, BSc; Cecilia Hageman, PhD

11:30 a.m. - 1:00 p.m. B158 Low-Cost Lanthanide-Organic Framework Markers for Gunshot Residue (GSR) Identification
Isabela Bastos Servy*; Kaline Wanderley, PhD; Marcella Auxiliadora de Melo Lucena, MS*; Marcio Talhavini, PhD; Marcelo O. Roderigues, PhD; Ingrid T. Weber, PhD*

11:30 a.m. - 1:00 p.m. B159 Characterization of Hair Dyes Using Ultra High-Performance Liquid Chromatography Electrospray Ionization Time-of-Flight Mass Spectrometry (UHPLC-ESI-TOF/MS) for the Forensic Analysis of Dyed Hair
Diana I. Camacho; Ira S. Lurie, PhD; Ioan Marginean, PhD*

11:30 a.m. - 1:00 p.m. B160 Analysis of Change in Nitrite-to-Nitrate Ratios in Gunshot Residue Over Time Using Ion Pairing High-Performance Liquid Chromatography (HPLC)
Anusha Rankoth*; Marianne E. Staretz, PhD; Peter J. Diazeck, BS; Thomas H. Pritchett, MS; Elana Conant, MS

Patterns and Impressions

Moderator: Eric S. Sahota, BA
Las Vegas, NV

Co-Moderator: Philip R. Antoci, MS
NY City Police Department Crime Lab
Jamaica, NY

1:00 p.m. - 1:20 p.m. B161 Evaluation and Validation of a Model to Quantify the Weight of Fingerprint Evidence
Henry J. Swofford, MSFS*; Anthony Koertner; Michael J. Salyards, PhD

1:20 p.m. - 1:35 p.m. B162 I Know It When I See It — Is Complexity the Key to Creating a Workable Documentation Policy for the Pattern Evidence Disciplines?
Heidi Eldridge, MS*
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<td>1:35 p.m.</td>
<td>B163</td>
<td>A Bibliometric Review of the Impact of the National Academy of Sciences (NAS) Report on the Friction Ridge Discipline</td>
<td>Maria A. Roberts; Kathryn B. Knorr; MS; Kyle Tom, MS*</td>
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<tr>
<td>1:50 p.m.</td>
<td>B164</td>
<td>Fingerprint Aging Mechanism Determination Through Electrochemistry</td>
<td>Roberto Rosa, PhD*; Roberto Giovanardi, PhD; Andrea Bozza, MSc; Paolo Veronesi, PhD; Cristina Leonelli, PhD</td>
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<tr>
<td>2:05 p.m.</td>
<td>B165</td>
<td>Performance and Ricochet Characteristics of Frangible Ammunition</td>
<td>Peter J. Diaczuk, BS*; Jack Hietpas, PhD; Xiao Shan Law, BS</td>
</tr>
<tr>
<td>2:20 p.m.</td>
<td>B166</td>
<td>Development of a New Standard Bullet for Ballistic Quality Control</td>
<td>Thomas B. Renagar, BS*; Xiaoyu A. Zheng, MS; Robert M. Thompson, BS; Theodore V. Vorburger, PhD; Junfeng J. Song, MS; Johannes A. Soons, PhD; James H. Yen, PhD</td>
</tr>
<tr>
<td>2:35 p.m.</td>
<td>B167</td>
<td>Analyzing a Firearms Proficiency Test Using the Congruent Matching Cells (CMC) Method of Computer-Aided Topography Comparisons</td>
<td>Daniel Ott, PhD*; Robert M. Thompson, BS; Junfeng J. Song, MS</td>
</tr>
<tr>
<td>2:50 p.m.</td>
<td>B168</td>
<td>Modeling Firearm Tool Mark Persistence Through Objective Surface Metrology and Analysis</td>
<td>Xiaoyu A. Zheng, MS*; Johannes A. Soons, PhD; Robert M. Thompson, BS; Wei Chu</td>
</tr>
<tr>
<td>3:05 p.m.</td>
<td>B169</td>
<td>Proposed Congruent Match Cross-Section (CMX) Method for Ballistics Identification of Firing Pin Impressions</td>
<td>Junfeng J. Song, MS*; Mingsi Tong, PhD; Hao M. Zhang, PhD; Wei Chu; Robert M. Thompson, BS*</td>
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<tr>
<td>3:20 p.m.</td>
<td>Break</td>
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Interpretation Challenges in the Non-Biological Criminalistics Disciplines: Assessing the Path

**Moderator:** Jose R. Almirall, PhD  
Florida International University  
Dept of Chemistry  
Miami, FL

**Co-Mediator:** Glen P. Jackson, PhD  
West Virginia University  
Dept of Forensic and Investigative Science  
Morgantown, WV

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<tr>
<td>3:35 p.m.</td>
<td>B170</td>
<td>Imparting a Meaningful Application of Statistics to Forensic Scientists</td>
<td>Stephen L. Morgan, PhD*</td>
</tr>
<tr>
<td>3:55 p.m.</td>
<td>B171</td>
<td>Challenges for Implementing a New Paradigm in Fire Debris Analysis and Reporting</td>
<td>Mary R. Williams, MS; Michael E. Sigman, PhD*</td>
</tr>
<tr>
<td>4:15 p.m.</td>
<td>B172</td>
<td>An Overview of Different Approaches to Expressing Significance in Associative Forensic Reports</td>
<td>Christopher R. Bommarito, MS*</td>
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*Presenting Author*
CRIMINALISTICS
Las Vegas
2016

4:35 p.m. - 4:55 p.m.  B173  Challenges in Developing Objective Interpretation Methods for Firearm and Tool Mark Examination
Robert M. Thompson, BS*

4:55 p.m. - 5:30 p.m.  Discussion

Criminalistics Believe It or Not!

Moderator: Vincent J. Desiderio, MS
United States Postal Inspection Service
Dulles, VA

Co-Moderator: Kristy Kadash, PhD
Jefferson County Regional Crime Lab
Golden, CO

7:00 p.m. - 9:00 p.m.  Open Presentations in a Bring Your Own Slides Format

Friday — Session II

Mixture Interpretation and Statistics Town Hall Meeting

Moderator: Kristy Kadash, PhD
Jefferson County Regional Crime Lab
Golden, CO

8:25 a.m. - 10:20 a.m.  B174  Mixture Interpretation and Statistics Town Hall Meeting
Kristy Kadash, PhD; Todd W. Bille, MS*; Charles H. Brenner, PhD*; Michael D. Coble, PhD*; Norah Rudin, PhD*; Joel D. Sutton, MSFS*; Brad Jenkins, MS*

10:20 a.m. - 10:35 a.m.  Break

Mito and Other Things MPS

Moderator: Sara E. Bitter, MSF
Pittsburgh, PA

Co-Moderator: Kimberly S. Kobojek, MS
ASU New College
Arizona State University-W Campus
Phoenix, AZ

10:35 a.m. - 10:55 a.m.  B175  Optimization and Validation of Mitochondrial DNA (mtDNA) D-Loop Sequencing on the MiSeq*
Laura A. Wilson, BS*; Sarah Copeland, BS; Gloria Dimick, MS; Charity A. Holland, MPH; Robert Bever; Mitchell M. Holland, PhD

*Presenting Author
### CRIMINALISTICS

**Las Vegas**  
**2016**

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<tr>
<th>Time</th>
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<tr>
<td>10:55 a.m. -</td>
<td>B176</td>
<td><strong>Massively Parallel Sequencing (MPS) of Microhaplotypes for Forensics</strong></td>
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<tr>
<td>11:00 a.m.</td>
<td></td>
<td>Sharon C. Wootton, PhD*; Kenneth Kidd, PhD; William C. Speed, PhD;</td>
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<td>Joseph P. Chang, BS; Sheri J. Olson, MS; Reina Langit, MS; Chien-Wei Chang, PhD; Robert Lagace, BS</td>
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<tr>
<td>11:10 a.m. -</td>
<td>B177</td>
<td><strong>Optimization of a Next Generation Sequencing (NGS) Protocol for Processing</strong></td>
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<tr>
<td>11:25 a.m.</td>
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<td>High-Quality Mitochondrial DNA (mtDNA) Samples</td>
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<td>Joseph D. Ring, MS*; Michelle A. Peck, MFS*; Erin M. Gorden, MFS*;</td>
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<td>Charla Marshall, PhD; Kimberly S. Andreaggi, MFS*</td>
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<tr>
<td>11:25 a.m. -</td>
<td>B178</td>
<td><strong>Assessing the Impact of DNA Damage on the Interpretation of Low-Level</strong></td>
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<tr>
<td>11:40 a.m.</td>
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<td>Mitochondrial DNA (mtDNA) Heteroplasmy</td>
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<td>Molly M. Rathbun, BS*; Jennifer A. McElhoe, DPhil; Mitchell M. Holland, PhD</td>
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<tr>
<td>11:40 a.m. -</td>
<td>B179</td>
<td><strong>Comparison of DNA Repair Methods for Improved Success With Next Generation</strong></td>
</tr>
<tr>
<td>11:55 a.m.</td>
<td></td>
<td>Sequencing (NGS) of Compromised Skeletal Remains</td>
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<td></td>
<td>Erin M. Gorden, MFS*; Charla Marshall, PhD*; Kimberly S. Andreaggi, MFS*</td>
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<tr>
<td>11:55 a.m. -</td>
<td>B180</td>
<td><strong>Sequence-Based Analysis of Stutter at Short Tandem Repeat (STR) Loci:</strong></td>
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<tr>
<td>12:10 p.m.</td>
<td></td>
<td>Implementation and Utilization</td>
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<td>Rachel Aponte*; Katherine B. Gettings, PhD; David L. Duewer, PhD; Becky Hill, MS; Michael D. Coble, PhD; Peter M. Vallone, PhD</td>
</tr>
<tr>
<td>12:10 p.m. -</td>
<td></td>
<td><strong>Lunch</strong></td>
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</tbody>
</table>

#### Advances in Biological Screening

**Moderator:** Jenna L. Oakes-Smith, MFS  
**Co-Moderator:** Matthew G. Seabert, BS  
**St. Louis Metro Police Department**  
**St. Louis, MO**

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<tr>
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<tbody>
<tr>
<td>1:00 p.m. - 1</td>
<td>B181</td>
<td><strong>Light It Up: Fluorescent Biosensors for the Detection of Biological Fluids and Fingerprints</strong></td>
</tr>
<tr>
<td>1:30 p.m.</td>
<td></td>
<td>James Gooch*; Barbara Daniel, PhD; Vincenzo Abbate, PhD; Nunzianda Frascione, PhD</td>
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<tr>
<td>1:30 p.m. -</td>
<td>B182</td>
<td><strong>Streamlining Sperm Cell Detection Via Proximity Ligation Real-Time Polymerase Chain Reaction (PLiRT-PCR) With Forensic DNA Analysis</strong></td>
</tr>
<tr>
<td>1:45 p.m.</td>
<td></td>
<td>Sarah Rim, PhD*; Daniele S. Podini, PhD*</td>
</tr>
<tr>
<td>1:45 p.m. -</td>
<td>B183</td>
<td><strong>Developmental Validation of MicroRNAs (miRNAs) for Body Fluid Identification</strong></td>
</tr>
<tr>
<td>2:00 p.m.</td>
<td></td>
<td>Carolyn Lewis, BS*; Jamie Gentry, BS; Chelsea F. Calloway, BS; Nerissa Peace, BS; Ariana Albornoz, MS; Samantha R. Fleming, MS; Christina Hayes Nash, MS; Zendra E. Zehner; PhD; Sarah J. Seashols Williams, PhD</td>
</tr>
<tr>
<td>2:00 p.m. -</td>
<td>B184</td>
<td><strong>Recent Progress in the Development of a Surface-Enhanced Raman Spectroscopy (SERS) Platform for Rapid Identification of Trace Amounts of Human Body Fluids</strong></td>
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<tr>
<td>2:15 p.m.</td>
<td></td>
<td>Jennifer Fore, PhD; Ranjith Premasiri, PhD; Kathryn A. Zegarelli, BS; Brandon Scott, PhD; Jessica Irvine, BS; Amy N. Brodeur, MFS; Lawrence Ziegler, PhD*</td>
</tr>
</tbody>
</table>

*Presenting Author*
2:15 p.m. - 2:30 p.m. B185  Optimum Case Detection Limit of the Forensic Luminol Test for Bloodstains
Stephen L. Morgan, PhD*; Brianna M. Cassidy, BS; Zhenyu Lu, BS;
Jennifer P. Martin, BS; Shawna K. Tazik, BS; Katherine A. Witherspoon, BS;
Katherine E. Kilgore; Stephanie A. DeJong, BS; Raymond G. Belliveau, BS;
Michael L. Myrick, PhD

2:30 p.m. - 2:45 p.m. B186  Time-Dependent Loss of Messenger RNA (mRNA) Transcripts From Forensic Samples Analyzed Using Next Generation Sequencing
Katelyn D. Weinbrecht, MS; Robert W. Allen, PhD*

2:45 p.m. - 3:00 p.m. B187  An Evaluation of the Differential Stability of Nucleic Acids in Biological Fluids Compromised by Environmental Exposure
Tiffany R. Layne, BS*; Zendra E. Zehner, PhD; Sarah J. Seashols Williams, PhD

3:00 p.m. - 3:20 p.m.  Break

New Sources of Forensic Biological Evidence

Moderator: Katerina Doneva, MS
OCSD, Orange County Crime Laboratory
Santa Ana, CA

Co-Moderator: Gary J. Molina, BA
Texas DPS Crime Laboratory
CODIS Laboratory
Austin, TX

3:20 p.m. - 3:45 p.m. B188  Obtaining Significant Powers of Individual Discrimination From Hair Shaft Proteins
Glendon Parker, PhD*; Deon Anex, PhD; Katelyn Mason, PhD; Bradley Hart, PhD

3:45 p.m. - 4:00 p.m. B189  Using DNA Barcoding to Assess DNA Viability in Plant and Insect Fragments Isolated From Forensic Soil Samples
Kelly A. Meiklejohn, PhD*; Megan L. Jackson, BS; Jack Hietpas, PhD;
Libby A. Stern, PhD; James M. Robertson, PhD

4:00 p.m. - 4:15 p.m. B190  Evaluation of a 13-Loci Short Tandem Repeat (STR) Multiplex System for Cannabis Sativa Genetic Identification
Rachel M. Houston, BS*; Sheree R. Hughes-Stamm, PhD; David A. Gangitano, PhD

4:15 p.m. - 4:30 p.m. B191  Development of a High Resolution Real-Time Polymerase Chain Reaction (PCR) Melt Assay for Identifying “Legal High” Plant Material
Alicia Quinn, BS*; Kelly M. Elkins, PhD

4:30 p.m. - 4:45 p.m. B192  Epigenetic-Aging-Signature — The Future?
Athina Vidaki, PhD*; Anastasia Aliferi; David Ballard, PhD; Leon Barron, PhD;
Denise Syndercombe Court, PhD

4:45 p.m. - 5:00 p.m. B193  A Raman “Spectroscopic Clock” for Bloodstain Age Determination: The First Week After Deposition
Kyle C. Doty, BS*; Gregory McLaughlin, MS; Igor K. Lednev, PhD*
5:00 p.m. - 5:15 p.m.  B194  Investigations on the Use of Tissue MicroRNA Markers to Correlate Bloodstains With Wounds for Bloodstain Pattern Analysis
Donald J. Johnson, MS*; David Raymond, PhD; Ray de Leon, PhD

Saturday — Session I

Instrumental Analysis

Moderator: Tammi Jacobs Shulman, BS
Westchester County
Forensic Lab
Valhalla, NY

Co-Moderator: Tracey M. Ray, BS
Douglas County Sheriff Office
Forensic Services Division
Omaha, NE

8:00 a.m. - 8:15 a.m.  B195  Examination of Plastic Shopping Bags Using Attenuated Total Reflectance/Fourier Transform Infrared Spectrometry (ATR/FTIR)
Walter F. Rowe, PhD*

8:15 a.m. - 8:30 a.m.  B196  X-Ray Powder Diffraction (XRPD) Method Development and Validation for the Identification of Counterfeit Pharmaceuticals
Mark R. Witkowski, PhD; Nicola Ranieri, BS; JaCinta Batson, MS; Lauren L. Richards-Waugh, PhD; Kelsey M. DeWitt, BS*

8:30 a.m. - 8:45 a.m.  B197  Microextraction Capsules (MEC): A New Direction in Green Analytical and Forensic Sample Preparation
Abuzar Kabir, PhD*

8:45 a.m. - 9:00 a.m.  B198  WITHDRAWN

9:00 a.m. - 9:15 a.m.  B199  Characterization of Performance-Enhancing Peptides Via Ambient Ionization Time-of-Flight/Mass Spectrometry (TOF/MS)
Kyle E. Vircks, MS*; Jesse M. Zavala, MS; Robert B. Cody, PhD; Warren C. Samms, PhD; Roger Kahn, PhD

9:15 a.m. - 9:30 a.m.  B200  The Effect of Skin Debris on Gunshot Residue (GSR) Detection
Bryan R. Burnett, MS*

9:30 a.m. - 10:00 a.m.  B201  Modeling of Elemental and Isotopic Data for Reference Populations Distribution Functions to Be Used in Comparison Evidence and Provenance Intelligence
Jurian A. Hoogewerff, PhD*

10:00 a.m. - 10:20 a.m.  Break

*Presenting Author
Criminalistics Management and Philosophy

Moderator: Linda C. Rourke, MS
Bayside, NY
Vancouver, WA

Co-Moderator: Catherine R. Dunn, BS
WA State Patrol Crime Lab

10:20 a.m. - 10:40 a.m. B202 Forensic Pathology as a Forensic Science: What Is “Bias” and Why Does It Matter?
Andrew M. Baker, MD*

10:40 a.m. - 11:00 a.m. B203 Analyzing Linear Sequential Unmasking
Roger G. Koppl, PhD*

11:00 a.m. - 11:15 a.m. B204 Three Roads Converge: The Formation of the Houston Forensic Science Center
Daniel D. Garner, PhD; Michael Grojean, PhD; Amy L. Popejoy, MS*

11:15 a.m. - 11:30 a.m. B205 Embracing Change: The Challenges and Rewards of Transitioning From the Bench to Management
Julia A. Dolan, MS*

11:30 a.m. - 11:45 a.m. B206 Using Results-Based Data to Make Informed Management Decisions
Jenna L. Oakes-Smith, MFS*

11:45 a.m. - 12:00 p.m. B207 Applying the Queuing Theory in Forensic Cases Management
Khudooma S. Al Na’imi, MSc*

Saturday — Session II

The Big Picture

Moderator: Pamela Jarman, MSc
Phoenix, AZ

Co-Moderator: Brittany N. Beyer, MS
Houston Forensic Science Center
Houston, TX

8:00 a.m. - 8:30 a.m. B208 Quality Assurance of the Biostatistical Workflow in Forensic Genetic Casework
Andreas Tillmar, PhD*; Gunilla Holmlund, PhD

8:30 a.m. - 9:00 a.m. B209 Success Rates From Touch DNA in Property Crimes
Tammy Taylor, MS*; Michael A. Donley, MS; Diana Gonzalez, MS; Nikia S. Redmond, MSFS; Katherine Welch, MSFS; Roger Kahn, PhD

9:00 a.m. - 9:20 a.m. B210 Forensic Genetics in Brazil: A (Still) Brief History
Ana Paula S. Doval*; Meiga A.M. Menezes, MSc; Guilherme Silveira Jacques, MSc; Helio Buchmuller, PhD*

9:20 a.m. - 9:40 a.m. B211 From Cold Case to Solved Crime
Lisa Mertz, MS*; Krista Currie, MSc*

*Presenting Author
CRIMINALISTICS

9:40 a.m. - 10:00 a.m. Break

DNA Policy

Moderator: Carol J. Retamozo, BS
LVMPD Forensic Laboratory
Biology/DNA
Las Vegas, NV

Co-Moderator: Season E. Seferyn, MSFS
Marshall University Forensic Science Center
Huntington, WV

10:00 a.m. - 10:25 a.m. B212 National Institute of Justice’s (NIJ’s) “Using DNA Technology to Identify the Missing” Program: An Update
Charles M. Heurich, MFS*

10:25 a.m. - 10:50 a.m. B213 The Testing of Unsubmitted Sexual Assault Kits: An Update on the National Institute of Justice-Federal Bureau of Investigation (NIJ-FBI) Sexual Assault Kit Partnership
Gerald M. LaPorte, MSFS; Heather E. Waltke, MS*

10:50 a.m. - 11:20 a.m. B214 What Errors Are We Looking for and How Can We Look for More?
Charlotte J. Word, PhD*

11:20 a.m. - 11:40 a.m. B215 The Proper Use of Standard Reference Material 2372 (SRM 2372) Human DNA Quantitation Standard for the Calibration of Commercial Quantitative Polymerase Chain Reaction (qPCR) Kit DNA Standards
Erica L. Romsos, MFS*; Margaret C. Kline, MS; David L. Duewer, PhD; Peter M. Vallone, PhD

11:40 a.m. - 12:00 p.m. B216 Is the Factor of 10 Still Applicable Today?
Simone Gittelson, PhD*; John S. Buckleton, PhD
Thursday

Moderator: Richard Vorder Bruegge, PhD  
FBI – OTD  
Quantico, VA

Co-Moderator: Catalin Grigoras, PhD  
Denver, CO

8:30 a.m. - 8:55 a.m.  C1  Differential Forensic Analysis of Periodic Mobile Forensics Images  
Mark D. Guido, MS*

8:55 a.m. - 9:00 a.m.  Discussion

8:55 a.m. - 9:00 a.m.  Discussion

9:00 a.m. - 9:25 a.m.  C2  Using Deep Learning Methods for Forensic Image and Video Investigation  
Zeno J. Geradts, PhD*; Arnout C. Ruifrok, PhD

9:25 a.m. - 9:30 a.m.  Discussion

9:30 a.m. - 9:55 a.m.  C3  Discriminating Hacker Techniques by Individual Differences and Techniques of Neutralization  
Gregory Bowen*; Kathryn C. Seigfried-Spellar, PhD*

9:55 a.m. - 10:15 a.m.  Break

Moderator: Julie J.C.H. Ryan, DSc  
Washington, DC

Co-Moderator: Eliud Bonilla, BS  
EB Technologies, LLC  
Kensington, MD

10:15 a.m. - 10:40 a.m.  C4  Joint Test Action Group (JTAG) Tool Testing  
Jenise Reyes-Rodriguez, BS*; Richard Ayers, MS

10:40 a.m. - 10:45 a.m.  Discussion

10:45 a.m. - 11:10 a.m.  C5  Mobile Device Data Population for Tool Testing  
Jenise Reyes-Rodriguez, BS; Richard Ayers, MS*

11:10 a.m. - 11:15 a.m.  Discussion

11:15 a.m. - 11:40 a.m.  C6  Defining, Measuring, and Mitigating Errors for Digital Forensic Tools  
James R. Lyle, PhD*

11:40 a.m. - 1:00 p.m.  Lunch

*Presenting Author
### DIGITAL & MULTIMEDIA SCIENCES

**Las Vegas 2016**

**Moderator:** William J. Abaunza, MS  
**Co-Moderator:** Patrick A. Eller, MS  
**Location:** Springfield, VA  
**Time:** 1:00 p.m. - 4:30 p.m.

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<tr>
<td>1:00 p.m. - 1:25 p.m.</td>
<td>C7</td>
<td><strong>Google® Chromebook™: Evaluation of Forensic Methods for Data Extraction</strong></td>
<td>Marcus Rogers, PhD*; Yoshitaka Takase, MS*</td>
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<td>1:25 p.m. - 1:30 p.m.</td>
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<td><strong>Discussion</strong></td>
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<td>1:30 p.m. - 1:55 p.m.</td>
<td>C8</td>
<td><strong>Case Study: Snapchat™ Picture Recovery From Mobile Device Unallocated Space</strong></td>
<td>Joseph L. White, MS*</td>
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<td>1:55 p.m. - 2:00 p.m.</td>
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<td><strong>Discussion</strong></td>
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<td>2:00 p.m. - 2:25 p.m.</td>
<td>C9</td>
<td><strong>Development of a Portable Mobile Phone Forensic Acquisition and Analysis Toolkit Utilizing Open Source Tools</strong></td>
<td>Kelsey L. Wilkinson, BS*; Robert J. Boggs; Joshua L. Brunty, MS*; Terry Fenger, PhD</td>
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<td>2:25 p.m. - 2:45 p.m.</td>
<td></td>
<td><strong>Break</strong></td>
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**Moderator:** Zac P. Giammarrusco, MS  
**Co-Moderator:** Daniel J. Ryan, JD  
**Location:** Denver, CO, Pasadena, MD  
**Time:** 2:45 p.m. - 4:30 p.m.

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<tr>
<td>2:45 p.m. - 3:10 p.m.</td>
<td>C10</td>
<td><strong>Forensic Analysis of Digital Audio File Structures and Formats</strong></td>
<td>Catalin Grigoras, PhD*; Jeff M. Smith, MS</td>
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<td>3:10 p.m. - 3:15 p.m.</td>
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<td><strong>Discussion</strong></td>
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<td>3:15 p.m. - 3:40 p.m.</td>
<td>C11</td>
<td><strong>Proposed Analytical Framework for Electronically Frequency/Pitch-Modified Voices</strong></td>
<td>Eliud Bonilla, BS*; Catalin Grigoras, PhD; Jeff M. Smith, MS</td>
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<tr>
<td>3:40 p.m. - 3:45 p.m.</td>
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<td><strong>Discussion</strong></td>
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<tr>
<td>3:45 p.m. - 4:10 p.m.</td>
<td>C12</td>
<td><strong>Age Estimation of Adolescents Using Eye Measurements From Various Angles in Videos</strong></td>
<td>Neeka M. Parker*; Joshua L. Brunty, MS; Robert J. Boggs; Terry Fenger, PhD</td>
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<tr>
<td>4:10 p.m. - 4:30 p.m.</td>
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<td><strong>Questions &amp; Answers</strong></td>
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## Friday

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<tr>
<td>8:30 a.m.</td>
<td>C13</td>
<td>The Use of Photo Response Non-Uniformity (PRNU) Patterns for the Comparison of Online Videos on Social Media</td>
<td>Zeno J. Geradts, PhD*; Rick Cents, BS</td>
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<tr>
<td>8:55 a.m.</td>
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<td>Discussion</td>
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<tr>
<td>9:00 a.m.</td>
<td>C14</td>
<td>Source Identification of High-Definition Videos — A Forensic Analysis of Downloaders and YouTube® Video Compression Using a Group of Action Cameras</td>
<td>Zac P. Giammarrusco, MS*; Catalin Grigoras, PhD*; Jeff M. Smith, MS*</td>
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<td>9:25 a.m.</td>
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<td>Discussion</td>
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<tr>
<td>9:30 a.m.</td>
<td>C15</td>
<td>The Authentication of MP4 Video Using File Structure and Metadata</td>
<td>Jacob R. Hall*</td>
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<tr>
<td>9:55 a.m.</td>
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<td>Break</td>
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<tr>
<td>10:15 a.m.</td>
<td>C16</td>
<td>Challenges in Recovering Deleted Data in the Cloud</td>
<td>Robert Jackson, MS; Richard Austin, MS; Martin Herman, PhD*; P.W. Carey, MS; Otto S. Reemelin, MS</td>
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<tr>
<td>10:40 a.m.</td>
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<td>Discussion</td>
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<tr>
<td>10:45 a.m.</td>
<td>C17</td>
<td>Counterfeiting and Counterfeit Deterrence Applications for Imaging Technologies</td>
<td>Joel A. Zlotnick, MSFS*</td>
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<td>11:10 a.m.</td>
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<td>Discussion</td>
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<tr>
<td>11:15 a.m.</td>
<td>C18</td>
<td>H.Y.D.R.A. (Hyper Yield Data-Driven Real-Time Analysis)</td>
<td>Anthony Skjellum, PhD*; Austin Hancock, BS*; Janice Canedo*; Erby Fischer</td>
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<tr>
<td>11:40 a.m.</td>
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<td>Lunch</td>
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*Presenting Author
### Poster Session

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<tr>
<td>11:30 a.m. -</td>
<td>C19</td>
<td>A Comparison of Computer Forensic Tools: An Open-Source Evaluation</td>
<td>Adam Cervellone, BS*; Robert Price, MS; Joshua L. Brunty, MS; Terry Fenger, PhD</td>
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<td>1:00 p.m.</td>
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<tr>
<td>11:30 a.m. -</td>
<td>C20</td>
<td>Integrating a Profile of Frontal Face With Its Mirror Image for Facial Reconstruction</td>
<td>Paramjit Kaur, MSc; Kewal Krishan, PhD*; Tanuj Kanchan, MD; Suresh K. Sharma, PhD</td>
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<td>1:00 p.m.</td>
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**Moderator:** Douglas R. White, MS  
**Co-Moderator:** Kathryn C. Seigfried-Spellar, PhD  
**Location:** Gaithersburg, MD  
**Affiliation:** Purdue University  
**Department:** Computer and Information Technology  
**Location:** West Lafayette, IN

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<tr>
<td>1:00 p.m. - 1:25 p.m.</td>
<td>C21</td>
<td>Performance of Matching Algorithms in Non-Standard Expression-Variant Faces</td>
<td>Petra Urbanová, PhD*; Igor Chalás</td>
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<td>1:25 p.m. - 1:30 p.m.</td>
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<td>1:30 p.m. - 1:55 p.m.</td>
<td>C22</td>
<td>On the Need for Social Contract Theory in the Ethics of Digital Forensics</td>
<td>Martin S. Olivier, PhD*</td>
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<td>1:55 p.m. - 2:00 p.m.</td>
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<tr>
<td>2:00 p.m. - 2:25 p.m.</td>
<td>C23</td>
<td>An Efficient and Effective Forensic Analysis Approach for the Internet of Things (IoT)</td>
<td>Anthony Skjellum, PhD*; Ankit Kumar Singh*; Janice Canedo*</td>
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<td>2:25 p.m. - 2:45 p.m.</td>
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**Discussion**

**Questions & Answers**
Thursday

New Discoveries Enabled by Engineering Analyses

**Moderator:** David Pienkowski, PhD  
*University of Kentucky*  
*AB Chandler Hospital*  
*Lexington, KY*  

**Co-Moderator:** Michelle R. Hoffman, MS  
*Forensic Injury Analysis, LLC*  
*Tempe, AZ*

8:30 a.m. - 9:10 a.m.  **D1**  
**Richard III Discovered: The King’s Remains**  
Sarah V. Hainsworth, PhD*; Guy N. Ruty, MD; Jo Appleby, PhD;  
Alison L. Brough, BS

9:10 a.m. - 9:30 a.m.  **D2**  
**Measurement of High Temperature and High Humidity Moisture Effects in Football Helmet Elastomeric Energy-Absorbing Padding Performance and Implications for Head Injury Danger**  
Kenneth J. Saczalski, PhD*; Mark N. West, BS; Todd Saczalski, BSMET;  
Joseph L. Burton, MD; Paul Renfroe Lewis, Jr., MS; Mark C. Pozzi, MS

9:30 a.m. - 9:45 a.m.  **D3**  
**Specimen Age Affects the Fracture Pattern of Immature Porcine Femurs Under Torsional Loading**  
Patrick E. Vaughan, BS*; Feng Wei, PhD; Roger C. Haut, PhD

9:45 a.m. - 10:00 a.m.  **D4**  
**Non-Destructive Test Method for Forensic Evaluation of Motorcycle Helmet Shell Failure Mechanism and Resulting Safety Deficiency Causing Fatal Head Injury**  
Kenneth J. Saczalski, PhD*; Mark N. West, BS; Todd Saczalski, BSMET;  
Joseph L. Burton, MD; Paul Renfroe Lewis, Jr., MS; Mark C. Pozzi, MS

10:00 a.m. - 10:15 a.m.  **Break**

New Analytical Methods in Forensic Engineering

**Moderator:** John Nixon, CEng, MBA  
*ARC*  
*Bippus, IN*  

**Co-Moderator:** David Pienkowski, PhD  
*University of Kentucky*  
*AB Chandler Hospital*  
*Lexington, KY*

10:15 a.m. - 10:35 a.m.  **D5**  
**Fire Dynamic Simulation — Assessing Structural Damage and Suppression Potential of a Church Fire**  
Darren Franck, MSME*; Harold Franck, MSEE

10:35 a.m. - 11:00 a.m.  **D6**  
**Application of Reverse Engineering in Forensic Investigation**  
Wego Wang, SciD*

*Presenting Author*
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<tr>
<th>Time</th>
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<tr>
<td>11:00 a.m. - 11:15 a.m.</td>
<td>D7</td>
<td>Evaluating the Structural Failure of Wood Bowstring Trusses Under Heavy Snow Loading</td>
<td>Daniel M. Honig, PE*</td>
</tr>
<tr>
<td>11:15 a.m. - 11:30 a.m.</td>
<td>D8</td>
<td>Comparison of Measurement Error Between 3D Laser Scanning, Total Station Survey, and Photogrammetry Using PhotoModeler®</td>
<td>Shannon Wilson*, James E. Flynn, BS; Stephen Harper, BS; Jace Priester, BS</td>
</tr>
<tr>
<td>11:30 a.m. - 11:45 a.m.</td>
<td>D9</td>
<td>Natural Language Engineering for Multilingual Forensic Author Identification</td>
<td>Carole E. Chaski, PhD*; Nan Decker, PhD; Ali M. Alshehri, MA; Seung-Man Kang, PhD; Angela Almela, PhD</td>
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<tr>
<td>11:45 a.m. - 1:00 p.m.</td>
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<td>Lunch</td>
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<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>D10</td>
<td>Analysis of Citrate Distribution in Bone for the Estimation of Postmortem Interval</td>
<td>Matthew Pysh*; Katherine E. Weisensee, PhD; Mark A. Schlautman, PhD; Melinda Harman, PhD</td>
</tr>
<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>D11</td>
<td>Crime Scene Imaging Using a Highly Affordable, User-Friendly, Portable, Open-Source 3D Imaging System</td>
<td>Nikolaj Kjaer Nielsen*, Kim Juul Henriksen, BS; Samuel Alber Trysoee, PhD; Henrik Pedersen, PhD; Iana Lesnikova, MD, PhD</td>
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**Poster Session**

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<td>Nikolaj Kjaer Nielsen*, Kim Juul Henriksen, BS; Samuel Alber Trysoee, PhD; Henrik Pedersen, PhD; Iana Lesnikova, MD, PhD</td>
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</tbody>
</table>

**Multidisciplinary Session: Engineering Sciences Session/Jurisprudence Session II — The Judge as Gatekeeper**

**Moderator:** Stephanie Domitrovich, JD, PhD  
**Co-Moderator:** Peter Alexander, PhD  
**Location:** Erie County Courthouse, Erie, PA

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<tr>
<th>Time</th>
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<th>Authors</th>
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<tbody>
<tr>
<td>1:00 p.m. - 1:10 p.m.</td>
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<td>Introduction</td>
<td>Peter Alexander, PhD</td>
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<tr>
<td>1:10 p.m. - 1:40 p.m.</td>
<td>F20</td>
<td>Better Ways to Manage Poorly Validated Scientific Evidence</td>
<td>Michael J. Saks*</td>
</tr>
<tr>
<td>1:40 p.m. - 2:10 p.m.</td>
<td>F21</td>
<td>Upstream Remedies to Prevent Wrongful Convictions: Beating Daubert to the “Gate”</td>
<td>Peter Neufeld, JD*</td>
</tr>
<tr>
<td>2:10 p.m. - 2:40 p.m.</td>
<td>F22</td>
<td>Holding the Gate Open or Closing It: Evolving Frye and Daubert Approaches?</td>
<td>Donald E. Shelton, JD, PhD*; Stephanie Domitrovich, JD, PhD*</td>
</tr>
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</table>
2:40 p.m. - 3:00 p.m. Break

3:00 p.m. - 3:30 p.m. D12 Is the Gatekeeper Concept Failing the Justice System? Is There a Viable Alternative?  
                   John Nixon, CEng, MBA*

3:30 p.m. - 4:00 p.m. D13 The Federal Bureau of Investigation’s (FBI’s) Misrepresentation of Hair Evidence: History, Response, and Remedy  
                   Peter D. Barnett, BS*

4:00 p.m. - 4:30 p.m. F23 How the Trial Judge’s Gatekeeping Function Can Be Better Utilized to Bar the Admission of Unreliable and Exaggerated Opinion Testimony From Traditional Forensic Science Disciplines  
                   Andrew Sulner, MSFS, JD*

4:30 p.m. - 5:00 p.m. Discussion

Friday

Application of Scientific Methods to Forensic Engineering

<table>
<thead>
<tr>
<th>Moderator:</th>
<th>Co-Moderator:</th>
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<tr>
<td>David Pienkowski, PhD</td>
<td>Kurt D. Weiss, MS</td>
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<tr>
<td>University of Kentucky</td>
<td>Automotive Safety Research</td>
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<tr>
<td>AB Chandler Hospital</td>
<td>Santa Barbara, CA</td>
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<td>Lexington, KY</td>
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8:30 a.m. - 9:00 a.m. D14 Quantification of Forces Generated by Volunteers in Stabbing Trials  
                        Gary Nolan, BS; Sarah V. Hainsworth, PhD*; Guy N. Rutty, MD

9:00 a.m. - 9:15 a.m. D15 Identification of Building Insulation and Soundproofing Products by Light and Electron Microscopy  
                        Richard S. Brown, MS*

9:15 a.m. - 9:30 a.m. D16 Forensic Microscopy in a Case of Asbestos-Containing Cigarettes  
                        James Millette, PhD*

9:30 a.m. - 9:45 a.m. D17 The Potential of Comprehensive Gas Chromatography (GC) in Forensic Fire Investigations  
                        Martin Lopatka, MSc; Gabriel Vivó-Truyols; Marjan J. Sjerps;  
                        Peter J. Schoenmakers; Arian C. van Asten, PhD*; Andjoe A.S. Sampat, MSc

9:45 a.m. - 10:00 a.m. D18 Physical Evidence Used in Rollover Crash Reconstruction  
                        Kurt D. Weiss, MS*

10:00 a.m. - 10:15 a.m. Break

*Presenting Author
Case Studies in Forensic Engineering & Science

**Moderator:** David Pienkowski, PhD  
University of Kentucky  
AB Chandler Hospital  
Lexington, KY  

**Co-Moderator:** Darren Franck, MSME  
Advanced Engineering Associates, Inc.  
Charleston, WV

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<tr>
<th>Time</th>
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<tbody>
<tr>
<td>10:15 a.m.</td>
<td>D19</td>
<td>Biomedical Engineering Contributions in the Analysis of Head and Brain Impact With Legal Perspectives by Counsel for the Department of Transportation Bicycle vs. Auto, Seatbelts, and Motorcycle Accidents</td>
<td>Laura L. Liptai, PhD; Landa S. Low, JD</td>
</tr>
<tr>
<td>10:45 a.m.</td>
<td>D20</td>
<td>Non-Collision Moving Vehicle Fire Caused by Escape of Exhaust Heat and Combustion Gases Due to Muffler Design and Materials Defects</td>
<td>Mark C. Pozzi, MS*; Dean L. Jacobson, PhD; David Bosch, PhD; Scott Anderson, BS</td>
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<tr>
<td>11:00 a.m.</td>
<td>D21</td>
<td>Refueling Fire Caused by Defective Fuel Pump Nozzle, Electrostatic Discharge Ignition, and Violations of Safety Practices</td>
<td>Mark C. Pozzi, MS*</td>
</tr>
<tr>
<td>11:15 a.m.</td>
<td>D22</td>
<td>Friction Tire Testing of a Run-Flat Condition Sport Utility Vehicle (SUV) Tire</td>
<td>Kurt D. Weiss, MS*; Jacqueline Paver</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>D23</td>
<td>Witness Identification Under Low Light-Level Conditions: A Case Study</td>
<td>James B. Hyzer, PhD*</td>
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<tr>
<td>11:45 a.m.</td>
<td></td>
<td>Break</td>
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<tr>
<td>12:00 p.m.</td>
<td>D24</td>
<td>Forensic Engineering Investigation of a Dual Fatality Auto-Pedestrian Collision by an Impaired-Vision Driver</td>
<td>Adam Aleksander, PhD*</td>
</tr>
<tr>
<td>12:15 p.m.</td>
<td>D25</td>
<td>A Case Against “Inattentive Driving” as a Cause for Some Nighttime Vehicle Pedestrian Accidents</td>
<td>James B. Hyzer, PhD*</td>
</tr>
<tr>
<td>12:30 p.m.</td>
<td>D26</td>
<td>An Engineering Perspective on Case Studies Where Performance Does Not Match Scientific Predictions — The Expansive Nature of Collapsible Soils and Other Engineering Oddities</td>
<td>Michael D. McDowell, MS*</td>
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<tr>
<td>12:45 p.m.</td>
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<td>Lunch</td>
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**Poster Session**

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<th>Time</th>
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<tr>
<td>11:30 a.m.</td>
<td>D27</td>
<td>A Structural Analysis of a Gymnasium Collapse Using the MIDAS Program</td>
<td>Chan-Seong Park, PhD*; Jong-Heon Shim, MS; Jin-Pyo Kim, PhD; Nam-Kyu Park, PhD</td>
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*Presenting Author*
ENGINEERING SCIENCES

11:30 a.m. - 1:00 p.m.  **D28**  Forces Transmission to the Skull in a Case of Mandibular Impact
Lucile Tuchtan, MD*; Marie-Dominique Piercecchi-Marti, PhD; Christophe Bartoli, MD; Pascal Adalian; Georges Leonetti, PhD; Lionel Thollon

**Tribometry, Stucco, & Gas**

| Moderator: | David Pienkowski, PhD  
| University of Kentucky  
| AB Chandler Hospital  
| Lexington, KY | Co-Moderator: Harold Franck, MSEE  
| Advanced Engineering Associates, Inc.  
| Charleston, WV |

1:45 p.m. - 2:05 p.m.  **D29**  Forensic Engineering Examination of Stucco on a Concrete Masonry Unit (CMU) Wall, Paint Layer Evidence, and Crack Propagation
Adam Aleksander, PhD*

2:05 p.m. - 2:35 p.m.  **D30**  Fuel Gas Odorization: History, Requirements, Application, and Challenges for Natural Gas and Propane
Tim G. Dunn, MS*

2:35 p.m. - 2:55 p.m.  **D31**  Redesign of a StepMeter for Direct *In Vivo* Measurement of Barefoot Skin Friction
Marcus P. Besser, PhD*; Mark I. Marpet, PhD, PE

*Presenting Author
### Wednesday

**Poster Session**

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<tr>
<td>11:30 a.m.</td>
<td><em>Difficulties in the Interpretation of Postmortem Concentrations of Synthetic Cannabinoids</em></td>
<td><em>Anders Rietz</em>; <em>Gunilla Thelander, BSc; Robert Kronstrand, PhD</em></td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td><em>Technical Considerations for a Drone-Mounted GoPro® Camera for Crime Scene Measurements</em></td>
<td><em>Jacob Martin; Annalie Martin; Gary H. Naisbitt, PhD</em></td>
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<tr>
<td>11:30 a.m.</td>
<td><em>Homicide Injury Quantification: Correlations and Reliability of Injury Severity Scores Applied to Homicide Victims</em></td>
<td><em>Fredrik Tamsen, MD, MSc</em>; Fia Klötz-Logan, PhD; Ingemar Thiblin, PhD*</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td><em>A Case for Using Mixed Method Research to Investigate the Relationship Between Art and Science in Forensic Facial Reconstruction</em></td>
<td><em>Daniel Marion, Jr., PhD</em></td>
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<td>11:30 a.m.</td>
<td><em>A Unique Case of Death by Misadventure Due to Electrocution Involving a Man and a Cat: The Utility of Electron Microscopy</em></td>
<td><em>Elvira Ventura Spagnolo</em>; Cristina Mondello, BS; Stefania Zerbo, MD; Antonina Argo; Luigi Cardia; Francesca Giuffrida; Giulio Cardia</td>
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<tr>
<td>11:30 a.m.</td>
<td><em>The Value of Outsourcing Selected Cases in a Medical Examiner Population: A Ten-Year Experience</em></td>
<td><em>Brandi C. McCleskey</em>; <em>Stephanie Reilly, MD; Daniel Atherton</em></td>
</tr>
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<td>11:30 a.m.</td>
<td><em>The Birth of a National Department for Legal Medicine in the Grand Duchy of Luxemburg</em></td>
<td><em>Ulrich S. Preiß, MD</em>; Patricia Lambert, MS; Sarah Toussaint; Andreas Schuff, PhD*</td>
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<td>11:30 a.m.</td>
<td><em>The Value in Integrating Emergency Management and Forensic Death Investigation at the Harris County Institute of Forensic Sciences</em></td>
<td><em>Allison Woody; Jason M. Wiersema, PhD</em>; Phong Nguyen; Roxanne Phatak, MS*</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td><em>Stress Responses of Crime Scene Investigators When Responding to Traumatic Death Events</em></td>
<td><em>Jalika Rivera Waugh, PhD</em></td>
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<td>11:30 a.m.</td>
<td><em>Deaths in Silence: The Role of Prison Surveillance in Suicides</em></td>
<td><em>Isabella Aquila, MD</em>; <em>Silvia Boca</em>; Ciro Di Nunzio, MFS, PhD; Salvatore Savastano; Francesca Pepe, MD; Santo Gratteri, MD; Pietranzionio Ricci*</td>
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</table>
11:30 a.m. - 1:00 p.m.  E11  Survivability of Explosive Residue on Improvised Explosive Device (IED) Components Subjected to an Underwater Detonation  
David J. Prasek, MFS*; Ronald L. Kelly, BS; Ismail M. Sebetan, MD, PhD*; Paul Stein, PhD*  

11:30 a.m. - 1:00 p.m.  E12  The Lip Prints Morphological Profile in a Brazilian Population: A Prospective Study  
Antonio A. Antunes, PhD*; Raylane F. Albuquerque; Patricia S. Trigueiro, MSc; Evelyne P. Sotirano, PhD; Marcus Vitor D. Carvalho, PhD; Reginaldo I.C. Campello, PhD; Gabriela G. Porto, PhD  

11:30 a.m. - 1:00 p.m.  E13  Applications of Plant Sciences to Forensic Science  
Jane H. Bock, PhD*; David O. Norris, PhD*  

11:30 a.m. - 1:00 p.m.  E14  Evaluation of Drug Intoxication Cases and Medicolegal Reports  
Kenan Kaya; Mete K. Gulmen, PhD, MD*; Derya Kaya; Ahmet Hilal, MD; Necmi Cekin, MD  

11:30 a.m. - 1:00 p.m.  E15  Investigation of Human Skeletal Tissue Using Raman Spectroscopy (RS) and Surface-Enhanced Raman Spectroscopy (SERS) for Forensic Applications  
Kristin K. Cooke, BS*; David D. Evanoff, Jr., PhD  

Thursday  

Moderator: Steven C. Clark, PhD  
Occupational Research and Assessment  
Big Rapids, MI  

Co-Moderator: Todd M. Howell, MFS  
Magnolia, DE  

8:30 a.m. - 8:45 a.m.  E16  John David Brown Brought to Justice 20 Years Later — A Multidisciplinary Approach to a Cold Case Homicide Investigation  
Donald Hayden, MFS*; Steven Geniuk, MS*  

8:45 a.m. - 9:00 a.m.  E17  A Continuing Need — Certification of Medicolegal Death Investigation Personnel  
Julie A. Howe, MBA*; Steven C. Clark, PhD*  

9:00 a.m. - 9:15 a.m.  E18  Testing the Use of Pigs as Human Proxies in Decomposition Studies  
Melissa A. Connor, PhD*  

9:15 a.m. - 9:30 a.m.  E19  An Unusual Case of Complex Suicide by Nail Gun, Carbon Monoxide, and Ethanol  
Erick P. Bryant, MFS*  

9:30 a.m. - 9:45 a.m.  E20  Method Development and Optimization of Detection of Decomposition Products in Soil Using Headspace/Gas Chromatography/Mass Spectrometry (HS/GC/MS)  
Amanda L. Haggerty, BS*; Kimberlee S. Moran, MSc; Heather L. Harris, MFS, JD  

*Presenting Author
9:45 a.m. - 10:00 a.m.  E21  A Follow-Up Study: Recovery of “Touch” DNA From Cleaned Pistol and Ammunition Surfaces  
Maher Noureddine, PhD*; James A. Bailey, PhD

10:00 a.m. - 10:15 a.m.  Break

10:15 a.m. - 10:30 a.m.  E22  Bloodstain Evidence of Trophy Taking in a Homicide  
Bryan R. Burnett, MS*

10:30 a.m. - 10:45 a.m.  E23  Multidisciplinary Approach to the Identification of Military Remains — An Australian Perspective  
Donna M. MacGregor, MSc*; Marc Oxenham, PhD; Henry Y.H. Wu; Brian Manns

10:45 a.m. - 11:00 a.m.  E24  “We Didn’t Start This Fire” — Understanding What Caused the Fire That Killed Twin Boys  
Matthew C. Wietbrock, BS*

11:00 a.m. - 11:15 a.m.  E25  Perceptions of the “CSI Effect” by New York State Prosecutors and Forensic Science Requests at Trial  
Elizabeth A. Erickson, MS*

11:15 a.m. - 11:30 a.m.  E26  How Abductive Reasoning Impacts Criminal Investigations  
Lyndsie N. Ferrara, MS*; James B. Schreiber, PhD

11:30 a.m. - 11:45 a.m.  E27  A Barrel-Bullet Comparison of Rifling Lines: A Transformation for a Quantifiable Examination Approach  
John Z. Wang, PhD*

11:45 a.m. - 12:00 p.m.  E28  Forensic Podiatry — How Gait, Footwear, and Footprints Convict Criminals  
Michael S. Nirenberg, DPM*

12:00 p.m. - 1:00 p.m.  Lunch

Poster Session

11:30 a.m. - 1:00 p.m.  E29  Use of Unmanned Aerial Vehicles (UAVs) for Documenting the Forensic Scene and Body Retrieval in a Case of Mid-Air Collision Between Aircraft  
Angelina I. Phillips, MD*; Lee M. Tormos, MD

*Presenting Author
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<td>11:30 a.m.</td>
<td>E30</td>
<td>Suicidal Hanging: A Prospective Autopsy-Based Study of 650 Cases</td>
<td>Mantaran Singh Bakshi, MBBS*; Sudhir Kumar Gupta, MD; Deepak Prakash, MD; Piyush Sharma, MD; Shivani Dhaka, MBBS</td>
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<td>11:30 a.m.</td>
<td>E31</td>
<td>Suicide or Homicide: A Case of Multiple Stab Wounds and Poisoning</td>
<td>Kelly Kraus, BS*</td>
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<td>11:30 a.m.</td>
<td>E32</td>
<td>A Case Review of a Suicide by Homemade Miniature Cannon</td>
<td>Meryle A. Dotson, MA*; Kyle Shaw, MBBS; Brett E. Harding, MBA</td>
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<td>11:30 a.m.</td>
<td>E33</td>
<td>Cases of Forensic Human Identification Using Hair</td>
<td>Songhie An; Myung-duck Kim, PhD; Kiwook Kim, MS; Jin Hee Lee; Byung-Ryul Song, PhD; Geummun Nam, PhD; Jisook Min*</td>
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<td>11:30 a.m.</td>
<td>E34</td>
<td>Smartphone Uses in Medicolegal Death Investigation</td>
<td>Kathryn H. Haden-Pinneri, MD*; Bethany L. Bless, MS</td>
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<td>11:30 a.m.</td>
<td>E35</td>
<td>A Multidisciplinary Approach to Exhuming a Body Buried Under a Newly Built House</td>
<td>Dae-Kyoon Park, MD, PhD*; Nak-Eun Chung, PhD; Yi-Suk Kim, MD, PhD; U-Young Lee, MD; Deog-Im Kim, PhD; Yong-Woo Ahn, DDS, PhD; Taeyeong Kim; Eungmyeong Kang</td>
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<td>11:30 a.m.</td>
<td>E36</td>
<td>Recognition of Skin Damage Caused by the Presence of Different Insects on Dead Bodies</td>
<td>Carolina Nuñez Vázquez, PhD*; Lorena Valencia Caballero, PhD</td>
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<td>11:30 a.m.</td>
<td>E37</td>
<td>Elemental Composition of Tattoo Inks as an Identification Tool</td>
<td>Trevor E. Curtis, BS*; John P. Buchweitz, PhD; Ruth Waddell Smith, PhD</td>
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<td>11:30 a.m.</td>
<td>E38</td>
<td>Identification of Bullets Fired From Consecutively Manufactured Double-Broached Ruger® SR9c® Barrels Utilizing Comparison Microscopy and Confocal Microscopy</td>
<td>Jennifer L. Stephenson, MSFS*; Erich D. Smith, MS</td>
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<td>11:30 a.m.</td>
<td>E39</td>
<td>Surface-Enhanced Raman Spectroscopy (SERS) for the Forensic Analysis of Vaginal Fluid</td>
<td>Kathryn A. Zegarelli, BS*; Jennifer Fore, PhD; Ranjith Premasiri, PhD; Brandon Scott, PhD; Amy N. Brodeur, MFS; Lawrence Ziegler, PhD*</td>
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<td>11:30 a.m.</td>
<td>E40</td>
<td>Novel Azo Dye Presumptive Test for the Detection of Nitrites in Gunshot Residue (GSR): An Expansion of the Modified Griess Test</td>
<td>Erin M. Noval, BS*; Jeannie Berk</td>
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<td>11:30 a.m.</td>
<td>E41</td>
<td>Multidisciplinary Study of a 17th-Century French Natural Mummy</td>
<td>Dedouit Fabrice, MD*; Fatima-Zohra Mokrane, MD; Rozenn Colleter; Frederic Savall; Sylvie Duchesne; Patrice Gerard; Eric Crubezy, PhD; Hervé Rousseau, PhD; Daniel Rouge, MD; Norbert Telmon, PhD, MD</td>
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*Presenting Author
11:30 a.m. - 1:00 p.m.  E42  **K9 Water Searches and Volatile Organic Compounds (VOCs): A Method to Aid in Determining the Location of Submerged Human Bodies**

Marcello Rendine*; Cristoforo Pomara, MD, PhD; Carmela Fiore, MD; Palmira Fortarezza, MS; Francesco Sessa, MS; Irene Riezzo, MD, PhD

11:30 a.m. - 1:00 p.m.  E43  **Death From Hypothermia During a Training Course Under “Extreme Conditions”: Two Related Cases**

Lucile Tuchtan, MD*; Pierre Perich, MD; Georges Leonietti, PhD; Marie-Dominique Pierrecchietti-Marti, PhD; Christophe Bartoli, MD

---

**Moderator:** Sherronda Appleberry, MS  
**Brighton, CO**

**Co-Moderator:** Chad W. Hutchins, MFS  
**Waverly, GA**

1:00 p.m. - 1:15 p.m.  E44  **Use of Infrared Photography to Document Bloodstains in Fire Scenes**

William K. Perdue, MP A*; Elizabeth Richards, PhD; Maria C. Castellanos, MFS*

1:15 p.m. - 1:30 p.m.  E45  **The Relevance of a Multidisciplinary Approach to the Crime Scene Investigation: A Case Report of a Homicide Victim Who Was Hidden**

Natascha Pascale, MD*; Marcello Rendine; Francesco Sessa, MS; Damia De Carlo, MD; Irene Riezzo, MD, PhD

1:30 p.m. - 1:45 p.m.  E46  **Sudden Unexpected Infant Deaths (SUID) in North Central Indiana — A Comprehensive Look at Infant Deaths in Indiana**

Matthew C. Wietbrock, BS*

1:45 p.m. - 2:00 p.m.  E47  **The Impact of Fentanyl Use and Abuse**

Breanna M. Cuchara*; Thomas A. Andrew, MD

2:00 p.m. - 2:15 p.m.  E48  **“All the Things You Ask of Me”: Law Enforcement Experiences of Infant Death Investigation**

Jennifer R. Schindell, MA*

---

**Moderator:** Cliff Akiyama, MPH, MA  
**Akiyama and Associates, LLC  
Philadelphia, PA**

**Co-Moderator:** Bethany L. Bless, MS  
**Houston, TX**

2:30 p.m. - 2:45 p.m.  E49  **Case Study: Perfect Crime? The Forensic Sciences at the Service of the Crime**

Eric R. Ruiz Hernandez, MD*

2:45 p.m. - 3:00 p.m.  E50  **Retrospective Analysis of 93 Male Victims of Unnatural Sexual Offenses From 2011 to 2014 in a Tertiary Care Center in India**

Shashank Pooniya, MD*; Rajanikanta Swain, MD; Sanjeev Lalwani, MD
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<tbody>
<tr>
<td>3:00 p.m. - 3:15 p.m.</td>
<td>E51</td>
<td>Shaken Baby Syndrome/Abusive Head Trauma (SBS/AHT) Mortality in Sweden</td>
<td>Jacob Andersson, MS*; Ingemar Thiblin, PhD</td>
</tr>
<tr>
<td>3:15 p.m. - 3:30 p.m.</td>
<td>E52</td>
<td>Case Study: From Maternal Instinct to Staged Domestic Homicide</td>
<td>Eric R. Ruiz Hernandez, MD*</td>
</tr>
<tr>
<td>3:30 p.m. - 3:45 p.m.</td>
<td></td>
<td>Break</td>
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<tr>
<td>3:45 p.m. - 4:00 p.m.</td>
<td>E53</td>
<td>Child Abduction Murder: Regional Differences in Time to Death and Offender Motivation</td>
<td>Katherine M. Brown, PhD*</td>
</tr>
<tr>
<td>4:00 p.m. - 4:15 p.m.</td>
<td>E54</td>
<td>An Application of Gunshot Residue (GSR) as Trace Evidence</td>
<td>Jason L. Schroeder, MS, MBA*; William M. Davis, PhD; Roger Kahn, PhD</td>
</tr>
<tr>
<td>4:15 p.m. - 4:45 p.m.</td>
<td>E55</td>
<td>Forensic Science as an Indispensable Tool in the International Cooperation in Fighting Terrorism</td>
<td>Elazar Zadok*</td>
</tr>
<tr>
<td>4:45 p.m. - 5:00 p.m.</td>
<td>E56</td>
<td>University Groper: How One Suspect Was Identified Using Touch DNA Findings — A Successful Case Study</td>
<td>Julie L. Valentine, MS*; Suzanne Miles, BS*</td>
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**Friday**

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<th>Time</th>
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<tr>
<td>8:30 a.m. - 8:45 a.m.</td>
<td>E57</td>
<td>Analysis of Smokeless Powder Components by Ion Mobility Spectrometry (IMS)</td>
<td>Marcela Najarro, MFS*; Rose M. Garcia, BS</td>
</tr>
<tr>
<td>8:45 a.m. - 9:00 a.m.</td>
<td>E58</td>
<td>Examining the Factors Affecting Forensic Scientists’ Job Stress and Satisfaction</td>
<td>Thomas J. Holt, PhD*; Kristie Blevins, PhD; Ruth Waddell Smith, PhD; David R. Foran, PhD</td>
</tr>
<tr>
<td>9:00 a.m. - 9:15 a.m.</td>
<td>E59</td>
<td>Neanderthals, Werewolves, and a Pig Man: A Novel and Collaborative Method for Differentiating Human and Animal Skeletal Remains</td>
<td>Brett E. Harding, MBA*; Barbara C. Wolf, MD; Lindsey A. Bayer, MS; Meryle A. Dotson, MA</td>
</tr>
<tr>
<td>9:15 a.m. - 9:30 a.m.</td>
<td>E60</td>
<td>The Utility of Forensic Evidence in Homicide Cases Tried in London Courts Between 2010 and 2014</td>
<td>Dagmar Heinrich, PhD*; Ruth Morgan, PhD; Nick Tilley, PhD</td>
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<tr>
<td>9:30 a.m.</td>
<td>E61</td>
<td>Identification of Decomposition Odors That Elicit a Response From Trained Cadaver Dogs</td>
<td>Lorna C. Irish, BSc*; Gareth Parkes, PhD; Anna Williams, PhD</td>
</tr>
<tr>
<td>9:45 a.m.</td>
<td>E62</td>
<td>Houston’s Approach: A Final Outcome to the National Problem of Untested Sexual Assault Kits</td>
<td>Irma Rios, MBA*</td>
</tr>
<tr>
<td>10:00 a.m.</td>
<td>E63</td>
<td>Validation! Validation! Validation!…With a Touch of Reality</td>
<td>Daniele S. Podini, PhD*</td>
</tr>
<tr>
<td>10:15 a.m.</td>
<td>Break</td>
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**Moderator:** Donald Hayden, MFS
**Co-Moderator:** Gina Londino, MS
Richmond Hill, GA
Indianapolis, IN

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<tr>
<td>10:30 a.m.</td>
<td>E64</td>
<td>Standard Protocols: Forensic Archaeology Integration With Standard Archaeological and Anthropological Methodologies Following Natural Disasters</td>
<td>Christine L. Halling, MS*; Arbie Goings; Ginesse A. Listi, PhD; Ryan M. Seidemann, MA; Mary H. Manhein, MA</td>
</tr>
<tr>
<td>10:45 a.m.</td>
<td>E65</td>
<td>A Novel Method for Ninhydrin Development of Fingerprints on Absorbent Surfaces</td>
<td>Howard A. Harris, JD, PhD*</td>
</tr>
<tr>
<td>11:00 a.m.</td>
<td>E66</td>
<td>Forensic Archaeology and Surface Scatter Body Recovery: A Contested Missing Person Case</td>
<td>Sharon K. Moses, PhD*</td>
</tr>
<tr>
<td>11:15 a.m.</td>
<td>E67</td>
<td>The “CSI Effect”: The Barristers and the Bench</td>
<td>Janne A. Holmgren, PhD*</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>E68</td>
<td>Implementation of the National Institute of Justice’s (NIJ’s) Online Firearms Examiner Training Course in Marshall University’s Graduate Curriculum and Its Potential to Reduce Time to Competency</td>
<td>Season E. Seferyn, MSFS*; Pamela J. Staton, PhD</td>
</tr>
<tr>
<td>11:45 a.m.</td>
<td>E69</td>
<td>Teaching Today’s Students: Hybrid Learning</td>
<td>Crystal L. Wagoner, MFS*; Christina A. Leija, MS*</td>
</tr>
<tr>
<td>12:00 p.m.</td>
<td>Lunch</td>
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<tr>
<td>11:30 a.m.</td>
<td>E70</td>
<td>Multi-Phase Postmortem Computed Tomography Angiography (MPMCTA): Is an Interventional Radiological Approach Possible Instead of the Classical One? A Preliminary Study</td>
<td>Fatima-Zohra Mokrane, MD; Frederic Savall; Silke Grabherr, PhD; Daniel Rouge, MD; Eric Crubezy, PhD; Hervé Rousseau, PhD; Norbert Telmon, PhD, MD; Fabrice F. Dedouit*</td>
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<tr>
<td>11:30 a.m.</td>
<td>E71</td>
<td>Italian Emergency Medical Team (EMT) Experience Regarding Crime Scene Access: A Proposal for a Specific Training Program</td>
<td>Luciano Garofano, PhD*; Cristina Enrica Brondoni, MS*</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>E72</td>
<td>Autopsy Rate in Suicide by Poisoning Is Low in Denmark Compared to Finland</td>
<td>Seija Ylijoki-Sørensen, MD, DDS, PhD*; Jesper L. Boldsen, PhD; Lene W. Boel, PhD; Henrik Boggild, PhD; Kaisa Lalu, PhD; Antti Sajantila, MD, PhD</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>E73</td>
<td>A Survey of Abuse of Illicit Drugs in Punjab, Pakistan</td>
<td>Sardar Ali Wattoo, MPhil; Muhammad Taimoor Chaudhary, MPhil*; Mohammad A. Tahir, PhD</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>E74</td>
<td>Brazilian Federal Police (BFP) Forensic Activities in the Paleontological Area</td>
<td>Guilherme H.B. de Miranda*; Camilla Vasconcelos Kafino, MS</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>E75</td>
<td>Time-Dependent Changes in Human and Chicken Bones in Soil Examined by Infrared (IR), Raman, Inductively Coupled Plasma/Optical Emission Spectroscopy (ICP/OES), and Organic Elemental Analysis</td>
<td>Matthew J. Danker, BS*; Donovan C. Haines, PhD; Joan A. Bytheway, PhD</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>E76</td>
<td>Human Bias in the Case of JonBenet Ramsey</td>
<td>Claudia M. Bonilla*; Ashraf Mozayani, PharmD, PhD</td>
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<tr>
<td>11:30 a.m.</td>
<td>E77</td>
<td>Discrimination of Ginseng Cultivation Regions With Stable Isotope Ratio and Multi-Element Analyses</td>
<td>Jisook Min*; Dae-jun Ahn, PhD; Hye-jin Choi, PhD; Joo-Hyun Song, MS; Jae-Hoon Yu, MS; Jungseok Seo, PhD; Dae-Hong Hong, BS</td>
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<tr>
<td>11:30 a.m.</td>
<td>E78</td>
<td>Association Between Volatile Organic Compounds and Microbes Present During the Decomposition of a Cadaver</td>
<td>Todd A. Deyne, BSc*; Donovan C. Haines, PhD; Aaron M. Lynne, PhD; Sibyl R. Bucheli, PhD</td>
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<tr>
<td>11:30 a.m.</td>
<td>E79</td>
<td>The Use of Lean Principles in a Forensic Environment to Facilitate Transformation</td>
<td>Zo-dee Ledger*</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>E80</td>
<td>Motor Vehicle Crash or Auto-Pedestrian: Are Stranded Motorists (SM) Left “Stranded”?</td>
<td>Stacy A. Drake, MPH, PhD*; Dwayne A. Wolf, MD, PhD</td>
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<tr>
<td>11:30 a.m.</td>
<td>E81</td>
<td>Forensic Podiatry and Human Identification — The State of This Art in European Countries</td>
<td>Pablo Martínez-Escauriaza*, Sara C. Zapico, PhD; Joe Adserias, DDS, PhD</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>E82</td>
<td>Craniofacial Analysis of 3D Computed Tomography (CT) Models and a New Method for Dense Facial Tissue Depth Mapping: A Collaboration Between Forensic Science Researchers and Forensic Art Practitioners</td>
<td>Terrie Simmons-Ehrhardt, MA*; Catyana R. Skory Falsetti, MFS; Christopher J. Ehrhardt, PhD</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>E83</td>
<td>Perception of Elder Abuse by Primary Health Care Professionals</td>
<td>Mafalda Ferreira, MSc; César Santos; Duarte Nuno Vieira, MSc, PhD, MD*</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>E84</td>
<td>A Comprehensive Comparison of Various Postmortem (PM) Fingerprint Recovery Techniques</td>
<td>Marzena H. Mulawka, MFS*; Gary W. Reinecke, MA*</td>
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**Moderator:** David G. Lord, PhD  
CA State Poly University  
Dept of Geography & Anthropology  
Pomona, CA  

**Co-Moderator:** Phillip M. Curran, MFS  
Fort Hood, TX  

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<tr>
<td>1:00 p.m.</td>
<td>E85</td>
<td>Missing Persons: A Comparative Statistical Framework of the Phenomenon in Italy and the United States — To Identify Particular Characteristics and to Propose Improvements in Investigative Techniques</td>
<td>Patrizia Trapella, JD, MA*; Luca Massaro, MA*; Matteo Borrini, PhD*</td>
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<tr>
<td>1:30 p.m.</td>
<td>E86</td>
<td>Determining Donor Gender Based on Blood Stains Using Raman Spectroscopy</td>
<td>Igor K. Lednev, PhD*; Aliaksandra Sikirzytskaya, MS; Vitali Sikirzytski, MS; Ewelina Mistek, BS; Lenka Halamkova, PhD</td>
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<tr>
<td>1:45 p.m.</td>
<td>E87</td>
<td>Evaluation of Decomposition and Insect Colonization of Pig (Sus Scrofa) Cadavers Inside a Vehicle</td>
<td>Helene N. LeBlanc, PhD*; Shari Forbes, PhD; Kelly Robinson, MSc; Alicia Buetter, BSc</td>
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<tr>
<td>2:05 p.m.</td>
<td>E88</td>
<td>Serial Killers in Colombia: A Comparative Study</td>
<td>Edwin O. Olaya Molina, BA*</td>
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<tr>
<td>2:15 p.m.</td>
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<td>Break</td>
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<td>2:30 p.m.</td>
<td>E89</td>
<td>Understanding Familial DNA Searching: Policies and Practices in the United States</td>
<td>Sara A. Debus-Sherrill*, Michael B. Field, MS; Saniya Seera, BA</td>
</tr>
<tr>
<td>2:45 p.m.</td>
<td>E90</td>
<td>Statistical Analysis of Key Components of Alcohol-Related Sexual Assault in the Military</td>
<td>Michael J. Bosse, MFS*; Unsil Lee, MS*</td>
</tr>
<tr>
<td>3:00 p.m.</td>
<td>E91</td>
<td>Case Study of Postmortem Dismemberment Using a Coping Saw and a Related Analysis of the Cutting Plane Curvature</td>
<td>Eunah Joo, MS*; Youngil Seo, MS; Sangyoon Lee, MS; Donghwan Kim, PhD; Jin-Pyo Kim, PhD; Nam-Kyu Park, PhD</td>
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<tr>
<td>3:30 p.m.</td>
<td>E92</td>
<td>A Proposal for a Universal Classification of Paraphilias</td>
<td>Anil Aggrawal, MD*</td>
</tr>
<tr>
<td>4:00 p.m.</td>
<td>E93</td>
<td>An Interdisciplinary Approach to Forensic Science Education</td>
<td>John Mabry, JD*; Wayne D. Lord, PhD; Mark R. McCoy, EdD; Thomas H. Jourdan, PhD; Dwight E. Adams, PhD</td>
</tr>
<tr>
<td>4:30 p.m.</td>
<td>E94</td>
<td>Movement and Perception in Shooting Incidents: Neuroscience of Reaction and Reflex</td>
<td>Alexander Jason, BA*</td>
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*Presenting Author
**Wednesday**

**Poster Session**

11:30 a.m. - 1:00 p.m. **F1** The Principle of Guilt (Beyond All Reasonable Doubt) and the Presumption of Innocence in Italy: Juridical, Forensic, and Investigative Reflections on the Gallo Case  
Patrizia Trapella, JD, MA*; Luca Massaro, MA*; Matteo Borrini, PhD*  

11:30 a.m. - 1:00 p.m. **F2** An Analysis of Data on Wrongful Convictions on Grounds of False or Misleading Forensic Evidence (FMLFE)  
Jude L. Jokwi, MA*; Ashraf Mozayani, PharmD, PhD*

**Thursday — Session I**

**Moderator:** Winona J. Aghabiaka, JD  
Crete, IL  
**Co-Moderator:** Kenneth E. Melson, JD  
GWU Law School  
Montclair, VA

8:30 a.m. - 9:45 a.m. **F3** Ethical Responsibilities for Strengthening the Court System by Requiring a Basic Understanding of an Individual Forensic Science Discipline — The Judge, Lawyers, and the Expert Witness  
Joseph P. Bono, MA*; Linda L. Chezem, JD*; Ted R. Hunt, JD*; Betty Layne DesPortes, JD, MS*

9:45 a.m. - 10:05 a.m. **F4** Scientific Evidence and the Law School Curriculum  
Robert M. Sanger, JD*

10:05 a.m. - 10:20 a.m. Break

**Moderator:** Danielle D. Ruttman, JD  
Brooklyn, NY  
**Co-Moderator:** Frances L. Watson, JD  
IU Robert H. McKinney School of Law  
Law Clinic  
Indianapolis, IN

10:20 a.m. - 10:40 a.m. **F5** Building Bridges Between Science and Law  
Cynthia Blackwell, JD*

10:40 a.m. - 11:00 a.m. **F6** The Value of a Customer Working Group: A Customer’s Perspective  
Kristine Hamann, JD*
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<tr>
<td>11:00 a.m.</td>
<td>F7</td>
<td>Asymmetric Politics and Forensic Science: “Forget It, Jake — It’s Chinatown”</td>
<td>Max M. Houck, PhD*</td>
</tr>
<tr>
<td>11:20 a.m.</td>
<td>F8</td>
<td>Post-Conviction in the Wake of a Crime Lab Scandal: Lessons Learned From the St. Paul Police Department Crime Lab</td>
<td>Katie Conners*</td>
</tr>
<tr>
<td>11:40 a.m.</td>
<td>F9</td>
<td>Transferring Management of Forensic Operations From Police Department to Independent Non-Profit Corporation: Houston’s Experience</td>
<td>Tom P. Allen, JD*</td>
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<tr>
<td>12:00 p.m.</td>
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<td>Lunch</td>
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<td><strong>Poster Session</strong></td>
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<tr>
<td>11:30 a.m.</td>
<td>F10</td>
<td>Arc Burn: Not a Cause of Necrosis From Stun Gun Shock Wounds</td>
<td>James F. McNulty, Jr., JD*; Ismail M. Sebetan, MD, PhD*; Paul Stein, PhD*</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>F11</td>
<td>Forensic Science and Justice Integration — The Brazilian Experience: People and Systems Working Together for a Better Criminal Prosecution</td>
<td>Marcia Aiko Tsunoda, MSc*; Jairo G. Schafer, MSc*</td>
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<td><strong>Moderator:</strong> Nicole Starr, JD Ramsay County District Court Sant Paul, MN</td>
<td><strong>Co-Moderator:</strong> Daniel G. Martin Superior Court of Arizona Old Courthouse Phoenix, AZ</td>
</tr>
<tr>
<td>1:30 p.m.</td>
<td>F12</td>
<td>The Role of the English Coroner in Preventing Future Deaths in Similar Circumstances</td>
<td>A.R.W. Forrest, LLM*</td>
</tr>
<tr>
<td>1:45 p.m.</td>
<td>F13</td>
<td>Good Cop, Bad Cop — Forensic Pathology of Law Enforcement-Associated Deaths and Case Review</td>
<td>J.C. Upshaw Downs, MD*; Michael M. Baden, MD*</td>
</tr>
<tr>
<td>2:30 p.m.</td>
<td>F14</td>
<td>The Baby Tyler Case: Should Medical Examiners Have Access to Statements Obtained by Law Enforcement to Determine Cause and Manner of Death?</td>
<td>Stephanie Domitrovich, JD, PhD*; Donald E. Shelton, JD, PhD*; Jeffrey M. Jentzen, MD*</td>
</tr>
<tr>
<td>3:00 p.m.</td>
<td>F15</td>
<td>The Role of the Forensic Pathologist in the Judge’s Decision in Italy: A Presentation of a Peculiar Case</td>
<td>Anna Gitto, JD*; Giovanni Serinelli, JD; Gabriella Fimiani, JD; Serenella Serinelli, MD; Lorenzo Gitto, MD; Giorgio Bolino, MBBS</td>
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*Presenting Author*
**Thursday — Session II**

**Multidisciplinary Session: Engineering Sciences Session/Jurisprudence Session II — The Judge as Gatekeeper**

**Moderator:** Stephanie Domitrovich, JD, PhD  
Sixth Judicial District of PA  
Erie County Courthouse  
Erie, PA

**Co-Moderator:** Peter Alexander, PhD  
Aurora, CO

**1:00 p.m. - 1:10 p.m.**  
**D11** Introduction  
*Peter Alexander, PhD*

**1:10 p.m. - 1:40 p.m.**  
**F20** Better Ways to Manage Poorly Validated Scientific Evidence  
*Michael J. Saks*

**1:40 p.m. - 2:10 p.m.**  
**F21** Upstream Remedies to Prevent Wrongful Convictions: Beating *Daubert* to the “Gate”  
*Peter Neufeld, JD*

**2:10 p.m. - 2:40 p.m.**  
**F22** Holding the Gate Open or Closing It: Evolving *Frye* and *Daubert* Approaches?  
*Donald E. Shelton, JD, PhD*, *Stephanie Domitrovich, JD, PhD*
<table>
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<tr>
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<tbody>
<tr>
<td>2:40 p.m. - 3:00 p.m.</td>
<td>Break</td>
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<tr>
<td>3:00 p.m. - 3:30 p.m.</td>
<td>D12</td>
<td>Is the Gatekeeper Concept Failing the Justice System? Is There a Viable Alternative?</td>
<td>John Nixon, CEng, MBA*</td>
</tr>
<tr>
<td>3:30 p.m. - 4:00 p.m.</td>
<td>D13</td>
<td>The Federal Bureau of Investigation’s (FBI’s) Misrepresentation of Hair Evidence: History, Response, and Remedy</td>
<td>Peter D. Barnett, BS*</td>
</tr>
<tr>
<td>4:00 p.m. - 4:30 p.m.</td>
<td>F23</td>
<td>How the Trial Judge’s Gatekeeping Function Can Be Better Utilized to Bar the Admission of Unreliable and Exaggerated Opinion Testimony From Traditional Forensic Science Disciplines</td>
<td>Andrew Sulner, MSFS, JD*</td>
</tr>
<tr>
<td>4:30 p.m. - 5:00 p.m.</td>
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<td>Discussion</td>
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**Friday**

**Moderator:** Paula H. Wulff, JD  
**Co-Moderator:** Jeremy C. Brehmer, JD  
**Location:** Alexandria, VA, Bakersfield, CA

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<tbody>
<tr>
<td>8:40 a.m. - 9:00 a.m.</td>
<td>F24</td>
<td>An Examination of Scientific Expert Testimony: Transforming Evidence Presentation in the Courtroom</td>
<td>Shirley Marshall*; Hannah Fawcett, PhD</td>
</tr>
<tr>
<td>9:00 a.m. - 9:20 a.m.</td>
<td>F25</td>
<td>From Crime Scene to Hipster Haven: Solving a Rape on Manhattan’s Lower East Side</td>
<td>Melissa Mourges, JD*; Martha Bashford, JD*</td>
</tr>
<tr>
<td>9:20 a.m. - 9:40 a.m.</td>
<td>F26</td>
<td>We Don’t Catch the Smart Ones — How a Rubber Glove Left Genetic Fingerprints at the Crime Scene</td>
<td>Rachel S. Singer, JD*; Diana Ho*</td>
</tr>
<tr>
<td>9:40 a.m. - 10:00 a.m.</td>
<td>F27</td>
<td>Naked DNA: Mounting an Inadvertent Transfer Defense in Cases With Little or No Corroboration</td>
<td>Kelley Kulick, JD*</td>
</tr>
<tr>
<td>10:00 a.m. - 10:20 a.m.</td>
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<td>Break</td>
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<tr>
<td>Time</td>
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<tr>
<td>10:20 a.m.</td>
<td>F28</td>
<td>Disputed DNA Stats for a Low-Level Sample: A Case Study</td>
<td>Dan Krane, PhD*; Carrie Rowland, MSc; Nathaniel D. Adams, BS</td>
</tr>
<tr>
<td>10:40 a.m.</td>
<td>F29</td>
<td>Overcoming Bias in DNA Mixture Interpretation</td>
<td>Mark W. Perlin, PhD, MD*</td>
</tr>
<tr>
<td>11:00 a.m.</td>
<td>F30</td>
<td>Limitations of Current DNA Testing: Information That May Not Be in Reports</td>
<td>Charlotte J. Word, PhD*</td>
</tr>
<tr>
<td>11:20 a.m.</td>
<td>F31</td>
<td>Two Worlds Collide: The Perspective of the Forensic DNA Lab vs. the District Attorney’s Office and the Impact of the Errors Reported in the Federal Bureau of Investigation (FBI) Population Data</td>
<td>Courtney Head, MS*; Inger H. Chandler, JD</td>
</tr>
<tr>
<td>11:40 a.m.</td>
<td>F32</td>
<td>Justice for All, Oversight for Some? The Independent External Investigation Requirement of the Department of Justice’s Paul Coverdell Forensic Science Improvement Grants Recipients</td>
<td>Jeffrey A. Benson, JD*</td>
</tr>
<tr>
<td>12:00 p.m.</td>
<td></td>
<td>Lunch</td>
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**Poster Session**

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<th>Time</th>
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<tbody>
<tr>
<td>11:30 a.m.</td>
<td>F33</td>
<td>Geographic Variability of Active Ingredients in Spice Within Alaska as an Indicator of Mechanisms of Distribution and Manufacture</td>
<td>Dakota W. Emery*; Christopher R. Iceman, PhD; Sarah Hayes, PhD</td>
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<tbody>
<tr>
<td>1:15 p.m.</td>
<td>F34</td>
<td>Debating Death: Examining Capital Punishment Legislation More Than 40 Years After <em>Furman</em></td>
<td>Christiana Burgess, BS, BA*</td>
</tr>
<tr>
<td>1:30 p.m.</td>
<td>F35</td>
<td>Innocent, Yet Still Incarcerated in Minnesota</td>
<td>Cynthia L. Evenson, JD*</td>
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<tr>
<td>Time</td>
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<tr>
<td>1:50 p.m. - 2:50 p.m.</td>
<td>F36</td>
<td>The Shifted Paradigm: The Unprecedented Year in Bitemark Analysis and Hair Microscopy Litigation</td>
<td>Maxwell Christopher Fabricant, JD*; Dana Delger, JD*</td>
</tr>
<tr>
<td>2:50 p.m. - 3:10 p.m.</td>
<td>F37</td>
<td>The Stingray® Revolution: How the Widespread Use of Cell Site Simulators Is Changing Law Enforcement Tactics and Criminal Prosecutions in Maryland</td>
<td>Jason D. Ricke, JD, LLM*</td>
</tr>
<tr>
<td>3:10 p.m. - 3:30 p.m.</td>
<td>F38</td>
<td>Loss of the Fingerprint Exemption: Implications of Changes in Professional Practice</td>
<td>David A. Stoney, PhD*; Paul L. Stoney, MBA</td>
</tr>
<tr>
<td>3:30 p.m. - 3:45 p.m.</td>
<td>Break</td>
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<tr>
<td>3:45 p.m. - 4:05 p.m.</td>
<td>F39</td>
<td>Black Boxes and Due Process: Transparency in Expert Software Systems</td>
<td>Dan Krane, PhD*; Nathaniel D. Adams, BS</td>
</tr>
<tr>
<td>4:05 p.m. - 4:30 p.m.</td>
<td>F40</td>
<td>The Legal and Scientific Landscape of a Federal Analogue Prosecution Post-McFadden</td>
<td>Heather L. Harris, MFS, JD*; T. Douglas Clifford, JD*</td>
</tr>
<tr>
<td>4:30 p.m. - 5:00 p.m.</td>
<td>F41</td>
<td>New and Better Ways to Challenge Fire Investigators in Court Using National Research Council/National Academy of Sciences (NRC/NAS) Report Initiatives</td>
<td>Terry-Dawn Hewitt, LLM*; Wayne J. McKenna, LLB</td>
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**Saturday**

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<tr>
<th>Time</th>
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<tr>
<td>9:00 a.m. - 9:20 a.m.</td>
<td>F42</td>
<td>Dealing With Daubert: The Change to and Application of a New Evidential Standard in Alcohol- and Drug-Impaired Driving Cases</td>
<td>Garett M. Berman, JD*</td>
</tr>
<tr>
<td>9:20 a.m. - 9:40 a.m.</td>
<td>F43</td>
<td>“Maybe I’m Amazed…” Maxwell Smart and Siegfried Couldn’t Have Done It Better: Crime Scene Investigation in an Argentine Prosecutor’s Death — Do We Really Want to Catch the Bad Guys?</td>
<td>Maria Susana Ciruzzi, PhD*</td>
</tr>
<tr>
<td>Time</td>
<td>Session (F44/F45)</td>
<td>Title</td>
<td>Presenter(s)</td>
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<tr>
<td>9:40 a.m.  - 10:00 a.m.</td>
<td>F44</td>
<td>Battlefield Forensics: A Precursor to Counterterrorism, Peace, and Security</td>
<td>Abdullah Usman, LLM, MSc*</td>
</tr>
<tr>
<td>10:00 a.m. - 10:20 a.m.</td>
<td>F45</td>
<td>Hospital Emergency Rooms: Please Stop the Blunders and Save the Evidence</td>
<td>Jayne J. Batts, MD*</td>
</tr>
<tr>
<td>10:20 a.m. - 10:40 a.m.</td>
<td>Break</td>
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<tr>
<td>10:40 a.m. - 11:00 a.m.</td>
<td>F46</td>
<td>Risk Factors in Adjudicative Incompetency: A Case Study</td>
<td>Lauren Traveller, DNP*, Joyce P. Williams, DNP</td>
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<tr>
<td>11:00 a.m. - 11:20 a.m.</td>
<td>F47</td>
<td>Due Process Necessities for Developing National Forensic Standards: Underscoring the Need to Prevent Domination of the Process by a Given Stakeholder Interest</td>
<td>Andrew Sulner, MSFS, JD*</td>
</tr>
<tr>
<td>11:20 a.m. - 11:40 a.m.</td>
<td>F48</td>
<td>“De-NIST-ing”: The Evidence and Science Behind the Term</td>
<td>Douglas R. White, MS*; Mary T. Laamanen, MS</td>
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**Wednesday**

**Poster Session**

11:30 a.m. - 1:00 p.m. **G1** Does Multimedia Facilitate Training in Dental Hygiene Mass Fatality Preparedness?
*Tara L. Newcomb, MS*

11:30 a.m. - 1:00 p.m. **G2** Dental Maturation and Age Estimation in Children With Down Syndrome
*Laura C. Farese, MD*; *Giulia Vitale*; *Viola Bartolini*; *Claudio Baldinotti, DDS*; *Stefano Vanin, PhD*; *Martina Focardi*; *Vilma Pinchi, PhD*

11:30 a.m. - 1:00 p.m. **G3** Selection of Analytical Techniques for Teeth According to Conservation and Conditions After Being Exposed at Different Temperatures
*Nancy Vargas Becerril, PhD*; *Marco A. Alvarez-Perez, PhD*; *Lorena Valencia Caballero, PhD*; *Ivet Gil, PhD*

**Thursday**

**Age Estimation I**

| Moderator: Richard M. Weledniger, DDS  | Co-Moderator: John B. Nase, DDS  |
| ____________________________ | ____________________________ |
| Melville, NY | Dental Forensic Services of Indian Valley  |
|              | Harleysville, PA |

8:30 a.m. - 8:45 a.m. **G4** Dental Age Estimation: Root Canal Widths (RCW) of Mandibular Permanent Molars at the 18-Year Threshold
*Graham J. Roberts, MDS*; *Fraser McDonald, PhD*; *Victoria S. Lucas, PhD*

8:45 a.m. - 9:00 a.m. **G5** Dental Age Estimation: Root Pulp Visibility (RPV) and Periodontal Ligament Visibility (PLV) at the 18-Year Threshold
*Victoria S. Lucas, PhD*; *Fraser McDonald, PhD*; *Graham J. Roberts, MDS*

9:00 a.m. - 9:15 a.m. **G6** A Comparison of Dental Age Estimation Using Cameriere et al. to Other Osteological Methods in a Deceased, Undocumented Border Crosser (UBC) Population
*Melinda Hacker, DDS*; *James P. Fancher, DDS, PhD*; *David R. Senn, DDS*

9:15 a.m. - 9:30 a.m. **G7** Validating Tooth Development Staging Techniques Based on the Prediction of the Mature Root Lengths
*Patrick W. Thevissen, PhD*; *Baraa Khalaf, MSc*; *Steffen Fieuws, PhD*; *Guy Willems, PhD*

9:30 a.m. - 9:45 a.m. **G8** Combining Radiographically Observed Craniofacial and Tooth Developmental Age Predictors
*Parul Khare, MSc*; *Guy Willems, PhD*; *Steffen Fieuws, PhD*; *Patrick W. Thevissen, PhD*
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<tr>
<td>9:45 a.m. - 10:00 a.m.</td>
<td>G9</td>
<td>Third Molar Age Estimation: Appropriately Censoring Stage “H” Using the Data From Two Previously Published Studies — Blankenship et al. and Kasper et al.</td>
<td>Jennifer A. Moore, DMD*</td>
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<td>10:00 a.m. - 10:15 a.m.</td>
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<td>Break</td>
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<td><strong>Age Estimation II</strong></td>
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<tr>
<td>Moderator: Genevieve D.S. Bussiere, DMD</td>
<td>Co-Moderator: Mark C. Frill, DDS</td>
<td>Co-Moderator: Leslie A. Haller, DMD</td>
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<td>Edmonton, AB, CANADA</td>
<td>Papillion, NE</td>
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<td>Miami, FL</td>
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<td>10:15 a.m. - 10:30 a.m.</td>
<td>G10</td>
<td>Dental Age Estimation in Children With Juvenile Rheumatoid Arthritis (JRA)</td>
<td>Giulia Vitale*; Claudio Baldinotti, DDS; Viola Bartolini; Stefano Vanin, PhD; Francesco Pradella, MSc; Gian A. Norelli; Vilma Pinchi, PhD</td>
</tr>
<tr>
<td>10:30 a.m. - 10:45 a.m.</td>
<td>G11</td>
<td>An Age Estimation Procedure Based on the 3D Cone Beam Computed Tomography (CBCT) Study of the Dental Pulp Volume in Adults</td>
<td>Vilma Pinchi, PhD*; Francesco Pradella, MSc; Claudio Baldinotti, DDS; Cosimo Nardi, MD; Martina Focardi; Giulia Vitale; Gian A. Norelli; Stefano Vanin, PhD</td>
</tr>
<tr>
<td>10:45 a.m. - 11:00 a.m.</td>
<td>G12</td>
<td>A Biometric Identification System and Border Control: A Proposal for the Integration of Digital Orthpantomograms (OPGs) and Odontogram Data of Migrants</td>
<td>Emilio Nuzzolese, PhD*; Sakher J. AlQahtani, PhD, DDS*; Joe Adserias, DDS, PhD*</td>
</tr>
<tr>
<td>11:00 a.m. - 11:15 a.m.</td>
<td>G13</td>
<td>Utilizing Custom Spreadsheets for Age Estimation Cases</td>
<td>Derek M. Draft, DDS*</td>
</tr>
<tr>
<td>11:15 a.m. - 11:30 a.m.</td>
<td>G14</td>
<td>The Performance of Willem’s Method in Estimating Dental Age in Children: A Systematic Review and Meta-Analysis</td>
<td>Mohd Yus miaidil P. Mohd Yusof, MS*; Ilham Wan Mokhtar, MSc; Sivaprakash Rajasekharan, MSc; Rosanna Overholser, PhD; Luc Martens, PhD</td>
</tr>
<tr>
<td>11:30 a.m. - 11:40 a.m.</td>
<td>G15</td>
<td>Accuracy of the Third Molar Index for Assessing the Legal Majority of 18 Years of Age in the Turkish Population</td>
<td>Roberto Cameriere; Stefano De Luca, PhD; Ayse Gulsahi, PhD*; Burcak Cehreli, PhD; Ebru Tirali, PhD</td>
</tr>
<tr>
<td>11:40 a.m. - 12:00 p.m.</td>
<td>G16</td>
<td>Standards of Dental Developmental Stages</td>
<td>Sakher J. AlQahtani, PhD, DDS*; Mary A. Cimrman cic, DDS</td>
</tr>
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*Presenting Author
12:00 p.m. - 12:15 p.m.  G17  Third Molar Maturity Index (I3M) for Assessing Age of Majority in a Black African Population in Botswana
Jelena Cavric, DDS; Marin Vodanovic, PhD; Serena Viva, PhD; Laura Paula Reu, PhD; Roberto Cameriere*; Ivan Galic

12:15 p.m. - 1:45 p.m.  Lunch

Poster Session

11:30 a.m. - 1:00 p.m.  G18  Domestic Predation of an Elder: A Fatal Dog Attack Case
Erwan Le Garff, MD*; Yann Delannoy, MD; Vadim Mesli, MD; Valery C. Hedouin, MD, PhD; Anne A. Bécart, DDS, PhD; Didier Gosset, MD, PhD

11:30 a.m. - 1:00 p.m.  G19  Dental Cone Beam vs. Microfocus Computed Tomography (CT) in Dental Pulp Volume Calculation for Estimating Age in Adults for Forensic Purposes
Claudio Baldinotti, DDS*; Vilma Pinchi, PhD; Lucia Mancini, PhD; Francesco Pradella, MSc; Giulia Vitale

11:30 a.m. - 1:00 p.m.  G20  Development of Preliminary Field Morgue Hazardous Materials (HAZMAT) Entry/Triage Flow Protocols Initiated on a Coordinated Field Training Exercise (FTX) Between the Suffolk County, New York, Medical Examiner’s Office and the Disaster Mortuary Operational Response Team (DMORT) 2 (10/2/14, Revisited)
Richard Boguslaw, DMD*

Bitemarks I

Moderator: Laura Paige Moses Smalley, DMD
Rome, GA
Co-Moderator: Thomas A. Gromling, DDS
Stephens City, VA

1:45 p.m. - 2:00 p.m.  G21  Bitemarks — Maybe It Is Rocket Science
Ken F. Cohrn, DDS*

2:00 p.m. - 2:15 p.m.  G22  Scorched Earth Forensics — Why The Move to “Eradicate” Disciplines From the Courtroom Is Bad for Science and Bad for the Law
Melissa Mourges, JD*; Roger D. Metcalf, JD*

2:15 p.m. - 2:30 p.m.  G23  Doyle — The Bitemark Case That Started It All
Roger D. Metcalf, JD*; Janice W. Klim-Lemann, DDS

2:30 p.m. - 2:45 p.m.  G24  The Near-Tragic Results of a Misdiagnosed Bitemark by an Untrained Professional
Thomas V. Brady, DMD*

*Presenting Author
2:45 p.m. - 3:00 p.m.  G25  The Rise and Fall of Bitemark Matching and Bitemark Recognition: Blame It on DNA … or, What’s Next?  
  Charles Michael Bowers, DDS, JD*

3:00 p.m. - 3:15 p.m.  Break

**Bitemarks II**

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<tr>
<td>3:15 p.m.</td>
<td>G26  Bitemark Analysis and Comparison: Science, Observation, and Opinion</td>
<td>Thomas J. David, DDS*; Holland Maness, DMD*</td>
</tr>
<tr>
<td>3:35 p.m.</td>
<td>G27  The Anatomy of an Aborted Retrial Involving Bitemark Evidence</td>
<td>Robert B.J. Dorion, DDS*</td>
</tr>
<tr>
<td>3:55 p.m.</td>
<td>G28  Bitemark Evidence — Part 2: Antemortem vs. Postmortem Bitemarks as Experimental Models</td>
<td>Robert B.J. Dorion, DDS*</td>
</tr>
<tr>
<td>4:15 p.m.</td>
<td>G29  Unusual Bitemark Cases Demonstrate the Value of Bitemark Analysis</td>
<td>Richard H. Fixott, DDS*</td>
</tr>
<tr>
<td>4:30 p.m.</td>
<td>G30  Assessing the Reliability of Measurements of Human Dental Casts Using an Intraoral 3D Scanner</td>
<td>Mithun Rajshekar, MFSc*</td>
</tr>
<tr>
<td>4:45 p.m.</td>
<td>G31  Morphoanalysis of Bitemarks</td>
<td>Charles E. Georget, PhD*; Aime Conigliaro, MA</td>
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<td>5:00 p.m.</td>
<td>Break</td>
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**Dental Identifications From World War II**

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<tr>
<td>5:05 p.m.</td>
<td>G32  Dental Identification Challenges Using World War II Military Dental Records: Tarawa, 2015</td>
<td>Corinne D’Anjou, DMD*; David R. Senn, DDS*; James F. Goodrich, BDS*</td>
</tr>
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</table>
Friday

Dental Identification I

Moderator: Charles E. Berner, DDS  
DMORT, FEMORS, OMORT, Summit Co. MEO  
Cleveland, OH  

Co-Moderator: Derek M. Draft, DDS  
Grandville, MI

9:00 a.m. - 9:15 a.m.  
G33 The Trabecular Bone in Identification — Algorithms and Fractal Analysis  
Sylvain Desranleau, DMD*; Robert B.J. Dorion, DDS

9:15 a.m. - 9:30 a.m.  
G34 Paradise Ablaze 6-2-6: Dental Identification of Charred Human Remains  
Judy Y. Marshall, DMD*

9:30 a.m. - 9:45 a.m.  
G35 You Mean You Made an Identification Using What?  
Mary Shields, DMD*; Mark L. Bernstein, DDS

9:45 a.m. - 10:00 a.m.  
G36 Accuracy of the Cameriere’s Method on Age Estimation on the Libyan Population  
Ashref A.K. Dardouri, MSc; Roberto Cameriere; Stefano Vanin, PhD*

10:00 a.m. - 10:15 a.m.  
 Break

Dental Identification II

Moderator: Marnie L. Sperling, DMD  
Somerset, NJ

10:15 a.m. - 10:30 a.m.  
G37 Restorative-Era Identification of a Severed, Embalmed Head  
Raymond G. Miller, DDS*; Mary A. Bush, DDS; Peter J. Bush, BS

10:30 a.m. - 10:45 a.m.  
G38 Annapolis Mansion Fire — January 2015: Utilizing Dental Identifications  
Patrick A. Murray, DDS*; Ali Behnia, DMD; Pete N. Nickolas, DDS;  
Warren D. Tewes, DDS

10:45 a.m. - 11:00 a.m.  
G39 Identification of Decomposed Human Remains Found in a Septic Tank  
Donna J. Hellwinkel, DDS*

11:00 a.m. - 11:15 a.m.  
G40 Dental Morphoanalysis and Identification of Monozygotic Twins  
Aime Conigliaro, MA*; Charles E. Georgei, PhD

11:15 a.m. - 11:30 a.m.  
G41 Photographically and Radiographically Observed Dental Evidences Validated for Human Identification Purposes  
Nikolaos Angelakopoulos*; Guy Willems, PhD; Ademir Franco, MSc;  
Steffen Fieuws, PhD; Patrick W. Thevissen, PhD

*Presenting Author
11:30 a.m. - 11:45 a.m. G42 Teeth and Fire: Forensic Analysis of Teeth and Dental Material Exposed to Fire
Joe Adserias, DDS, PhD*; Sara C. Zapico, PhD; Luis L. Cabo, MS; Steven A. Symes, PhD; Douglas H. Ubelaker, PhD; Dennis C. Dirkmaat, PhD

11:45 a.m. - 1:15 p.m. Lunch

Poster Session

11:30 a.m. - 1:00 p.m. G43 The Forensic Impact of the Humanitarian Work of the Vicente Ferrer Foundation’s Rural Development Trust in India
Joe Adserias, DDS, PhD*; Aida Dieguez, DDS; Sergio Irazusta, DDS; MD Y. Ballasubbaiah, MD; Vicente Lozano, PhD

11:30 a.m. - 1:00 p.m. G44 Imaging Techniques for Intraoral Postmortem Dental Radiographs
Ann M. Bruhn, MS*; Tara L. Newcomb, MS*; Bridget Giles, PhD

11:30 a.m. - 1:00 p.m. G45 Morphological Changes in Palatal Rugae After Maxillary Surgical Procedure: Is It Possible?
Antonio A. Antunes, PhD*; Augusto P. Oliveira; Evelyne P. Soriano, PhD; Marcus Vitor D. Carvalho, PhD; Reginaldo I.C. Campello, PhD; Gabriela G. Porto, PhD

Software and Statistics to Assist in Identification/MFI

Moderator: Marnie L. Sperling, DMD
Somerset, NJ

1:15 p.m. - 1:30 p.m. G46 The Computer Program for Identification of the International Criminal Police Organization (INTERPOL) Disaster Victim Identification (DVI) System International (Plass Data System) — The New Web-Based Version 5: Changes and Discussion
Tore T. Solheim*

1:30 p.m. - 1:45 p.m. G47 New Mexico Office of the Medical Investigator: Overview, Dental Identification Statistical Data, and Mass Fatality Incident Plan
Cristina M. Dalle Grave, DDS*; Peter W. Loomis, DDS

1:45 p.m. - 2:00 p.m. G48 The Use of Dental Patterns in Decedent Identification: The Role of the New and Improved OdontoSearch 3.0 Program
Kenneth W. Aschheim, DDS*; Bradley J. Adams, PhD*

2:00 p.m. - 2:15 p.m. G49 Dental Encoding Translator Applications Suite (DEnTAS) — “Universal Dental Code Translator”
Kenneth W. Aschheim, DDS*; Bruce Bandini, MS*

2:15 p.m. - 2:30 p.m. Break

*Presenting Author
Standards of Care

Moderator: Donna J. Hellwinkel, DDS
Reno, NV

2:30 p.m. - 2:50 p.m. G50 The Odontologist’s Role in Death Investigation in Cases of Deaths After Dentistry
Yolanda Nerkowski, BA; Taylor L. Gardner, BFSc; Jeff Chadwick, DDS; Kris Cunningham, MD; Robert E. Wood, DDS, PhD*

2:50 p.m. - 3:05 p.m. G51 How to Deliver Sub-Optimal Dental Care Effectively
Taylor L. Gardner, BFSc; Yolanda Nerkowski, BA; Jeff Chadwick, DDS; Kris Cunningham, MD; Robert E. Wood, DDS, PhD*

3:05 p.m. - 3:20 p.m. G52 Dental Litigation Epidemiology
Francesco Pradella, MSc*; Vilma Pinchi, PhD; Stefano Garatti, MSc; Viola Bartolini; Martina Focardi; Gian A. Norelli

3:20 p.m. - 3:35 p.m. G53 The Evaluation of 73 Dental Malpractice Cases From the Counsel of Forensic Medicine
Huseyin Afsin, PhD*; Ahmet Sadi Cagdir, MD; Abdi Ozaslan, MD; Muhammet Nabi Kantarci; Umit Naci Gundogmus; Gulnaz T. Javan, PhD

3:35 p.m. - 3:50 p.m. Break

Potpourri

Moderator: Corinne D’Anjou, DMD
Saint-Lambert, PQ, CANADA
Co-Moderator: Leigh-Ann Schuerman, DMD
Cave Creek, AZ

3:50 p.m. - 4:05 p.m. G54 Partial Faceoff Dissection in Dental Autopsy
William E. Silver, DDS*; Richard R. Souviron, DDS

4:05 p.m. - 4:20 p.m. G55 3D Analysis of Dental Crown Morphology in Laser-Scanned Dentitions: A Comparison of Three Software Packages
Ademir Franco, MSc*; Guy Willems, PhD; Sérgio Ignácio, PhD; Paulo Souza, PhD; Patrick W. Thevissen, PhD

4:20 p.m. - 4:30 p.m. G56 Manipulation of Forensic Experts — Altering the Course of Criminal Justice in Hungary
Armin A. Farid, DDS*
Wednesday

Poster Session

11:30 a.m. - 1:00 p.m.  H1  From 3 Years to 3,000 Years: Forensic Taphonomy of Human Remains From the Irish Peatlands
Esther Jack, MB BCh BAO*; Niamh A. McCullagh, MSc; Linda M. Mulligan, MBBCCH

11:30 a.m. - 1:00 p.m.  H2  Assessment of Infrared (IR) Thermography for the Estimation of Postmortem Interval in Rats
Jason W. Brooks, VMD, PhD*; Stephen Lynch, PhD

11:30 a.m. - 1:00 p.m.  H3  Blood-Derived Biomarkers for Estimation of Postmortem Interval (PMI)
Isabel Costa, MS; Teresa Magalhães, PhD*; Paula Pinho, PhD; Félix Carvalho, PhD; Ricardo Silvestre, PhD; Ricardo Jorge Dinis-Oliveira*

11:30 a.m. - 1:00 p.m.  H4  Decomposition of Mouse Carcasses Infected With Fluorescently Labeled Bacteria Provide Insight on Postmortem Microbial Translocation
Zachary M. Burcham, BS*; Jennifer L. Pechal, PhD; Jeffrey L. Base, PhD; M. Eric Benbow, PhD; Carl J. Schmidt, MD; Heather R. Jordan, PhD

11:30 a.m. - 1:00 p.m.  H5  A Meta-Analysis of Carcass Decomposition on O’ahu, Hawaii
Alexis J.L. Peterson*; Whitney A. Kodama, BA; David O. Carter, PhD

11:30 a.m. - 1:00 p.m.  H6  Analysis of Possible Impact Factors on the Regeneration Process of Hematomas in the Subcutaneous Fatty Tissue
Kathrin Ogris, MA*; Thomas Widek; Eva M. Hassler; Patrick P. Torreiter; Andreas Petrovic, MSc; Eva Scheurer, MD

11:30 a.m. - 1:00 p.m.  H7  A New Approach to Collecting, Fixing, and Preparing Samples for Sperm Cells in Cases of Alleged Rape
Helga Haahr-Lilleveang, MD; Maria Pihlmann, MD; Anette M. D. Funder; Marianne S. Martin, MA; Tine H. Meyer, MA; Iana Lesnikova, MD, PhD*

11:30 a.m. - 1:00 p.m.  H8  A Preliminary Study of Shifting Bacterial Communities of the Face During Human Cadaver Decomposition in Southeast Texas
Lauren R. Smith, BS*; Joseph F. Petrosino, PhD; Sibyl R. Bucheli, PhD; Aaron M. Lynne, PhD

11:30 a.m. - 1:00 p.m.  H9  Bacteria Triggering a Preference in Flesh Flies (Diptera: Sarcophagidae) Associated With Human Cadavers
Keli L. King*; Aaron M. Lynne, PhD; Sibyl R. Bucheli, PhD; Joseph F. Petrosino, PhD

11:30 a.m. - 1:00 p.m.  H10  The Six Little Pigs: Estimation of Long-Term Postmortem Interval (PMI) Based on Bacterial Community Succession in Porcine Remains
Michael S. Woolf, BS*; Vanessa Sufrin, MS; Baneshwar Singh, PhD; Tal Simmons, PhD

*Presenting Author
11:30 a.m. - 1:00 p.m.  H11 Investigation of the Utility of Five Messenger RNA (mRNA) Markers (SEMI1, KLK3, PRM1, PRM2, and TGM4) in the Identification of Semen
Ayse Serin, PhD*; Vugar K. Huseynov, PhD; Husniye Canan, PhD; Ayca Ulubay; Mete K. Gulmen, PhD, MD

11:30 a.m. - 1:00 p.m.  H12 Blow Flies and Nicotine: An Entomotoxicology Study
Paola A. Magni, PhD*; Marco Pazzi, PhD; Eugenio Alladio, MS; Marco Vincenti, MS; Marco Brandimarte, MSc; Ian Dadour, PhD

11:30 a.m. - 1:00 p.m.  H13 Internal Validation of the Promega® PowerPlex® Y23 Amplification Kit for Use in Forensic Casework
Jordan L. Clarke, BS*; Jody West; Kristin Meyer, MFS; Pamela J. Staton, PhD

11:30 a.m. - 1:00 p.m.  H14 Study on Forensically Important Insects Collected From Medicolegal Autopsies in South Korea
Sang Eon Shin*; Im Joo Rhyu, PhD*; Seong Ho Yoo, PhD*; Hyung Seok Kim, PhD; Seong Hwan Park, PhD*

11:30 a.m. - 1:00 p.m.  H15 Analysis of an Additional Nine Short Tandem Repeat (STR) Loci to 15 STR Loci and the Detection of Allele Frequencies in a Cukurova Population of Turkey
Ayca Ulubay*; Husniye Canan, PhD; Ayse Serin, PhD*; Necmi Cekin, MD; Mete K. Gulmen, PhD, MD

11:30 a.m. - 1:00 p.m.  H16 Interactions Between Microbes and Larvae on a Human Corpse
Vadim Mesli, MD*; Damien Charabidze, PhD; Valéry C. Hedouin, MD, PhD; Christel Neut, PhD; Didier Gosset, MD, PhD

11:30 a.m. - 1:00 p.m.  H17 Can DNA Data Be Used to Establish a Cut-Off Time for Juvenile Sexual Assault Exams?
Daniela Anane-Bediakoh, BS*; Martin Lopez, MS; Holly Whillock, BS; Sheree R. Hughes-Stamm, PhD

11:30 a.m. - 1:00 p.m.  H18 Application of a 6-Plex Microsatellite Kit in the Analysis of Aged Fecal DNA Samples: Prospective Use in Equine Slaughter Forensic Cases
Ketaki Deshpande, MS*; Melissa V. Oswald, MSFS; DeEtta Mills, PhD

11:30 a.m. - 1:00 p.m.  H19 The Assessment of GeoChip™ Functional Gene Microarray as an Aid for Soil Provenance
Priyanka Kushwaha, MS*; DeEtta Mills, PhD

11:30 a.m. - 1:00 p.m.  H20 Comparison of Extraction Methods From Cotton Swabs in Reference to Background DNA From Commonly Touched Surfaces
Meghan Roig, BS*; Thais Simoes; Bruce R. McCord, PhD; Kerry Lynn Opel, MA, PhD

11:30 a.m. - 1:00 p.m.  H21 Wildlife Forensic Investigation: Identifying an Unidentified Specimen Using NADH Subunit 2 (ND2) and Cytochrome B (cytb) Genes
Hailey Meclennon*; Ashraf Mozayani, PharmD, PhD; Hector Miranda, PhD

*Presenting Author
### PATHOLOGY/BIOLOGY

**Las Vegas 2016**

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<tr>
<td>11:30 a.m.</td>
<td>H22</td>
<td>Forensic Taphonomy: Investigating the Relationship Between Gross Postmortem Change and Mass Loss</td>
<td>Adam Orimoto, MS; Kanani N. Thompson; Emily Junkins, BS; Christopher G. Inoue, BS; David O. Carter, PhD*</td>
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<tr>
<td>11:30 a.m.</td>
<td>H23</td>
<td>Dynamics of Decomposition in Tropical Environments: A Multidisciplinary Approach</td>
<td>Ashley A. Matchett; Jariangely Rivera*</td>
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#### Thursday — Session I

**Pediatrics I**

**Moderator:** Carl J. Schmidt, MD
Wayne County MEO
Detroit, MI

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<tr>
<td>8:30 a.m.</td>
<td>H24</td>
<td>Severe Retinal Hemorrhages With Retinoschisis Are Not Pathognomonic for Abusive Head Trauma</td>
<td>Kenneth D. Hutchins, MD; Mark J. Shuman, MD*</td>
</tr>
<tr>
<td>8:45 a.m.</td>
<td>H25</td>
<td>Evaluation of the Presence and Distribution of Leptomeningeal Inflammation in Cases of Sudden Death in Infancy</td>
<td>Esther Jack, MB BCh BAO*; Elisabeth Haas, MPH; Terri L. Haddix, MD</td>
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<tr>
<td>9:00 a.m.</td>
<td>H26</td>
<td>Nerve Root and Dorsal Root Ganglia (NR/DRG) Hemorrhage as an Indicator of Pediatric Traumatic Head Injury (THI)</td>
<td>Marianne E. Beynon, MD*; Miriam E. Soto Martinez, MA; Jo Elle G. Peterson; Jennifer C. Love, PhD; Dwayne A. Wolf, MD, PhD; Glenn D. Sandberg, MD</td>
</tr>
<tr>
<td>9:15 a.m.</td>
<td>H27</td>
<td>Accidental Injuries in Children: A Clinical Study for Improving the Forensic Interpretation of Child Physical Abuse</td>
<td>Federica Collini, MD*; Enrico A. Muccino, MD; Annalisa Cappella, BS; Lorenza Grappeja, MD; Pasquale Poppa, BS; Alessandra Kustermann, MD; Cristina Cattaneo, PhD</td>
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<tr>
<td>9:30 a.m.</td>
<td>H28</td>
<td>A Unique Type of Birth Trauma Mistaken for Abuse</td>
<td>Carolyn V. Isaac, PhD*; Jered B. Cornelison, PhD; Joyce L. deJong, DO</td>
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<tr>
<td>9:45 a.m.</td>
<td>H29</td>
<td>Histological Abnormalities of the Costochondral Growth Plate in Infants and Young Children</td>
<td>Sandacan Waduge, MD; Micheline Lubin, MD*; Richard C. Harraff, MD</td>
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<tr>
<td>10:00 a.m.</td>
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<td>Discussion and Break</td>
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Pediatrics II

Moderator: Jeffrey M. Jentzen, MD
University of Michigan
Ann Arbor, MI

10:30 a.m. - 10:45 a.m.  H30  Risk Assessment for Asphyxia Without Doll Reenactments in Infant Deaths
Christopher Kiefer, MD*; Kent E. Harshbarger, MD, JD

10:45 a.m. - 11:00 a.m.  H31  Comparison of Safe vs. Unsafe Sleep Environments in Sudden, Unexpected Death in Infants
Michael D. Eckhardt, MD*; Steven M. White, MD, PhD; Jon Gates, MD;
Eric August Eason, MD

11:00 a.m. - 11:15 a.m.  H32  Unusual Blunt Force Trauma to the Cranial Vault: Investigation of an Atypical Infant Abuse/Homicide
Jered B. Cornelison, PhD*; Carolyn V. Isaac, PhD; Brandy Shattuck, MD;
Joyce L. deJong, DO

11:15 a.m. - 11:30 a.m.  H33  Infant and Child Deaths Associated With Drug Intoxication: A Series of Six Cases Over 15 Years in Eastern Virginia
Babatunde L. Stokes, MD*; Wendy M. Gunther, MD

11:30 a.m. - 11:45 a.m.  H34  Undiagnosed Metabolic Cardiomyopathy as a Cause of Pediatric Sudden, Unexpected Death: Case Report and Review of the Literature
Lauren M. Woertz; Steven M. White, MD, PhD; Audrey Deeken-Draisey, MD*

11:45 a.m. - 12:00 p.m.  H35  Use of an Automated, Nested, Multiplex, Respiratory Pathogen Polymerase Chain Reaction (PCR) Panel Postmortem in the Pediatric Forensic Setting
Tiffany Baker*; Cynthia A. Schandl, MD, PhD; S. Erin Presnell, MD; James Madory, DO;
Nicholas I. Batalis, MD

12:00 p.m. - 12:15 p.m.  Discussion

12:15 p.m. - 1:30 p.m.  Lunch

Poster Session

11:30 a.m. - 1:00 p.m.  H36  A Retrospective Study of Natural Causes of Sudden Unexpected Infant Deaths in Hubei, China
Xiang Zhang, MD*; Ling Li, MD*; Guoqiang Qian, MD*; Zhiyong Yang, MD*;
Tiantong Yang*; Zhaoming Guo, MD*

11:30 a.m. - 1:00 p.m.  H37  Female Suicides in Southern Marmara: A Retrospective Analysis of 8,048 Cases Between 2009 and 2014
Nurser Turkmens Inanir; Murat S. Gürses, MD*; Selcuk Cetin, MD; Mustafa N. Ural;
Eser Bayraktar, MD*; Bulent Eren; Recep Fedakar

*Presenting Author
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<tr>
<td>11:30 a.m.</td>
<td>H38</td>
<td>Early Ischemic Heart Injury: An Immunohistochemical Study of a Paradigmatic Case</td>
<td>Silvia D. Visonà, MD*; David Forni, MD; Giovanni Pierucci, MD; Luísa Andrello, MD; Antonio M.M. Osculati, MD</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>H39</td>
<td>Saddle Pulmonary Embolism With Paradoxical Coronary Artery Embolism Through a Patent Foramen Ovale: A Case Study</td>
<td>Amber L. Achesinski, BS*; Catherine B. Pearman, MPAS; Wendy M. Gunther, MD</td>
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<td>11:30 a.m.</td>
<td>H40</td>
<td>Massive Fetomaternal Transfusion (FMT): Case Reports and Review of the Literature</td>
<td>Silvana Temi, MD*; Giovanni Botta, MD; Giancarlo Di Vella, MD, PhD*</td>
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<td>11:30 a.m.</td>
<td>H41</td>
<td>The Prevalence of Paraphernalia Found at the Scene of Drug-Related Deaths</td>
<td>Jason Gene Lozano, MD*; Kimberley Molina, MD; Nicole L. Healy, BS</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>H42</td>
<td>Sudden Cardiac Death (SCD) Visualized by Postmortem Magnetic Resonance Imaging (PMMRI) — How to Make the Invisible Visible</td>
<td>Christian Jackowski, MD, EMBA*; Nicole Schwendener, HF; Anders Persson, MD, PhD; Wolf-Dieter Zech, MD</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>H43</td>
<td>Liver Laceration as a Complication of Cardiopulmonary Resuscitation (CPR)</td>
<td>Selcuk Cetin, MD*; Hasan Din, MD*; Murat S. Gürses, MD*; Filiz Eren; Bulent Eren; Eser Bayraktar, MD*</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>H44</td>
<td>A Nine-Year Review of All-Terrain Vehicle-Related Fatalities at the West Tennessee Regional Forensic Center: 2006–2014</td>
<td>Travis M. Sullivan, BS*; Zachary O’Neill, DO</td>
</tr>
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<td>11:30 a.m.</td>
<td>H45</td>
<td>Mechanisms of Death Due to Inadvertent Administration of Ionic Hypertonic Contrast Media Into the Subarachnoid Space</td>
<td>Kazuhiko Kibayashi, MD*; Ryo Shimada, PhD; Jiro Ezaki, MD</td>
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<td>11:30 a.m.</td>
<td>H46</td>
<td>An Autopsy Case of Suspected Anti-N-Methyl-D-Aspartate Receptor (NMDAR) Encephalitis</td>
<td>Kino Hayashi, MD*; Kumiko Asakura, MD; Wakako Hikiji, MD; Tatsushige Fukunaga, MD; Yohsuke Makino, MD; Hisaomi Suzuki, MD; Mitsumoto Onaya, MD; Takahiro Izuka, MD</td>
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<td>11:30 a.m.</td>
<td>H47</td>
<td>Medical Doctor Specialized in Legal Inspections (MDSLI): A Professional Interface Between State Prosecutors and Medical Examiners — The Swiss Model</td>
<td>Emilio Scossa Baggi; Ilaria Monico, MS*; Ario Conti, BD; Franco Ghiggia, MHME; Roberto Cianella, MHE; Jhon Noseda, LL; Luisa Andrello, MD; Tony Fracasso, MD, PhD; Patrice Mangin, MD, PhD</td>
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<td>11:30 a.m.</td>
<td>H48</td>
<td>Expression of Heat Shock Protein 70 (HSP70) After Human Brain Injury in Different Post-Traumatic Intervals</td>
<td>Martina Focardi*; Vilma Pinchi, PhD; Defraia Beatrice; Laura Pieri; Francesca Castiglione; Gian A. Norelli</td>
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11:30 a.m. - 1:00 p.m. H49 Computed Tomography (CT) Findings of Unsuspected Aortic Dissection and Adult Polycystic Kidney Disease (APKD)
Christopher J. Gordon, MD*; Edward Mazuchowski II, MD, PhD; Wendy S. Warren, DO*; Howard T. Harcke, Jr., MD

11:30 a.m. - 1:00 p.m. H50 Pack Mentality: Fatal Mauling in the African Painted Dogs’ Zoo Exhibit
Farshaad Bilimoria, MD*; Stacey L. Reed, DO; Jessica B. Dwyer, MD; Joseph A. DelTondo, DO; Todd M. Luckasevic, DO; Karl E. Williams, MD

11:30 a.m. - 1:00 p.m. H51 A Fatal Moose Attack
Petur G. Gudmannsson, MD*; Anders Eriksson, MD, PhD*; Johan Berge, MD; Henrik Druid, MD, PhD; Göran Ericsson

11:30 a.m. - 1:00 p.m. H52 Fatality During Servicing of a Fire Extinguisher: A Case Study
Nilesh K. Tumram, MD*

11:30 a.m. - 1:00 p.m. H53 Getting It Right: How Seemingly Obvious Manners of Death Can Change Through Historical and Autopsy Investigations
Phoutthasone Thirakul, MD*; Daniel L. Schultz, MD*; Kelly G. Devers, MD

11:30 a.m. - 1:00 p.m. H54 Diagnostic Accuracy of Postmortem Imaging vs. Autopsy: A Systematic Literature Review
Anders Eriksson, MD, PhD*; Torfinn Gustafsson, BM; Monica Hultcrantz, PhD; Malin Höistad, PhD; Stella Jacobson, PhD; Anders Persson, MD, PhD

11:30 a.m. - 1:00 p.m. H55 Prevalence and Etiology of Intervention-Related Deaths — A Swedish Perspective
Torfinn Gustafsson, BM*; Peter Carlsson, MD; Fredrik Tamsen, MD, MSc; Anders Eriksson, MD, PhD

11:30 a.m. - 1:00 p.m. H56 Treatment for Injury Predicts the Risk of Child Homicide — A Case-Control Study
Björn Bäckström*; Jonatan Hedlund, MD; Anna Jinghede, DDS; Joakim Sturup, PhD

11:30 a.m. - 1:00 p.m. H57 Deaths Associated With Choking: An Istanbul Experience
Erdinc Ozdemir*; Muhammet Nabi Kantarci; Timucin Yildirim; Sermet Koc

Trauma

Moderator: Jan M. Gorniak, DO
Office of the Chief Medical Examiner
Washington, DC

1:30 p.m. - 1:45 p.m. H58 A Mercury “Bullet” at Autopsy
Sarah Long, BS*; Richard Wiggins, BS; Jennifer T. Akin, MS; Amy C. Gruszecki, DO

1:45 p.m. - 2:00 p.m. H59 Chain Saw-Related Fatalities: What Is All the Buzz About?
Abigail J. Grande, BS*; Shawn A. Silver, BS; Joseph A. Prahlow, MD; Joyce L. deJong, DO

*Presenting Author
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<td>2:00 p.m.</td>
<td>H60</td>
<td>Intrepretation of Pedestrian Injuries: A Collaborative Research Approach</td>
<td>Jeffrey M. Jentzen, MD*; Joel B. MacWilliams, BA; Diana I. French, BA; Stewart C. Wang, MD</td>
</tr>
<tr>
<td>2:15 p.m.</td>
<td>H61</td>
<td>Characteristics of Traffic Crash-Related Blunt Traumatic Aortic Injury (BTAI)</td>
<td>Michael Freeman, MD, PhD*; Todd M. Luckasevic, DO; Karl E. Williams, MD; Anders Eriksson, MD</td>
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<tr>
<td>2:30 p.m.</td>
<td>H62</td>
<td>If at First You Don’t Succeed …</td>
<td>Richard C. Fries, DO; Tasha Z. Greenberg, MD; Nizam Peerwani, MD; Allison Mautone, MD*</td>
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<td>2:45 p.m.</td>
<td>H63</td>
<td>Pathologist Consensus in the Interpretation of Patterned Injuries From Photographs: Reasons for Lack of Consensus</td>
<td>William R. Oliver, MD*</td>
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<td>3:05 p.m.</td>
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<td>Discussion and Break</td>
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<td>3:30 p.m.</td>
<td>H64</td>
<td>Effect of Angled Impact on Bone Fracture Pattern</td>
<td>Jacob E. Hoerter*; David J. Porta, PhD; Tyler A. Kress, PhD</td>
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<td>3:45 p.m.</td>
<td>H65</td>
<td>Sudden Unexpected Deaths due to Sarcoidosis: A Forensic Autopsy Study</td>
<td>Tiantong Yang*; Xiang Zhang, MD*; Zhaoming Guo, MD*; Allen Burke, MD; Mary G. Ripple, MD; David R. Fowler, MD; Ling Li, MD</td>
</tr>
<tr>
<td>4:00 p.m.</td>
<td>H66</td>
<td>Sudden Unexpected Deaths due to Intracranial Meningioma: A Presentation of Six Fatal Cases and a Discussion of the Mechanisms of Death</td>
<td>Lorenzo Gitto, MD*; Stephen J. Cina, MD; James A. Filkins, MD, JD, PhD; Serenella Serinelli, MD</td>
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<td>4:15 p.m.</td>
<td>H67</td>
<td>Non-Rheumatoid Fibrinous Pericarditis: A Medical Examiner Quest With an Update on Myocarditis and Use of Molecular Diagnostic Techniques</td>
<td>Avneesh Gupta, MD*; Kilak Kesha, MD; Francisco J. Diaz, MD; Carl J. Schmidt, MD</td>
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<td>4:30 p.m.</td>
<td>H68</td>
<td>Liver Pathology at Autopsy in First Presentation of Diabetic Ketoacidosis (DKA)</td>
<td>Anita Lal, MD*; Jacqueline L. Parai, MD; Chris Milroy, MD, LLB</td>
</tr>
<tr>
<td>4:45 p.m.</td>
<td>H69</td>
<td>DNA Testing in Homicide Investigations</td>
<td>Joseph A. Prahlow, MD*; Thomas J. Cameron; Alexander Arendt, BS; Kenneth Cornelis; Anthony Bontrager, BA; Michael Suth, BS; Lisa B. Black, BS; Rebecca Tobey, BS; Sharon M. Pollock, BS; Shawn Stur, BS; Kenneth Cotter, JD; Joel Gabrielse, JD</td>
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**Natural and More ...**

*Presenting Author*
Thursday — Session II

Jay Dix Memorial Bonus Day

Moderator: Michael A. Graham, MD
Saint Louis University School of Medicine
Division of Forensic Pathology
St. Louis, MO

9:00 a.m. - 9:10 a.m.  H70  Jay Dix Memorial Lecture Series
Michael A. Graham, MD*; Randy L. Hanzlick, MD*; Joseph A. Prahlow, MD*;
Jonathan Hayes, MD*; Keith Pinckard, MD, PhD*; Rudy J. Castellani, MD*  

9:10 a.m. - 10:00 a.m.  H70  Electricity and Death
Michael A. Graham, MD*

10:00 a.m. - 10:50 a.m.  H70  Blunt Force Injuries
Joseph A. Prahlow, MD*

10:50 a.m. - 11:10 a.m.  Break

11:10 a.m. - 12:00 p.m.  H70  Postmortem Changes
Jonathan Hayes, MD*

12:00 p.m. - 2:00 p.m.  Lunch

2:00 p.m. - 2:50 p.m.  H70  Infant Deaths
Keith Pinckard, MD, PhD*

2:50 p.m. - 3:00 p.m.  Break

3:00 p.m. - 3:50 p.m.  H70  Pediatric Head Trauma
Rudy J. Castellani, MD*

3:50 p.m. - 4:00 p.m.  Discussion

*Presenting Author
Friday — Session I

Multidisciplinary Session: Pathology/Biology Session I/Toxicology

**Moderator:** Karen S. Scott, PhD  
Arcadia University  
Glenside, PA

**Co-Moderator:** Sarah Meyers, MD  
University of North Dakota -  
School of Medicine  
Dept of Pathology  
Grand Forks, ND

8:30 a.m. - 8:45 a.m.  
K65 Postmortem Findings in Deaths Related to Synthetic Cannabinoids  
Robert Kronstrand, PhD*

8:45 a.m. - 9:00 a.m.  
H71 Insights Into the Postmortem Redistribution (PMR) of Diazepam, Methadone, and Morphine: Sampling Site, Time, and Method Matter  
Eric Lemaire, MD*; Carl J. Schmidt, MD

9:00 a.m. - 9:15 a.m.  
K66 Report of Increasing Acetyl Fentanyl Deaths in Allegheny County, Pennsylvania  
Todd M. Luckasevic, DO; Jennifer K. Janssen, MS; Abdurezzak M. Shakir, MD; Karl E. Williams, MD; Jessica B. Dwyer, MD*

9:15 a.m. - 9:30 a.m.  
H72 Postmortem Distribution and Detection of Butyryl Fentanyl  
Meghan S. Kessler, DO*; Rebecca Jufer Phipps, PhD; Meghan A. Mulligan, MS; Barry S. Levine, PhD; Russell T. Alexander, MD; Mary G. Ripple, MD; David R. Fowler, MD

9:30 a.m. - 9:45 a.m.  
K67 The Real Heroin in South Florida: The Detection of a Fentanyl Analog in Postmortem Specimens Using Liquid Chromatography (LC) -Ion Trap Tandem Mass Spectrometry (MS/MS)  
Elisa N. Shoff, BS*; Diane Boland, PhD

9:45 a.m. - 10:00 a.m.  
H73 Buprenorphine Prevalence in the Office of the Chief Medical Examiner (OCME) Cases Positive for Drugs of Abuse: To Screen or Not to Screen?  
Diana Geli*; Rebecca Jufer Phipps, PhD; Meghan A. Mulligan, MS; Mary G. Ripple, MD; David R. Fowler, MD

10:00 a.m. - 10:30 a.m.  
Break

Supported by: Randox Toxicology, Ltd.

*Presenting Author
PATHOLOGY/BIOLOGY

Multidisciplinary Session: Pathology/Biology Session I/Toxicology

Moderator: Dustin Tate Yeatman, MS
West Palm Beach, FL

Co-Moderator: Sarah Meyers, MD
University of North Dakota - School of Medicine
Dept of Pathology
Grand Forks, ND

10:30 a.m. - 10:45 a.m.  K68 Blood Clonazepam and 7-Amino-clonazepam Trends in Postmortem and Driving Under the Influence of Drugs (DUID) Cases
Lucas Marshall, MS*; Timothy A. Robert, PhD; David L. Black, PhD; Rebecca Heltsley, PhD

10:45 a.m. - 11:00 a.m.  H74 Chi-Squared Automatic Interaction Detection (CHAID) Analysis as a Technique for Discerning Patterns of Drug Use in Postmortem Toxicology
Candace Savonen, BS; Carl J. Schmidt, MD*; Michael Bannon, PhD

11:00 a.m. - 11:15 a.m.  K69 A Case of Death by Diclapazam: Lorazepam in Disguise
Fessessewerk Guale, DVM*; Warren C. Samms, PhD; Jeffrey Walterscheid, PhD; Dana L. Johnson

11:15 a.m. - 11:30 a.m.  H75 Deaths Associated With Synthetic Cannabinoids in Mississippi
Mark M. LeVaughn, MD*; Brent Davis, MD*; Lisa Funte, MD; Thomas Dobbs, MD

11:30 a.m. - 11:45 a.m.  K70 Fatal Toxicity Involving 3-Methoxyphencyclidine (3-MeO-PCP)
Amelia Romoser, PhD*; Jeffrey Walterscheid, PhD

11:45 a.m. - 12:00 p.m.  H76 Using Enzyme-Multiplied Immunoassay Technique (EMIT) Analysis of Vitreous Humor to Identify Heroin Use at Autopsy
Brandi C. McCleskey*; C. Andrew Robinson, Jr., PhD; Daniel W. Dye, MD

12:00 p.m. - 1:30 p.m.  Lunch

Poster Session

11:30 a.m. - 1:00 p.m.  H77 Post-Traumatic Meningitis in the Setting of an Accidental Fall of a Two-Year-Old Child
Krishna D. Shah, MD*; Sarah A. Higdon, MD; Meredith H. Frame, MD; Gregory J. Davis, MD

11:30 a.m. - 1:00 p.m.  H78 Defining “Mass Fatality Incident” for Medicolegal Jurisdictions in the United States: A Planning Tool
Allison Woody; Jason M. Wiersema, PhD*; Frank DePaolo, BS; Emily Carroll; Adriana M. Fernandez, BS; Rachel Canfield, BA

11:30 a.m. - 1:00 p.m.  H79 Unexpected Pediatric Death Due to Congenital Mesenteric Defect
Hannah C. Jarvis, MRCS*; Carolyn A. Kappen, MD

*Presenting Author
11:30 a.m. - 1:00 p.m. H80 Entrance or Exit? A Multidisciplinary Approach to Gunshot Wound Interpretation on Fresh Remains
Maria T. Tersigni-Tarrant, PhD*; Deiter J. Duff, MD*; Jane W. Turner, PhD, MD

11:30 a.m. - 1:00 p.m. H81 In-Custody Deaths in Sweden: 1992-2014
Susan Sprogoe-Jakobsen*; Jonn Ekman, BM; Anders Eriksson, MD, PhD

11:30 a.m. - 1:00 p.m. H82 Case Report of Cerebral Tissue Pulmonary Embolism (CTPE) Following Blunt Force Head Injuries
Paul V. Benson, MD; Cory Bosworth, BS*

11:30 a.m. - 1:00 p.m. H83 A Retrospective Study of the Histologic Features and Scene Investigation in the Differential of Homicidal and Accidental Childhood Asphyxial Deaths
Theodore T. Brown, MD*; Nicholas I. Batalis, MD; Joni L. McClain, MD; Tracey S. Corey, MD; Kim A. Collins, MD; Jeffrey M. Jentzen, MD; Joseph A. Prahlow, MD

11:30 a.m. - 1:00 p.m. H84 Postmortem Iris Recognition and Its Application in Human Identification
Alora Sansola*; Dennis J. Chute, MD; Robert J. Bready, MS; Amy N. Brodeur, MFS

11:30 a.m. - 1:00 p.m. H85 A Retrospective Review of All-Terrain Vehicle (ATV)-Related Fatalities in Puerto Rico
Javier G. Serrano, MD*; Carlos F. Chavez-Arias, MD

11:30 a.m. - 1:00 p.m. H86 Heart Fatty Acid Binding Protein (H-FABP): Early Detection of Myocardial Infarction in Postmortem Analysis
Shashi K. Jasra, PhD*; Sean Murphy, BSc; Azin Shirin-Bayan; Janeta Szczepanik, BS; Janelle Hinds, BS; Pardeep K. Jasra, PhD; David Shum, MD

11:30 a.m. - 1:00 p.m. H87 Deaths Due to Carbon Monoxide Intoxication Involving Burning Charcoal Briquettes in Enclosed Spaces
Patricia Aronica, MD*; Jack M. Titus, MD; David R. Fowler; MD

11:30 a.m. - 1:00 p.m. H88 Influence of “Final Exit” on Asphyxial Suicides in New Mexico: A Retrospective Review
Adela S. Magallanes, BS*; Hannah A. Kastenbaum, MD*

11:30 a.m. - 1:00 p.m. H89 North Carolina Deaths Involving Acetyl Fentanyl: A Two-Year Retrospective Review
Kimberly E. Janssen*; Justin O. Brower, PhD; Michelle B. Aurelius, MD; Ruth E. Winecker, PhD

11:30 a.m. - 1:00 p.m. H90 Human or Non-Human: Identification of a Gastrointestinal Tract
Sarah Schaerli*; Nadja Morf, MS; Michael Thali, MD; Dominic Gascho*

11:30 a.m. - 1:00 p.m. H91 Tire Marks: Don’t Tread on Me
Dennis J. Chute, MD*; Robert J. Bready, MS

11:30 a.m. - 1:00 p.m. H92 Micro-Computed Tomography (CT) Analysis of Deadly Gunshot Wounds
Paolo Fais, MD; Chiara Giraudo, MD; Guido Pelletti, MD; Alessia Viero, MD; Diego Miotto; Massimo Montisci, PhD; Giovanni Cecchetto, MD, PhD*
11:30 a.m. - 1:00 p.m.  
**H93** When Insect Colonization Starts Before Death: A Case From Central Italy  
Stefano Vanin, PhD*; Martina Focardi*; Manuela Bonizzoli, MD;  
Marialuisa Migliaccio, MD; Laura Tedini Buoninsegni, MD;  
Marco Mangini, MD; Vilma Pinchi, PhD; Gian A. Norelli

11:30 a.m. - 1:00 p.m.  
**H94** Medicolegal Issues in Lethal Necrotizing Fasciitis: Presentation of a Case Series  
Paolo Fais, MD*; Giovanni Cecchetto, MD, PhD; Renzo Giordano, MD;  
Massimo Montisci, PhD; Dario Raniero, PhD; Federica Bortolotti, PhD, MD;  
Franco Tagliaro, PhD, MD

11:30 a.m. - 1:00 p.m.  
**H95** Recreational Sporting Activity Vehicle-Related Deaths  
Samuel Prahlow*; Andrew Renner, MD; Abigail J. Grande, BS; Joyce L. deJong, DO;  
Joseph A. Prahlow, MD

11:30 a.m. - 1:00 p.m.  
**H96** Facial Dissection: Two Case Reports Showing the Need for This Special Autopsy Technique  
Bruno M. Santos, MSc*; Luisa Eiras, MD; Maria C. Mendonça, PhD

11:30 a.m. - 1:00 p.m.  
**H97** Forensic Botany: Judicial or Circumstantial Evidence? A Case Report and Review of the Literature  
Isabella Aquila, MD*; Ciro Di Nunzio, MFS, PhD*; Silvia Boca; Pietrantonio Ricci*

11:30 a.m. - 1:00 p.m.  
**H98** The Forensic Applications of 3D Postmortem Multislice Computed Tomography (PMCT): From “Radiopsy” to “Virtopsy”  
Isabella Aquila, MD*; Ciro Di Nunzio, MFS, PhD; Carmela Falcone, MD;  
Oscar Tamburrini, PhD; Silvia Boca; Pietrantonio Ricci*

11:30 a.m. - 1:00 p.m.  
**H99** Right Atrial Infarction With Rupture  
Sait Özsoy, MD*; Sultan Pehlivan; Bahadir Özen; Gulnaz T. Javan, PhD

**Toxicology for Pathologists**

*Moderator: Karen F. Ross, MD  
Montgomery County Forensic Services Division  
Conroe, TX*

1:30 p.m. - 1:45 p.m.  
**H100** Lung Weights in Deaths Due to Drug Intoxication  
Heather L. Chen, BA*; Joyce L. deJong, DO

1:45 p.m. - 2:00 p.m.  
**H101** Heroin and Asthma Deaths in Cook County, Illinois — A Two-Year Review  
Serenella Serinelli, MD*; Matthew F. Fox, MD; Ponni Arunkumar, MD; Lorenzo Gitto, MD

2:00 p.m. - 2:15 p.m.  
**H102** Utility of Toxicology Screening in Older Adults Based on History and Scene Investigation  
Matthew F. Fox, MD*; Steven M. White, MD, PhD

*Presenting Author*
PATHOLOGY/BIOLOGY

2:15 p.m. - 2:30 p.m.  H103  A Prospective Double-Blinded Comparison of Autopsy and Postmortem Computerized Tomography (PMCT) for the Evaluation of Potential Drug Poisoning Deaths
Ian Paul, MD*; Sarah Lathrop, DVM, PhD; Gary M. Hatch, MD; Chandra Y. Gerrard, BS; Valerie Poland, BA; Ross E. Zumwalt, MD; Sam W. Andrews, MD; Jan Price, RN, MSA; Gary W. Mlady, MD; Jennifer W. Pohl, MD, PhD; Brad W. Cushnyr, MD; Philip W. Wiest, MD; Kurt B. Nolte, MD

2:30 p.m. - 2:45 p.m.  H104  Heroin-Related Deaths in Denver, Colorado
Meredith A. Frank, MD*

2:45 p.m. - 3:00 p.m.  H105  Case Report: Fatal Use of a Suspected Herbal Medication
Tiffany O’Neill, DO*; Donald R. Jason, MD, JD

3:00 p.m. - 3:30 p.m.  Break

Pathology — Miscellaneous

Moderator:  Karen F. Ross, MD
Montgomery County Forensic Services Division
Conroe, TX

3:30 p.m. - 3:45 p.m.  H106  Postpartum Non-Atherosclerotic Spontaneous Coronary Artery Dissection (NA-SCAD) Recurrence in Subsequent Pregnancies: A Case Report
Casey P. Bitting, DO*; Ross E. Zumwalt, MD

3:45 p.m. - 4:00 p.m.  H107  Custodial Suicides: A Review of Suicides of Incarcerated Persons Investigated by the Harris County Institute of Forensic Sciences Over a Ten-Year Period
Sara N. Doyle, MD*; Sharon M. Derrick, PhD

4:00 p.m. - 4:15 p.m.  H108  Deaths Associated With a November 2014 Snowstorm (“Winter Storm Knife”) in Erie County, New York
Katherine F. Maloney, MD*; Nicole A. Yarid, MD; Janinne Blank; Tara J. Mahar, MD

4:15 p.m. - 4:30 p.m.  H109  Effects of Weather and Lunar Phases on Forensic Autopsy Case Load: A Four-Year Review
Matthew D. Cain, MD*; Daniel W. Dye, MD

4:30 p.m. - 4:45 p.m.  H110  Trends in Officer-Involved Firearm Deaths in Oklahoma From 2005 to 2014
Kyla M. Jorgenson, MSc*; Andrea L. Wiens, DO; Eric Pfeifer, MD; Joshua Lanter, MD

4:45 p.m. - 5:00 p.m.  H111  Emergency Management, Death Investigation, and Pathology of a Mass Fatality Industrial Workplace Accident: The La Porte, Texas, Dupont® Plant Incident
Pramod Gumpeni, MD*; Jason M. Wiersema, PhD; Allison Woody

*Presenting Author
Friday — Session II

Insects and DNA

**Moderator:** M. Eric Benbow, PhD
Michigan State University
Depts of Entomology & Osteopathic Med Specialties
East Lansing, MI

8:30 a.m. - 8:45 a.m.  H112 Cadaver Gravesoil Microbial Profiles During Decomposition
Sheree J. Finley, MS*; Jennifer L. Pechal, PhD; M. Eric Benbow, PhD;
Boakai K. Robertson, PhD; Gulnaz T. Javan, PhD

8:45 a.m. - 9:00 a.m.  H113 The Influence of Predator Presence and Habitat Type on Blow Fly Oviposition
Kristi Bugajski, PhD*

9:00 a.m. - 9:15 a.m.  H114 Dynamics of Necrophagous Insect Species and Bacteria From Swine Carcasses During the Warm Season in Romania
Lavinia Iancu, PhD*; Cristina Purcarea, PhD

9:15 a.m. - 9:30 a.m.  H115 Postmortem Community Dynamics of the Larval Mass Microbiome
Emily Junkins, BS*; David O. Carter, PhD

9:30 a.m. - 9:45 a.m.  H116 Indoor vs. Outdoor Forensic Entomology: Exploring the Differences, Challenges, and Opportunities of Indoor Scenes
Michelle R. Sanford, PhD*

9:45 a.m. - 10:15 a.m.  Break

10:15 a.m. - 10:30 a.m.  H117 The Utility of Soil Eukaryotes During Human Decomposition and Their Potential Forensic Applications
Vanessa Sufrin, MS*; Tawni L. Crippen, PhD; Jeffery K. Tomberlin, PhD;
Aaron M. Tarone, PhD; Jennifer L. Pechal, PhD; M. Eric Benbow, PhD;
Baneshwar Singh, PhD*

10:30 a.m. - 10:45 a.m.  H118 Heat Signatures Produced by Maggot Masses: Using Forward Looking Infrared Radar (FLIR) Mounted on a Helicopter to Locate Human Remains
Ian Dadour, PhD*; Michael Lee, PhD

10:45 a.m. - 11:00 a.m.  H119 Statistical Confidence Limits for a Prediction of Carrion Insect Age Based on a Categorical Response Variable
Lynn R. LaMotte, PhD; Amanda L. Roe, PhD; Jeffrey D. Wells, PhD*;
Leon G. Higley, PhD

11:00 a.m. - 11:15 a.m.  H120 Thanatotranscriptome: Gene Expression in Cadaver Livers
Gulnaz T. Javan, PhD; Ismail Can, BS; Sheree J. Finley, MS*; Shivani Soni, PhD

*Presenting Author
### PATHOLOGY/BIOLOGY

**Las Vegas 2016**

<table>
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<tr>
<th>Time</th>
<th>Event</th>
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| 11:15 a.m. - 11:35 a.m. | H121 An Evaluation of a New Rapid DNA Platform for Field-Forward Applications  
Rachel E. Wiley, MFS; Kelly Sage, BS; Bruce Budowle, PhD; Bobby L. LaRue, Jr., PhD* |
| 11:35 a.m. - 11:50 a.m. | Discussion                                                               |
| 11:50 a.m. - 1:30 p.m.  | Lunch                                                                     |

#### Skin Trace Evidence and More

<table>
<thead>
<tr>
<th>Moderator: Heather R. Jordan, PhD</th>
<th>Co-Moderator: Rob Knight, PhD</th>
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<tr>
<td>Mississippi State University</td>
<td>University of California San Diego</td>
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<tr>
<td>Mississippi State, MS</td>
<td>La Jolla, CA</td>
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1:30 p.m. - 1:45 p.m. H122 Thanatophagy in Brain and Heart Tissues  
Gulnaz T. Javan, PhD*; Insu Kwon; Sheree J. Finley, MS; Youngil Lee, PhD

1:45 p.m. - 2:00 p.m. H123 Novel Association Between the Thanatomicmicrobiome and Postmortem Interval (PMI)  
Gulnaz T. Javan, PhD*; Ismail Can, BS; Nathalie Lorenzo; Sheree J. Finley, MS; Jennifer G. Mulle, PhD

2:00 p.m. - 2:15 p.m. H124 Inferring Patterns of Occupancy From Human Microbial Signatures  
Simon Lax*; Jack Gilbert, PhD

2:15 p.m. - 2:30 p.m. H125 Evaluating the Skin Microbiome as Trace Evidence on Common Surface Types  
Jessica L. Metcalf, PhD*; Embriette R. Hyde, BS; Se Jin Song, BA; Simon Lax; Jack Gilbert, PhD; David O. Carter, PhD; Rob Knight, PhD

2:30 p.m. - 2:45 p.m. H126 Drugs and Bugs (Bacteria): Does What You Use Relate to What You Grow?  
Jennifer L. Pechal, PhD*; Carl J. Schmidt, MD; Heather R. Jordan, PhD; M. Eric Benbow, PhD

2:45 p.m. - 3:00 p.m. Discussion

3:00 p.m. - 3:15 p.m. Break

3:15 p.m. - 3:30 p.m. H127 A Predictive Knowledgebase Linking Microbial Signatures to Human Lifestyle Characteristics  
Jack Gilbert, PhD*; Jose Lopez, PhD; Simon Lax; George T. Duncan, PhD; Jessica L. Metcalf, PhD

3:30 p.m. - 3:45 p.m. H128 Do Postmortem Skin Microbial Communities Change During Morgue Transit and Cooler Storage?  
Whitney A. Kodama, BA*; David O. Carter, PhD; Jessica L. Metcalf, PhD; Rob Knight, PhD

*Presenting Author
### PATHOLOGY/BIOLOGY

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<tr>
<td>3:45 p.m.</td>
<td>H129</td>
<td>The Human Postmortem Microbiome and Manner of Death</td>
<td>M. Eric Benbow, PhD*; Jennifer L. Pechal, PhD; Carl J. Schmidt, MD; Heather R. Jordan, PhD</td>
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<td>4:05 p.m.</td>
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<td><strong>Discussion</strong></td>
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<tr>
<td>3:45 p.m.</td>
<td>H130</td>
<td>Development of a Free, Customizable, Forensic Autopsy Report Generator</td>
<td>Matthew D. Cain, MD*; Yihong R. Ma, MD; Daniel W. Dye, MD</td>
</tr>
<tr>
<td>4:05 p.m.</td>
<td>H131</td>
<td>Detection and Differentiation of Early Acute and Following Age Stages of Myocardial Ischemia With Quantitative Postmortem Cardiac Magnetic Resonance (PMCMR)</td>
<td>Wolf-Dieter Zech, MD*; Nicole Schwendener, HF; Anders Persson, MD, PhD; Marcel Warnjes, PhD; Frederick Schuster, MD; Fabiano Riva, PhD; Christian Jackowski, MD, EMBA</td>
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<tr>
<td>9:00 a.m.</td>
<td>H133</td>
<td>Postmortem Computed Tomography (PMCT) and Initial Experiences in Postmortem Angiography in Pediatric Cases</td>
<td>Silke Grabherr, PhD*; Christine Chevallier; Beatriz V. Krentz; Leonor T. Alamo; Coraline Egger, MD; Jochen Grimm, MD, JD</td>
</tr>
<tr>
<td>9:00 a.m.</td>
<td>H132</td>
<td>Forensic Radiology Pitfalls</td>
<td>Mark A. Giffen, Jr., DO*; Jerri McLemore, MD; Jason Powell, MD*</td>
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<tr>
<td>9:30 a.m.</td>
<td>H134</td>
<td>Blast Injuries: Radiology-Pathology Correlation</td>
<td>Edward Mazuchowski II, MD, PhD*; Howard T. Hareke, Jr., MD</td>
</tr>
<tr>
<td>9:45 a.m.</td>
<td>H135</td>
<td>Clinicopathologic Correlations in a Free-Dive Competition Fatality</td>
<td>M.G.F. Gilliland, MD*; Kerry Hollowell, MD</td>
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<tr>
<td>9:45 a.m.</td>
<td>H136</td>
<td>Forensic Radiology Pitfalls</td>
<td>Mark A. Giffen, Jr., DO*; Jerri McLemore, MD; Jason Powell, MD*</td>
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<tr>
<td>10:00 a.m.</td>
<td>H137</td>
<td>A Quantitative Assessment of Peri-Mortem Blunt Force Trauma of the Neck</td>
<td>Deborrah C. Pinto, PhD*; Deanna Oleske, MD</td>
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*Presenting Author*
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<tr>
<td>11:00 a.m.</td>
<td>H138</td>
<td>Anatomical Larynx Variations and Hyoid and Thyroid Fractures</td>
<td>João E.S. Pinheiro, MD*; Jose L. Cascallana, PhD; Benito Lopez de Abajo, MD; Xose L. Otero, PhD; Maria Sol Rodriguez-Calvo, PhD</td>
</tr>
<tr>
<td>11:15 a.m.</td>
<td>H139</td>
<td>Social Media and Medicolegal Death Investigation: Logged in … to the Morgue</td>
<td>Lorenzo Gitto, MD*; Stephen J. Cina, MD; Ponni Arunkumar, MD; Matthew F. Fox, MD; Serenella Serinelli, MD</td>
</tr>
<tr>
<td>11:30 a.m.</td>
<td>H140</td>
<td>What is Sex? Autopsy Documentation and Death Certification in the Transgender Population</td>
<td>Jan M. Gorniak, DO*</td>
</tr>
<tr>
<td>11:45 a.m.</td>
<td>H141</td>
<td>The Current System of Forensic Science Inspection and Accreditation in China</td>
<td>Zhaoming Guo, MD*; Ling Li, MD*; Tiantong Yang*; Xiang Zhang, MD*</td>
</tr>
</tbody>
</table>
**Wednesday**

**Poster Session**

11:30 a.m. - 1:00 p.m.  
**I1** Cyberbullying: The Violence Behind Technology and Implications for Adolescents’ Self-Esteem  
Ana Rato, MS; Celina Manita, PhD; Ricardo Jorge Dinis-Oliveira; Teresa Magalhães, PhD*

11:30 a.m. - 1:00 p.m.  
**I2** Fatherhood and Incarceration: Primary Results on Parenthood and Imprisonment  
Susanna Pietralunga, PhD; Alessandro Taurino, PsyD; Rosalinda Cassibba, PsyD; Giuliana Laccalandra, PsyD; Elisabetta Preti, PsyD; Maria Pasceri, PhD; Giann Michele Laquale, PhD; Alessio Ostuni, MD; Nicola Petruzelli, PhD; Anna Cassano, PsyD; Roberto Catanesi, MD; Ignazio Grattagliano, PsyD*

11:30 a.m. - 1:00 p.m.  
**I3** Traumatic Exposure and Competency to Stand Trial: Describing Juvenile Offender Characteristics  
Sheresa Christopher, PhD*; Christopher Fields, MD*; Diana Mullis, MD*; Jennifer Steadham, PhD

11:30 a.m. - 1:00 p.m.  
**I4** Women Accused of Sexual Abuse: Three Case Reports From Turkey  
Esra Unal, MD*; Volkan Unal, MD; Tuba Özcanli; Murat Imali; Ibrahim Balcioglu

11:30 a.m. - 1:00 p.m.  
**I5** Made Up by Makeup — Pretense of an Offense  
Sabrina Mauf*; Rosa M. Martinez, MD; Christine Bartsch, MD

**Thursday**

**Ethical Considerations and Treatment Issues**

<table>
<thead>
<tr>
<th>Moderator: Dean Michael De Crisce, MD</th>
<th>Co-Moderator: John L. Young, MD</th>
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<tbody>
<tr>
<td>Avenel, NJ</td>
<td>New Haven, CT</td>
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8:30 a.m. - 10:30 a.m.  
**I6** Ethical Responsibilities of Physicians: Capital Punishment in the 21st Century  
Robert Weinstock, MD*; William C. Darby, MD*; Chinmoy Gulrajani, MD*; Karen B. Rosenbaum, MD*

10:30 a.m. - 10:45 a.m.  
**Break**

10:45 a.m. - 11:00 a.m.  
**I7** The Forensic Quality Challenges of the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5) and Neuroscience  
John L. Young, MD*

*Presenting Author*
11:00 a.m. - 11:15 a.m. I8 Evaluating Access to Substance Abuse Treatment in a Public Hospital Setting for Persons on Probation Under California's Realignment Program
   Eric Chaghouri*; Kimberly Brown, MD*; Kate Taylor, PhD; Kellie Spector, BS

11:15 a.m. - 11:30 a.m. I9 Predicting Success: A Study of Demographic Indicators of Success in Prison Career and Technology Education Training Programs
   Ronald R. Thrasher, PhD*; Kimberly Litterell, BS*

11:30 a.m. - 11:50 a.m. I10 Risk Factors and Legal Implications of Psychiatric Patient Elopement From Hospital Settings
   George Elias*

11:50 a.m. - 1:00 p.m. Lunch

Poster Session

11:30 a.m. - 1:00 p.m. I11 Stopping the Revolving Door: Identifying Factors Associated With Repeated Trial Competency Evaluations
   Bipin Subedi, MD; Martin Nau, MD*; Elizabeth P. Moreira, MA

11:30 a.m. - 1:00 p.m. I12 The Detection of Feigned Legal Knowledge Deficits in Defendants Undergoing Competency to Stand Trial Evaluations: The Use of the Inventory of Legal Knowledge (ILK)
   Emily D. Gottfried, PhD*; Joyce L. Carbonell, PhD; B. Lee Hudson, PhD

11:30 a.m. - 1:00 p.m. I13 Occurrence of a Suicide Attempt by Penis Auto-Amputation by a Murder Suspect: A Case Report
   Esra Unal, MD*; Volkan Unal, MD; Tuba Özcanli; Murat Imali; Ibrahim Balcioglu

11:30 a.m. - 1:00 p.m. I14 Elder Abuse and Violence: Descriptions of the Phenomenon by Health Care Workers From Two Italian Hospitals
   Graziamaria Corbi, PhD; Ignazio Grattagliano, PsyD*; Lidia Scarabaggio, RN; Carlo Sabbà, MD; Giorgio Fiore, MD; Nicola Ferrara, MD; Roberto Catanesi, MD; Carlo P. Campobasso, MD, PhD

Sexual Behavior

Moderator: Christopher R. Thompson, MD
Los Angeles, CA

Co-Moderator: R. Gregg Dwyer, MD, EdD
Medical University of South Carolina
Community & Public Safety Psychiatry Division
Charleston, SC

1:00 p.m. - 1:20 p.m. I15 Explorative Study on the Level of Online Sexual Activities and Sexual Paraphilias
   Cinzia Gimelli, PsyD, PhD*; Melania Lugli, PhD; Davide Dettore, PsyD, PhD; Andrea Giannelli, PHD

*Presenting Author
1:20 p.m. - 3:20 p.m.  **I16**  
**The Assessment, Treatment, and Community Management of Sex Offenders**  
R. Gregg Dwyer, MD, EdD*; J. Paul Fedoroff, MD*; Lisa Murphy, MCA*; Rebekah Ranger, BA*; Natasha M. Knack, BA*

3:20 p.m. - 3:40 p.m.  **Break**

3:40 p.m. - 4:00 p.m.  **I17**  
**Autoeroticism in Autism Spectrum**  
Denise C. Kellaher*

4:00 p.m. - 4:30 p.m.  **I18**  
**A Scientist-Practitioner Model for the Identification and Interpretation of Sadistic Offenders**  
Julian C.W. Boon, PhD*; Lynsey F. Gozna, PhD

4:30 p.m. - 5:00 p.m.  **I19**  
**Interpreting and Assessing Benign and Malign Sexual and Non-Sexual Necrophilous Interests in Criminal Cases**  
Lynsey F. Gozna, PhD*; Julian C.W. Boon, PhD

**Friday**

**Psychopathy and Violence**

**Moderator:** Raymond H. Hamden, PhD  
The Foundation for International Human Relations  
Washington, DC

**Co-Moderator:** Samuel J. Leistedt, MD, PhD  
Baudour, BELGIUM

8:30 a.m. - 8:45 a.m.  **I20**  
**Effects of a Treatment Program for Combat Veterans Charged With Domestic Violence**  
Giuseppe Troccoli, MD*; Mary Sullivan, MSN*

8:45 a.m. - 9:05 a.m.  **I21**  
**The Psychopathy Checklist-Revised (PCL-R) Use for Psychopath Diagnosis — A Study of a Sample of Italian Female Offenders Deemed a Danger to Society**  
Felice F. Carabellese, MD*; Andrea Pinotti, MD; Donatella La Tegola, PhD; Ilaria Rossetto, MD; Filippo Franconi, MD; Rosa Taratufolo, MD; Roberto Catanesi, MD

9:05 a.m. - 9:25 a.m.  **I22**  
**From Forensic Sciences to the Stars: Study for the Implementation of a Protocol to Protect Astronauts Based on an Evaluation of Criminal Trials and Behavioral Genetics**  
Vincenzo Lusa, JD*; Annarita Franza, PhD*

9:25 a.m. - 9:40 a.m.  **Break**

9:40 a.m. - 9:55 a.m.  **I23**  
**Suicide Note Writers: Are Medicolegal and Forensic Psychiatric Items Linked?**  
Pasquale Beltempo, MD*; Ilaria De Vitis, MD*; Roberto Catanesi, MD

*Presenting Author
<table>
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<th>Presenters</th>
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<tbody>
<tr>
<td>9:55 a.m. - 10:40 a.m.</td>
<td>I24</td>
<td>Stalking Charges Among Defendants Referred for Competency to Stand Trial and Criminal Responsibility Evaluations: A 10-Year Case Series</td>
<td>Christopher Fields, MD*; Sheresa Christopher, PhD*; Diana Mullis, MD*; Adam Bloom, MD*</td>
</tr>
<tr>
<td>10:40 a.m. - 11:10 a.m.</td>
<td>I25</td>
<td>The Sound of Music: Effects on Post-Traumatic Stress Disorder (PTSD)</td>
<td>Sundeep S. Randhawa, MD*; Michael Liepman, MD</td>
</tr>
<tr>
<td>11:10 a.m. - 11:30 a.m.</td>
<td>I26</td>
<td>Reducing the Risk of Violence in a Psychiatric Inpatient Setting by Examining External Factors</td>
<td>Rebecca Najera, DO*</td>
</tr>
<tr>
<td>11:30 a.m. - 12:00 p.m.</td>
<td>I27</td>
<td>WITHDRAWN</td>
<td></td>
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<td>12:00 p.m. - 1:00 p.m.</td>
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<td>Lunch</td>
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**Poster Session**

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<tbody>
<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>I28</td>
<td>The Risk of Assault by Patients in Psychiatry Settings: A Case Report and Review of the Literature</td>
<td>Giancarlo Di Vella, MD, PhD*; Lucia Tattoli, PhD; Fiammetta Marella; Mary Sullivan, MSN; Roberto Catanesi, MD; Ignazio Grattagliano, PsyD</td>
</tr>
<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>I29</td>
<td>Aggression and Harassment: An Underrated Risk in the Health Care Workplace</td>
<td>Ignazio Grattagliano, PsyD*; Stefano Berardi, MD; Gabriella Martina, MD; Antonio Baladassarre, MD; Luigi Vimercati, MD; Marina Musti, MD</td>
</tr>
<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>I30</td>
<td>Genetic Study of Single Nucleotide Polymorphisms (SNPs) in the Oxytocin Receptor (OXTR)</td>
<td>Elizabeth Chesna, BS*; Gabriella Cansino, MS; Peyton Gandy, MSFS; Jessica Wells, MS; Danielle Boisvert, PhD; Todd Armstrong, PhD; David A. Gangitano, PhD</td>
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<tr>
<td>11:30 a.m. - 1:00 p.m.</td>
<td>I31</td>
<td>Means and Dynamics of Suicide in Human History</td>
<td>Luca Massaro, MA*; Matteo Borrini, PhD*</td>
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**Homicide**

**Moderator:** Peter Ian Collins, MD  
Ontario Provincial Police  
Behavioral Sciences Service  
Orillia, ON, CANADA

**Co-Moderator:** Eleanor B. Vo, MD  
OmaDesala Psychiatric Services  
Ewing, NJ

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<tr>
<td>1:00 p.m. - 1:30 p.m.</td>
<td>I32</td>
<td>Neurobiology of Psychopathy: Developments and Directions</td>
<td>Arin Abnoosian, MD*; Michael Cummings, MD</td>
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</table>
1:30 p.m. - 2:00 p.m.  **I33** Killer Cult Members and the Insanity Plea: Exploring the Line Between Belief and Delusion  
*Brian J. Holoyda, MD*; *William Newman, MD*

2:00 p.m. - 3:20 p.m.  **I34** Civil and Criminal Commitment for Homicidal Ideation  
*Jason Beaman, DO*; *Jennifer Piel, MD, JD*; *John P. Shand, MD* 

3:20 p.m. - 3:40 p.m.  Break

3:40 p.m. - 3:50 p.m.  **I35** The Massacre of Erba: An Uncommon Homicide by a “Normal Peaceable” Couple  
*Federica Collini, MD*; *Isabella Merzagora Betsos, PhD*

3:50 p.m. - 4:10 p.m.  **I36** The Pseudocommando and the Terrorist: Casuistic Comparison and Cnalysis  
*Samuel J. Leistedt, MD, PhD*; *Fabienne Fabienne Glowacz, PhD*

4:10 p.m. - 4:30 p.m.  **I37** Killing a Child: Neuropsychological Profiles of Murderers of Children  
*Nicole Azores-Gococo*; *Robert Hanlon, PhD*; *Saritha Teralandur, MS*; *Michael Brook, PhD*

4:30 p.m. - 4:50 p.m.  **I38** Confirmation Bias and Metalinguistic Awareness  
*Carole E. Chaski, PhD*; *Elizabeth A. Smith, PhD*; *Cristina Aggazzotti, MS*; *Ying Liu, BA*

4:50 p.m. - 5:00 p.m.  **I39** Among a German Sample of Forensic Patients: Previous Animal Abuse Mediates Between Psychopathy and Sadistic Actions  
*Stupperich Alexandra*; *Micha Strack*

**Saturday**

**Child and Adolescent**

*Moderator:* *Robert Weinstock, MD*  
*Los Angeles, CA*  
*Co-Moderator:* *Laura Volpini, PhD*  
*Rome, ITALY*

8:30 a.m. - 9:30 a.m.  **I40** Resolving Ethical Dilemmas Using Dialectical Principism in End-of-Life Decisions  
*Robert Weinstock, MD*; *William C. Darby, MD* 

9:30 a.m. - 9:45 a.m.  **I41** Effects of Anger Management and Social Support to Cope With Cyber Bullying of Adolescents  
*Nursen Turan, MD*; *Asligul Metin*; *Sazimet Geyik*; *Sitti Hatice Nur Nas*; *Berfin Aydogdu*; *Burcu Kilic*; *Yesim Yenigul, PhD*

9:45 a.m. - 10:05 a.m.  Break

10:05 a.m. - 11:05 a.m.  **I42** Juvenile Sex Trafficking  
*Sara R. Thomas, MS* 

*Presenting Author*
11:05 a.m. - 11:20 a.m.  **I43** Empirical Survey in the Italian Courts  
Laura Volpini, PhD*; Roberta Russo, MS; Federica Rossi Berluti, MS; Cristina Mazza

11:20 a.m. - 11:40 a.m.  **I44** I Need to Be Myself, I Can’t Be Anyone Else — Analyzing the Role of Forensic Sciences in Disorders of Sex Development (DSD), Discussion of Historical Case Studies, and Contemporary Reports Leading to New Perspectives  
Annarita Franza, PhD*; Vincenzo Lusa, JD*

11:40 a.m. - 12:00 p.m.  **I45** Hypnosis in the Courtroom  
Sebastien S. Prat, MD*; Joseph Ferencz, MD, PhD*
Thursday

Moderator: Kevin P. Kulbacki, MSFS  
South Carolina Law Enforcement Division  
Columbia, SC

8:30 a.m. - 8:45 a.m.  
Opening Remarks  
Thomas W. Vastrick, BS

8:45 a.m. - 9:45 a.m.  
Discussion

9:45 a.m. - 10:00 a.m.  
J1  
Evaluation of the Problems in the Field of Questioned Documents in Turkey  
Isil Ocal*, Mete K. Gulmen, PhD, MD

10:00 a.m. - 10:30 a.m.  
Break

Moderator: Kevin P. Kulbacki, MSFS  
South Carolina Law Enforcement Division  
Columbia, SC

10:30 a.m. - 11:30 a.m.  
J2  
Electrostatic Detection Apparatus (ESDA®) for Questioned Document Examination — Theory and Application  
F.L. Jim Lee, Jr., MS*

11:30 a.m. - 1:30 p.m.  
Lunch

Poster Session

11:30 a.m. - 1:00 p.m.  
J3  
A Study of Bandings in Printed Black Texts for the Identification of Monochromic Laser Printers  
Ning Liu, MA*

11:30 a.m. - 1:00 p.m.  
J4  
Determination of the Sequence of Non-Intersecting Lines From Laser Toner Particles and Pen Ink by Stereomicroscope  
Ismail Çakir, PhD*; Gürsel Çetin, MD*; Abdi Ozaslan, MD; Ibrahim E Çaki

*Presenting Author
QUESTIONED DOCUMENTS

Moderator: David S. Moore, MEd
Fair Oaks, CA

1:30 p.m. - 2:00 p.m. J5 Oh Brother — Another Paper on Following the Basics
Thomas W. Vastrick, BS*

2:00 p.m. - 3:00 p.m. J6 Counterfeit Detection Training in Distributed Learning Environments
Joel A. Zlotnick, MSFS*; Zhengfan E. Song, MS; Tyra Lundy, MS

3:00 p.m. - 3:30 p.m. Break

Moderator: David S. Moore, MEd
Fair Oaks, CA

3:30 p.m. - 3:45 p.m. J7 A Survey of Usage of Opinion Terminology in Questioned Document Examination and on Varying Proposed Approaches to the Standardized Terminology
Carl R. McClary, BA*

3:45 p.m. - 4:30 p.m. J8 The Impact of Daubert on Forensic Document Examinations — The Paradigm Shift
Jan S. Kelly, BA*

4:30 p.m. - 4:45 p.m. J9 Forensic Document Examination by a Multispectral Mobile Forensic Imaging System
Halîs Dökçüz*; Hakan Kar, MS*

4:45 p.m. - 5:00 p.m. J10 Developing an Ink Database for Commonly Used Pens Manufactured in Pakistan
Zumrad U. Bhutta, MS*; Ayesha Intiaz, MS*

Friday

Moderator: Linda L. Mitchell, BS
Escondido, CA

8:30 a.m. - 8:45 a.m. J11 Conductive Inks: Implications for Forensic Document Examiners
Kevin P. Kulbacki, MSFS*
8:45 a.m. - 9:00 a.m.  J12  A Comparative Study of Common Individual Writing Characteristics in Determining Left- and Right-Hand Writings  
Vikram Raj Singh Chauhan, PhD*

9:00 a.m. - 10:00 a.m.  J13  Security Feature Implementation: The Other Side of Document Security  
Joel A. Zlotnick, MSFS*

10:00 a.m. - 10:30 a.m.  Break

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Moderator: Linda L. Mitchell, BS  
Escondido, CA

10:30 a.m. - 11:00 a.m.  J14  The Value of Skill Task Assessments (STA)  
Jan S. Kelly, BA*

11:00 a.m. - 11:30 a.m.  J15  A Triad of Techniques and Instruments for the Examination of Questioned Documents  
F.L. Jim Lee, Jr., MS*

11:30 a.m. - 1:30 p.m.  Lunch

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**Poster Session**

11:30 a.m. - 1:00 p.m.  J16  How Well Do People Know Their Signatures?  
Zuzanna Kozmierczyk, BS*; Ian J. Turner, PhD

11:30 a.m. - 1:00 p.m.  J17  Properties of Inkless Pens  
Samiah Ibrahim, BSc*; Tobin A. Tanaka, BS*

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Moderator: Carl R. McClary, BA  
Atlanta, GA

1:30 p.m. - 1:55 p.m.  J18  The Leon Savoy Estate  
David S. Moore, MEd*

1:55 p.m. - 2:25 p.m.  J19  Status of the Expert Working Group on Human Factors in Handwriting Examinations  
Thomas W. Vastrick, BS*

2:25 p.m. - 2:55 p.m.  J20  Critics Say the Darndest Things!  
Jan S. Kelly, BA*

2:55 p.m. - 3:10 p.m.  Closing Remarks

*Presenting Author
**Wednesday**

**Toxicology Section Awardees Recognition (by invitation only)**

6:30 p.m. - 7:30 p.m. Supported by: Randox Toxicology, Ltd.

**Poster Session**

**Moderator:** Sumandeep Rana, PhD
Redwood Toxicology Laboratory
Santa Rosa, CA

**Co-Moderator:** Sabra B. Botch-Jones, MS, MA
Boston University School of Medicine
Biomedical Forensic Sciences
Boston, MA

7:30 p.m. - 9:00 p.m. 

**K1** Driving Under the Influence of 5-MAPB: A Case Report
Brittany Thomas, MFS*; Lisa Noble, BS; Brianna Peterson, PhD; Fiona J. Couper, PhD

**K2** Incidence and Trends of Driving Under the Influence (DUI) of Zolpidem: A Retrospective Study of DUI Cases From 2001 to 2014
Monica Jacobs*; Lisa J. Reidy, PhD

**K3** Retrospective of Phencyclidine (PCP) Incidence in Cleveland, Ohio, in Driving Under the Influence of Drugs (DUID) and Homicide Cases
Katherine Turner*; Eric S. Lavins, BS; Rindi N. Rico, BS; Claire Kaspar-Naso, BS; Harold E. Schueler, PhD; Paula Wallace, BA; Thomas P. Gilson, MD

**K4** Patterns of Drugs and Poisons on Criminal Cases in Southeastern Korea (Busan, Ulsan, and Gyeongsangnam-Do) for 2014
Eunmi Kim, PhD*; Hongil Ha; Park Yonghoon; Hee-Sun Chung, PhD

**K5** Case Report: Detection of 25C-NBOMe in Three Related Cases
John J. Kristofic, BS; Jeffrey D. Chmiel, MS; George F. Jackson, PhD*; Erin Karschner, PhD; Eric T. Shimomura, PhD; Shawn P. Vorce, BS; Justin Holler, MS; Stephen L. Robinson, MD; Thomas Z. Bosy, PhD

Joseph A. Cox, MS*; Naga Venkata Naidu, PhD; Ernest D. Lykissa, PhD

**K7** The Rapid Identification of Synthetic Hallucinogens 25I-NBOMe and 2C-B Using DART*-MS
Joseph Stone, BS*; Justin L. Polis, BS; Michelle R. Peace, PhD; Alphonse Polis, PhD

*Presenting Author
**TOXICOLOGY**

7:30 p.m. - 9:00 p.m.  **K8** Fragmentation Pathways and Structural Characterization of Synthetic Cathinones Using Electrospray Ionization (ESI) and High Resolution Mass Spectrometry
Lindsay Glicksberg*; Kelsie Bryand, MS; Sarah Kerrigan, PhD

7:30 p.m. - 9:00 p.m.  **K9** Development and Validation of a Confirmatory Method for Six Novel Psychoactive Substances (NPS) in Whole Blood Using Ultra Performance Liquid Chromatography/Tandem Mass Spectrometry (UPLC/MS/MS)
Melissa Friscia, MSFS*; Amanda L.A. Mohr, MSFS; Francis X. Diamond, BS; Barry K. Logan, PhD

7:30 p.m. - 9:00 p.m.  **K10** The Application of Gold Nanoparticles for the Trace Detection of PINACAs in Urine by Surface Enhanced Raman Spectroscopy (SERS)
Thaddeus Mostowtt, MFS*; Bruce R. McCord, PhD

7:30 p.m. - 9:00 p.m.  **K11** Forensic Medical Evaluation of Fatalities Resulting From Lighter Gas Inhalation
Erdinc Ozdemir*; Ibrahim Üzün; Muhammet Demir; Huseyin Es

7:30 p.m. - 9:00 p.m.  **K12** Domino Effect: A Singular Case of Six Fatal Hydrogen Sulfide (H2S) Poisonings in Quick Succession — Evaluation of the Sulfides Quantification Method
Nunziata Barbera, MD; Angelo Montana, MD; Francesca Indorato, MD*; Nadia Arbouche, SB; Guido Romano, SB

7:30 p.m. - 9:00 p.m.  **K13** An Extremely Rare Suicidal Intoxication With Sodium Azide: A Case Report
Francesco Randazzo*; Massimiliano Scida; Alessandro De Gaetano; Marco Motta; Antonella Profumo; Angelo Groppi; Luca Morini

7:30 p.m. - 9:00 p.m.  **K14** Epidemiological and Toxicological Traits in Methadone-Related Deaths — A Five-Year (2010-2014) Retrospective Study in Vojvodina, Serbia
Isidora Samojlik, MD, PhD*; Vesna Mijatovic, MD, PhD; Vladimir Knezovic; Stojan Petkovic, MD, PhD

7:30 p.m. - 9:00 p.m.  **K15** A Remarkable Case of Fatal Monocrotophos Poisoning by Cutaneous Absorption While Sleeping
Jatin Bodwal, MBBS, MD*; Seema Sarohe Sarohe, MeD

7:30 p.m. - 9:00 p.m.  **K16** Detection of Metal Phosphide Poisoning by Using Headspace/Gas Chromatography With Flame Ionization Detector (HS/GC/FID)
Sardar Ali Wattoo, MPhil; Muhammad Taimoor Chaudhary, MPhil*; Mohammad A. Tahir, PhD

7:30 p.m. - 9:00 p.m.  **K17** Vitreous Humor Chemistry of Heroin-Related Deaths as Compared With the General Population of Non-Drug-Related Deaths in the City and County of San Francisco From 2010 Through 2013
Glenda M. Easterling, BS*; Pavlos Karamanidis, BS; Eric A. Ingle, BA; Chinyere M. Williams, BS; Jeffery Hackett, PhD; Nikolas P. Lemos, PhD

7:30 p.m. - 9:00 p.m.  **K18** A European Rave Drug (Prolintane) Fatality in Phoenix, Arizona
Whitney Brown, BS*; Ian Duffy, BS; Norman A. Wade, MS

*Presenting Author
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<td>7:30 p.m. - 9:00 p.m.</td>
<td>K19</td>
<td>Dangers of Carbon Monoxide (CO) Generated From Small Internal Combustion Engines</td>
<td>Sandra Bishop-Freeman, PhD*; Marc Feaster, BS*; Franklin Pippen, BS; Ruth E. Winecker, PhD</td>
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<tr>
<td>7:30 p.m. - 9:00 p.m.</td>
<td>K20</td>
<td>A Retrospective Analysis of Deaths Due to Carbon Monoxide (CO) Poisoning Reported at a Tertiary Care Center in New Delhi, India, From January 2010 to January 2015</td>
<td>Shivani Dhaka, MBBS*; Sudhir Kumar Gupta, MD; Chittaranjan Behera, MD; Rajanikanta Swain, MD</td>
</tr>
<tr>
<td>7:30 p.m. - 9:00 p.m.</td>
<td>K21</td>
<td>The Analysis of Benzodiazepines in Dried Blood Spots (DBS) Using Liquid Chromatographic/Tandem Mass Spectrometry (LC/MS/MS)</td>
<td>Andrea L. Jones, BS*; Thomas A. Brettell, PhD</td>
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<td>7:30 p.m. - 9:00 p.m.</td>
<td>K22</td>
<td>Detecting Ketamine in the Hair of Buried Decomposed Rats Using Liquid Chromatographic/Tandem Mass Spectrometry (LC/MS/MS)</td>
<td>Christine Barrett, BS*; Kimberlee S. Moran, MSc; Gail Cooper, PhD; Karen S. Scott, PhD</td>
</tr>
<tr>
<td>7:30 p.m. - 9:00 p.m.</td>
<td>K23</td>
<td>Detection, Quantification, and Relative Distribution of Ketamine, Norketamine, and Dehydronorketamine in Skeletal Tissue of Dosed and Buried Rat Remains at Different Stages of Decomposition</td>
<td>Kimberlee S. Moran, MSc; James Watterson, PhD; Karen S. Scott, PhD; Erica N. Johnson, BA*</td>
</tr>
<tr>
<td>7:30 p.m. - 9:00 p.m.</td>
<td>K24</td>
<td>Comparison of Cocaine Concentrations in Heart Blood, Thigh Muscles, and Thigh Bones</td>
<td>Ken-ichiro Nakao*; Kazuhiko Kibayashi, MD*</td>
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<td>7:30 p.m. - 9:00 p.m.</td>
<td>K25</td>
<td>Methamphetamine, Amphetamine, and Norephedrine Levels in Dermestid Beetles From the Consumption of Dosed, Buried Rat Remains</td>
<td>Meaghan P. Drumm*; M. Lee Goff, PhD; Karen S. Scott, PhD; Kimberlee S. Moran, MSc</td>
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<td>7:30 p.m. - 9:00 p.m.</td>
<td>K26</td>
<td>Determination of Drug Distribution in Postmortem Tissues and Bones of Pigs Administered Drugs</td>
<td>Ismail E. Goren, BS; Nebile Gokce Daglioglu, PhD*; Mete K. Gulmen, PhD, MD; Pinar Efeoglu, MS</td>
</tr>
<tr>
<td>7:30 p.m. - 9:00 p.m.</td>
<td>K27</td>
<td>Detection of Ketamine by Analyzing Dermestid Beetles Feeding on Buried, Dosed Rats by Liquid Chromatography With Tandem Mass Spectrometry (LC/MS/MS)</td>
<td>Thomas J. Nolan, BA*; M. Lee Goff, PhD; Karen S. Scott, PhD; Kimberlee S. Moran, MSc</td>
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<td>7:30 p.m. - 9:00 p.m.</td>
<td>K28</td>
<td>Determination of Zolpidem and Glyphosate in Blood From Emergency Room (ER) Patients</td>
<td>Hee-Sun Chung, PhD*</td>
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<td>7:30 p.m. - 9:00 p.m.</td>
<td>K29</td>
<td>Quetiapine Stability as It Relates to the Time Frames of Case Studies</td>
<td>Mariah D. Carson, BS*; Jeffrey Walterscheid, PhD</td>
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<td>7:30 p.m. - 9:00 p.m.</td>
<td>K30</td>
<td>Mass Spectral Library for Phosphodiesterase Type 5 Inhibitors by Ultra High-Performance Liquid Chromatography/Quadrupole-Time-of-Flight/Mass Spectrometry (UHPLC/Q-TOF/MS)</td>
<td>Marissa J. Finkelstein, MS*; Mathew Hautman, BS; Lucas Marshall, MS; Rebecca Hetsley, PhD; Timothy A. Robert, PhD; David L. Black, PhD</td>
</tr>
<tr>
<td>7:30 p.m. - 9:00 p.m.</td>
<td>K31</td>
<td>Effective Extraction Strategies for Buprenorphine and Norbuprenorphine in Urine, Oral Fluid, and Whole Blood Using Cation Exchange Solid Phase Extraction (SPE) and Supported Liquid Extraction (SLE) Prior to High-Performance Liquid Chromatography With Tandem Mass Spectrometry (HPLC/MS/MS) Analysis</td>
<td>Victor Vandell, PhD*; Elena Gairloch, BS; Bruce R. Kempf, BS</td>
</tr>
<tr>
<td>7:30 p.m. - 9:00 p.m.</td>
<td>K32</td>
<td>Quantification of Buprenorphine and Norbuprenorphine in Postmortem Blood and Urine by Ultra High-Performance Liquid Chromatography/Tandem Mass Spectrometry (UHPLC/MS/MS)</td>
<td>Chu-An Yang, MS*; Hsiu-Chuan Liu, MS; Ray H. Liu, PhD; Dong-Liang Lin, PhD</td>
</tr>
<tr>
<td>7:30 p.m. - 9:00 p.m.</td>
<td>K33</td>
<td>The Analysis of N,N-Dimethyltryptamine (DMT) in Plasma by Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS)</td>
<td>David M. Andrenyak, PhD*; David E. Moody, PhD</td>
</tr>
<tr>
<td>7:30 p.m. - 9:00 p.m.</td>
<td>K34</td>
<td>Rapid Screening and Quantitation of Pesticides in Biological Samples Using Gas Chromatography (GC) With Mass Spectrometer (MS)</td>
<td>Muhammad Taimoor Chaudhary, MPhil*; Mohammad A. Tahir, PhD</td>
</tr>
<tr>
<td>7:30 p.m. - 9:00 p.m.</td>
<td>K35</td>
<td>Applicability of Biochip Array Technology to the Simultaneous Screening of Drugs Associated With Driving Under the Influence of Drugs (DUID)</td>
<td>Gemma Mullan, PhD; William Snelling, MS; Laura Keery, BSc; Joanne Darragh, PhD; Pankaj Sinha*, Maria Luz Rodriguez, PhD; R. Ivan McConnell, BSc; S. Peter Fitzgerald, PhD</td>
</tr>
<tr>
<td>7:30 p.m. - 9:00 p.m.</td>
<td>K36</td>
<td>Fragmentation Pathways and Structural Characterization of Mitragynine and Its Metabolite Using Electrospray Ionization (ESI) and High Resolution Mass Spectrometry</td>
<td>Stephanie Basiliere, BS*; Sarah Kerrigan, PhD; Kelsie Bryand, MS</td>
</tr>
<tr>
<td>7:30 p.m. - 9:00 p.m.</td>
<td>K37</td>
<td>In Vitro Metabolism Studies on P-Methoxyamphetamine (PMA) Using Human Liver Microsomes and Liquid Chromatography With Tandem Mass Spectrometry (LC/MS/MS) With Chemical Derivatization</td>
<td>Tanasiri Yokchue, MSc*; Robert A. Anderson, PhD</td>
</tr>
<tr>
<td>7:30 p.m. - 9:00 p.m.</td>
<td>K38</td>
<td>Analysis of Illicit Substances in Urine by Biocompatible Solid-Phase Microextraction (BioSPME) and Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS)</td>
<td>Kaitlyn E. Hess, BS*; Thomas A. Brettell, PhD</td>
</tr>
</tbody>
</table>

*Presenting Author
### Evaluation of the Components Within Electronic Cigarette Liquids and Drugs of Abuse Using Gas Chromatography/Mass Spectrometry (GC/MS) and Ultra-Fast Liquid Chromatography Tandem Mass Spectrometry (LC/MS/MS)

_Erin Walsh*; Robert D. Johnson, PhD; Peter Tracy, BS; Sabra R. Botch-Jones, MS, MA_

### Extraction of Selected Barbiturates, Primidone, and Phenytoin From Blood Using Supported Liquid Extraction Columns With Gas Chromatography/Mass Spectrometry (GC/MS) Analysis

_Gregory A. Priebe, MS*; Brent Dawson, PhD; Lister M. Macharia, MBA; Laureen Marinetti, PhD_

### FAST Analysis of 6-Monoacetyl Morphine (6-MAM) and Acetylcocodeine (AC) in Urine of Opiate-Positive Drugs and Driving Cases

_Alfred T. Elian, MS*; Jeffery Hackett, PhD*

### Analysis of Opioids in Urine Specimens by Solid Phase Extraction (SPE) and Ultra Performance Liquid Chromatography/Tandem Mass Spectrometry (UPLC/MS/MS)

_Melissa A. Johnson, BA*; Chinyere M. Williams, BS; Jeffery Hackett, PhD; Nikolas P. Lemos, PhD_

### Comparison of Blood Concentrations for Commonly Encountered Drugs in Postmortem and Human Performance Forensic Toxicology Cases in the City and County of San Francisco

_Constantine Konstantakis, BA*; Tamy Chan; Jeffery Hackett, PhD; Nikolas P. Lemos, PhD_

## Thursday

### Special Session: Driving Under the Influence of Drugs — Synthetic Cannabinoids

#### Moderator: Amy Miles, BS  
_Madison, WI_

#### Co-Moderator: David M. Benjamin, PhD  
_Chestnut Hill, MA_

### Synthetic Cannabinoids in Drivers: Clinical and Psychophysical Indications of Intoxication

_Kayla M. Neuman, MS*_

### AB-CHMINACA, AB-PINACA, XLR-11, and UR-144 and Driver Behavior in Suspected Impaired Driving Cases in Which a Drug Recognition Expert (DRE) Exam Was Performed

_Brittany Thomas, MFS*; Brianna Peterson, PhD; Fiona J. Couper, PhD_

### XLR-11 and Impaired Driving — Case Reports

_Sherri L. Kacinko, PhD*; Barry K. Logan, PhD_
9:30 a.m. - 9:50 a.m. K47 Confirmation of Synthetic Cannabinoids in Driving Under the Influence (DUI) and Sexual Assault (SA) Cases by Liquid Chromatography With Tandem Mass Spectrometry (LC/MS/MS)
Joshua Seither, MS*; Lisa J. Reidy, PhD

9:50 a.m. - 10:10 a.m. K48 Indazole-Carboxamide (NACA) Series Synthetic Cannabinoids and Driving Impairment
Sherri L. Kacinko, PhD; Barry K. Logan, PhD*

10:10 a.m. - 10:30 a.m. Break
Supported by: Immunalysis Corporation

Impaired Driving

Moderator: Amy Miles, BS
Madison, WI

Co-Moderator: Robert D. Johnson, PhD
Tarrant County MEO
Fort Worth, TX

10:30 a.m. - 10:45 a.m. K49 Aligning With the National Safety Council’s Recommendations: Redesigning the Enzyme-Linked Immuno-Sorbent Assay (ELISA) Screen Testing Scope and Improving Sensitivity for Driving Under the Influence of Drugs (DUID) Investigation Cases
Ayako Chan-Hosokawa, MS*

10:45 a.m. - 11:00 a.m. K50 Statistical Assessment of Toxicology Cases Submitted to the Las Vegas Metropolitan Police Department (LVMPD) From 2000 Through 2014
Michael P. Stypa, MS*; Denise K. Heineman, BS; Darby A. Lanz, MSFS; Jennifer O. Rattanaprasit, MS

11:00 a.m. - 11:15 a.m. K51 Zolpidem Concentrations Found in 644 Blood Samples Submitted for Driving Under the Influence of Drugs (DUID) Analysis
Lee M. Blum, PhD; Laura M. Labay, PhD*

11:15 a.m. - 11:30 a.m. K52 Methamphetamine and Amphetamine in Suspected Driving Under the Influence (DUI) Cases in the City and County of San Francisco: A Six-Year Review
Mariya Mayevskaya, BA; Justin A. Volk; Jonas E. Knight, MS; Pavlos Karamanidis, BS; Glenda M. Easterling, BS; Chinyere M. Williams, BS; Jeffery Hackett, PhD; Nikolas P. Lemos, PhD; Eric A. Ingle, BA*

11:30 a.m. - 12:00 p.m. K53 Blood Cannabinoid Pharmacokinetics in Frequent Cannabis Smokers After Controlled Smoked, Vaporized, and Oral Cannabis Administration: Markers of Recent Cannabis Intake
Matthew N. Newmeyer, BS*; Karl B. Scheidweiler, PhD; Allan J. Barnes, BS; Agnes O. Coffay, MD; Osama A. Abulseoud, MD; Marilyn A. Huestis, PhD

11:45 a.m. - 12:00 p.m. K54 Neurocognitive Performance in Occasional and Frequent Smokers Following Controlled Smoked, Vaporized, and Oral Cannabis Administration
Madeleine J. Swortwood, PhD; Matthew N. Newmeyer, BS; Agnes O. Coffay, MD; Osama A. Abulseoud, MD; Marilyn A. Huestis, PhD*
TOXICOLOGY
Las Vegas
2016

12:00 p.m. - 1:00 p.m. Lunch

Annual Lectureship in Toxicology

Moderator: Marilyn A. Huestis, PhD
Chemistry & Drug Metabolism
Intramural Research, NIDA, NIH
Baltimore, MD

Co-Moderator: Mindy Hair
Abington, PA

1:00 p.m. - 2:00 p.m.
Performance-Enhancing Drugs: Not Only a Sports Problem
Daniel Eichner, PhD*

2:00 p.m. - 2:15 p.m.
Break
Supported by: Waters® Corporation

Methodology

Moderator: Michelle R. Peace, PhD
VA Commonwealth University
Richmond, VA

Co-Moderator: Christine Barrett, BS
Wyncote, PA

2:15 p.m. - 2:30 p.m. K55
Comparison of the Randox® Evidence Drugs of Abuse Custom Array VIII Biochip With Accurate Mass Screening III: Meprobamate (MPB), Methadone (MTD), Tramadol (TRM), and Zolpidem (ZPD)
Daniel S. Isenschmid, PhD*; Denice M. Teem, BS; Samantha Beauchamp, BA; Geoffrey French, BS; Lindsay Rohrbacher, BS; Mark Vandervest, BA; Jennifer S. Wilson, BS

2:30 p.m. - 2:45 p.m. K56
Ethylone: Development and Validation of a Quantitative Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS) Method With Analytical Confirmation in Toxicology Casework
Stephanie Kumor, MA*; Joseph Homan, MS; Annette Ervin, BS; Donna M. Papsun, MS; Barry K. Logan, PhD

2:45 p.m. - 3:00 p.m. K57
Paper Spray Mass Spectrometry for Rapid Drug Screening From Dried Blood Spots
Rachel Potter*; Nick Manicke

3:00 p.m. - 3:15 p.m. K58
Application of Mixed-Mode Ultra High-Performance Liquid Chromatography to the Analysis of Drugs in Urine
Ira S. Lurie, PhD*; Cassandra Lee Clyde, MFS; Samantha A. Blake, MFS; Stacey L. Obrien, BS; Ihuoma A. Igwilo, MBBS

3:15 p.m. - 3:30 p.m.
Break
Supported by: Agilent® Technologies
Lipomed, Inc.
Designer Drugs

Moderator: Gregory A. Priebe, MS  
Redwood Toxicology Laboratory  
Santa Rosa, CA

Co-Moderator: David M. Andrenyak, PhD  
University of Utah  
Center for Human Toxicology  
Salt Lake City, UT

3:30 p.m. - 3:45 p.m. K59  Development and Validation of Two Methods for the Analysis of Synthetic Cannabinoids in Whole Blood  
Marykathryn Tynon, MSFS*; Joseph Homan, MS; Sherri L. Kacinko, PhD; Barry K. Logan, PhD

3:45 p.m. - 4:00 p.m. K60  A Two-Year Comparative Analysis of Novel Psychoactive Substances (NPS) Detected in Blood, Urine, and/or Oral Fluid in Attendees at an Electronic Dance Music (EDM) Festival  
Amanda L.A. Mohr, MSFS*; Jillian K. Yeakel, MS; Melissa Friscia, MSFS; Francis X. Diamond, BS; Barry K. Logan, PhD

4:00 p.m. - 4:15 p.m. K61  Metabolic Profile Determination of NBOMe Compounds Using Human Liver Microsomes  
Keith-Dane H. Temporal, BS*; Melissa Friscia, MSFS; Karen S. Scott, PhD; Amanda L.A. Mohr, MSFS; Barry K. Logan, PhD

4:15 p.m. - 4:30 p.m. K62  Case Report of AB-FUBINACA Exposure With Chemical and Toxicological Confirmation  
David Buzby, BS*; Donna M. Papsun, MS; Mark Nyvean, MD; Barry K. Logan, PhD

4:30 p.m. - 4:45 p.m. K63  Cannabinoid Receptor Bioassay: A Characterization of UR-144, XLR-11, and Their Metabolites and Degradants  
Kelsey Longe, BS*; Amy B. Cadwallader, PhD; Darcie Wallace-Duckworth, PhD; Pamela J. Staton, PhD

4:45 p.m. - 5:00 p.m. K64  Analysis for Synthetic Cannabinoids in Oral Fluid Samples Obtained From a Music Festival Cohort  
Marykathryn Tynon, MSFS*; Joseph Homan, MS; Sherri L. Kacinko, PhD; Barry K. Logan, PhD

Toxicology Open Forum

Moderator: H. Chip Walls, BS  
Forensic, Analytical & Clinical Toxicology Lab  
Miami, FL

Co-Moderator: Nikolas P. Lemos, PhD  
OCME, Forensic Lab Division  
San Francisco, CA

7:00 p.m. - 9:00 p.m.  Supported by: Cerilliant® Corporation  
Randox Toxicology, Ltd.
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<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Presenters</th>
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<tbody>
<tr>
<td>8:30 a.m.</td>
<td>K65</td>
<td>Postmortem Findings in Deaths Related to Synthetic Cannabinoids</td>
<td>Robert Kronstrand, PhD*</td>
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<tr>
<td>8:45 a.m.</td>
<td>H71</td>
<td>Insights Into the Postmortem Redistribution (PMR) of Diazepam, Methadone, and Morphine: Sampling Site, Time, and Method Matter</td>
<td>Eric Lemaire, MD*; Carl J. Schmidt, MD</td>
</tr>
<tr>
<td>9:00 a.m.</td>
<td>K66</td>
<td>Report of Increasing Acetyl Fentanyl Deaths in Allegheny County, Pennsylvania</td>
<td>Todd M. Luckasevic, DO; Jennifer K. Janssen, MS; Abdulrezak M. Shakir, MD; Karl E. Williams, MD; Jessica B. Dwyer, MD*</td>
</tr>
<tr>
<td>9:15 a.m.</td>
<td>H72</td>
<td>Postmortem Distribution and Detection of Butyryl Fentanyl</td>
<td>Meghan S. Kessler, DO*; Rebecca Jufer Phipps, PhD; Meghan A. Mulligan, MS; Barry S. Levine, PhD; Russell T. Alexander, MD; Mary G. Ripple, MD; David R. Fowler, MD</td>
</tr>
<tr>
<td>9:30 a.m.</td>
<td>K67</td>
<td>The Real Heroin in South Florida: The Detection of a Fentanyl Analog in Postmortem Specimens Using Liquid Chromatography (LC) - Ion Trap Tandem Mass Spectrometry (MS/MS)</td>
<td>Elisa N. Shoff, BS*; Diane Boland, PhD</td>
</tr>
<tr>
<td>9:45 a.m.</td>
<td>H73</td>
<td>Buprenorphine Prevalence in the Office of the Chief Medical Examiner (OCME) Cases Positive for Drugs of Abuse: To Screen or Not to Screen?</td>
<td>Diana Geli*; Rebecca Jufer Phipps, PhD; Meghan A. Mulligan, MS; Mary G. Ripple, MD; David R. Fowler, MD</td>
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<tr>
<td>10:00 a.m.</td>
<td>Break</td>
<td>Supporting: Randox Toxicology, Ltd.</td>
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*Presenting Author
Multidisciplinary Session: Pathology/Biology Session I/Toxicology

Moderator: Dustin Tate Yeatman, MS
West Palm Beach, FL

Co-Moderator: Sarah Meyers, MD
University of North Dakota - School of Medicine
Dept of Pathology
Grand Forks, ND

10:30 a.m. - 10:45 a.m. K68 Blood Clonazepam and 7-Aminoclonazepam Trends in Postmortem and Driving Under the Influence of Drugs (DUlD) Cases
Lucas Marshall, MS*; Timothy A. Robert, PhD; David L. Black, PhD; Rebecca Heltsley, PhD

10:45 a.m. - 11:00 a.m. H74 Chi-Squared Automatic Interaction Detection (CHAID) Analysis as a Technique for Discerning Patterns of Drug Use in Postmortem Toxicology
Candace Savonen, BS; Carl J. Schmidt, MD*; Michael Bannon, PhD

11:00 a.m. - 11:15 a.m. K69 A Case of Death by Diclazepam: Lorazepam in Disguise
Fessessework Guale, DVM*; Warren C. Samms, PhD; Jeffrey Walterscheid, PhD; Dana L. Johnson

11:15 a.m. - 11:30 a.m. H75 Deaths Associated With Synthetic Cannabinoids in Mississippi
Mark M. LeVaughn, MD*; Brent Davis, MD*; Lisa Funte, MD; Thomas Dobbs, MD

11:30 a.m. - 11:45 a.m. K70 WITHDRAWN

11:45 a.m. - 12:00 p.m. H76 Using Enzyme-Multiplied Immunoassay Technique (EMIT) Analysis of Vitreous Humor to Identify Heroin Use at Autopsy
Brandt C. McCleskey*; C. Andrew Robinson, Jr., PhD; Daniel W. Dye, MD

12:00 p.m. - 1:00 p.m. Lunch

General Toxicology

Moderator: Denice M. Teem, BS
NMS Labs
Willow Grove, PA

Co-Moderator: Matthew N. Newmeyer, BS
Baltimore, MD

1:00 p.m. - 1:15 p.m. K71 A Crazy Mini Heroin Epidemic in Richmond, Virginia
Carl E. Wolf II, PhD*; Michelle Hieger, DO; Brandon K. Willis, DO; Alphonse Poklis, PhD

1:15 p.m. - 1:30 p.m. K72 Rise in Fentanyl Derivatives Acetyl and Butyryl Fentanyl Detection in Blood and Serum Coinciding With Rise in Opiate and Novel Psychoactive Substances (NPS) Use
David Buzby, BS*; Donna M. Papsun, MS; Daniel S. Isenschmid, PhD; Barry K. Logan, PhD

*Presenting Author
1:30 p.m. - 1:45 p.m.  **K73**  Fatal Methadone Intoxication in an Infant Listed as a Homicide  
*presenting author* Alessandro Bonsignore, MD, PhD*; Francesco Ventura, MD, PhD; Cristian Palmiere, MD

1:45 p.m. - 2:00 p.m.  **K74**  Case Report: Two Child Fatalities Due to Heroin/Fentanyl Exposure  
*presenting author* Rebecca T. DeRienz, MS*; Daniel Baker*; Rachel M. Barnett, BCJ; Jennifer M. Hogue, MS; Nancy E. Kelly; John A. Daniels, MD; Anahi Ortiz

2:00 p.m. - 2:15 p.m.  **Break**  
*Supported by:* Agilent® Technologies

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**Postmortem Pediatric Toxicology**

**Moderator:** Robert A. Middleberg, PhD  
NMS Labs  
Willow Grove, PA

**Co-Moderator:** Nikolas P. Lemos, PhD  
OCME, Forensic Lab Division  
San Francisco, CA

2:15 p.m. - 5:00 p.m.  **K75**  Postmortem Pediatric Forensic Toxicology  
*presenting author* Robert A. Middleberg, PhD; Nikolas P. Lemos, PhD; Tracey S. Corey, MD*; Alane Olson, MD*; Karen Cline-Parhamovich, DO*; Kenneth E. Ferslew, PhD*; Robert Kronstrand, PhD*
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<tr>
<td>8:00 p.m.</td>
<td>LW1</td>
<td>The Best Forensic Scientist You’ve Never Heard of: Wilmer Souder and the Early History of Forensic Science at the National Bureau of Standards</td>
<td>Kristen Frederick-Frost, PhD*; Robert M. Thompson, BS; John M. Butler, PhD*</td>
</tr>
<tr>
<td>8:20 p.m.</td>
<td>LW2</td>
<td>Giving Voice to a Serial Killer: Clinical Implications</td>
<td>Katherine Ramsland, PhD*</td>
</tr>
<tr>
<td>8:40 p.m.</td>
<td>LW3</td>
<td>Capital Punishment by Lethal Injection</td>
<td>David M. Benjamin, PhD*</td>
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<tr>
<td>9:00 p.m.</td>
<td>LW4</td>
<td>WITHDRAWN</td>
<td></td>
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<tr>
<td>9:20 p.m.</td>
<td>LW5</td>
<td>Small Town Forensics in the Land of Oz</td>
<td>Bryan R. Burnett, MS*</td>
</tr>
<tr>
<td>9:40 p.m.</td>
<td>LW6</td>
<td>Houdini on the Crime Scene: Debunking Psychic Sleuthing</td>
<td>Matteo Borrini, PhD*</td>
</tr>
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*Presenting Author
BRING YOUR OWN SLIDES (PowerPoint) BYOS.ppt

Wednesday Evening: 8:00 p.m. - 10:00 p.m.

In order to keep BYOS.ppt informal, fun, and informative for the large and diverse audience, here are a few things to keep in mind for the BYOS.ppt program at the 2016 AAFS Annual Meeting in Las Vegas, NV:

- To present at BYOS.ppt presentations must be in PowerPoint format. 35mm slides are not accepted.
- Proposals must be submitted on this form accompanied by a "6-slides per page" printout of the presentation and an electronic copy on CD or "flash" drive.
- BYOS is not intended as a forum to present scientific papers. It is designed as a means to present interesting information and/or unusual case(s) that may be educational and blended with humor.
- Speakers should plan on ten minutes in which to present their material.
- Material being presented in other parts of the AAFS scientific program will not be accepted at BYOS.ppt.
- Tables, charts, and graphs should be avoided, making every effort to use slides of scenes, bodily findings, and evidence.

This complete form, a "6-slide per page" printout, and the electronic presentation copy should be delivered to the on-site AAFS Staff Office by 4:00 p.m. on Wednesday, February 24, 2016. Presentations will be selected and scheduled based on perceived interest to the audience and in the order in which the completed submissions are received. This form and required printout are needed to organize the BYOS.ppt program and to allow appropriate allocation of continuing education credit. A BYOS.ppt Program Form also will be placed in each registrant’s meeting packet.

BYOS PROGRAM FORM

Name (include academic degree/s) _______________________________________________________________

Job title ________________________________________________________________

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AAFS Section Affiliation (if none, write "none")? __________________________________________

The presentation is being offered primarily to:

☐ Solicit input/advice on a challenging case
☐ Present interesting information or case(s) for educational purposes
☐ Entertainment

Presentation is:

☐ A single case
☐ A series of cases with a common topic
☐ Multiple cases with unrelated topics
☐ Other (please specify):

Briefly describe the material to be present _______________________________________________________

What are the major points to be emphasized? ____________________________________________________

How will the attendees benefit from this presentation? _____________________________________________

Is there financial interest in the material being discussed? ☐ No ☐ Yes (If yes, please describe) ___________________________________________________________

How much presentation time is required? _______ minutes How many PowerPoint slides will be shown? _______

Presenter’s local hotel ____________________________ Room # ______ Cell Phone # _____________________

The BYOS agenda, scheduled presentation times, and continuing education credit hours will be posted near the BYOS meeting room. If you have any questions, contact Salena Medina at (719) 636-1100, or at the on-site AAFS Staff Office.

AAFS STAFF USE ONLY: Date Received: _________________________ Time: _________________________
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Discloses no financial relationships with commercial entities.
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Napkin Forever (Discussion of Commercial Products or Services).
Kena Ilhe, BA - A24
Leica Microsystems (Discussion of Commercial Products or Services).

I

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National Institute of Justice (Grant Support).

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Agilent Technologies, Integrate DNA Technologies, Inc, Kapa
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Oak Ridge Institute for Science and Education, Federal Bureau
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GOM, VATECH America, Z Corporation (Discussion of
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National Science Foundation (Grant Support) - H122, H123
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ARCUS, Inc, Beemiller Manufacturing Facility, Forensic
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Software Corp., RStudio, Ruger & Co., Inc, SCCY Industries,
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William M. Bass Endowment — Forensic Anthropology Center-
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ASTM International (Discussion of Commercial Products or Services).
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National Forensic Service (Grant Support).
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Jantz, R.L./Ousley, S.D. (Discussion of Commercial Products or Services).
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ISTI – CNR, Robert McNeel & Associates, The University of Manchester, Wolfram Research, Inc (Discussion of Commercial Products or Services).
National Research Foundation of Korea and Global PhD Fellowship Program — National Research Foundation- The Ministry of Education, Science and Technology (Grant Support).
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United States Air Force Research Laboratory (Grant Support).

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Lawrence Livermore National Laboratory (Employee).
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Matrox Electronic Systems, Ltd, Quantum Composers, Inc (Discussion of Commercial Products or Services)
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Malvern Instruments, Ltd (Discussion of Commercial Products or Services) - B17
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National Institutes of Health, The R Foundation (Discussion of Commercial Products or Services).
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Winston-Salem State University (Employee and Grant Support).
Fabian Kanz, PhD - A56
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Hakan Kar, MS - J9
Grimed, Ltd (Discussion of Commercial Products or Services, Discussion of Unlabeled/Investigational Use of Product/Device, and Other Financial/Material Support).
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LaTrobe University, Skill-Task Training Assessment & Research, Inc - J14
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R Core Development Team, Joseph Hefner (Discussion of Commercial Products or Services).
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SPEware Corporation (Discussion of Commercial Products or Services).
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Applied Biosystems, EMD Millipore, QIAGEN, Inc (Discussion of Commercial Products or Services).
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Adobe Systems Incorporated (Discussion of Commercial Products or Services).
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- K24
Bayer AG (Discussion of Commercial Products or Services). - H45
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IBM Corporation, Materialise (Discussion of Commercial Products or Services). - A39
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National Institute of Justice (Grant Support).
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A214
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Applied Biosystems (Discussion of Commercial Products or Services). - B143, F28
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A8, A38
IrfanViewMATLAB (Discussion of Commercial Products or Services). - C20

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Glomics Incorporation (Discussion of Commercial Products or Services).

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   Discloses no financial relationships with commercial entities.
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   JEOL, Ltd (Discussion of Commercial Products or Services). University at Albany-SUNY Presidential Initiatives Fund Grand for Forensic Sciences and Cybersecurity (Grant Support).
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   Independent Forensics, Hologic (Discussion of Commercial Products or Services).
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   King County (Employee).
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   Discloses no financial relationships with commercial entities.
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Marcella Auxiliadora de Melo Lucena, MS - B158
   CBC Brazil, Glock, Inc (Discussion of Commercial Products or Services).
Ira S. Lurie, PhD
   Waters Corporation (Discussion of Commercial Products or Services). - B127
   Perkin Elmer, Inc (Discussion of Commercial Products or Services). - K58
   National Institute of Justice, Perkin Elmer, Inc, George Washington University (Grant Support). - B127
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   Discloses no financial relationships with commercial entities.
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3D Systems, Inc, Skeletal Biology and Forensic Anthropology Research Laboratory (Discussion of Commercial Products or Services). - L2
Queensland University of Technology and Australian Army (Employee). - E23
Queensland University of Technology and Queensland Police Service (Employee). - L2
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University of Nevada — Reno Graduate Student Research and Travel Grant (Grant Support).
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Solution Technologies, Inc (Discussion of Commercial Products or Services).
Susan Makar, MA - W1
Thomson Reuters (Discussion of Commercial Products or Services).
National Institute of Standards and Technology (Employee).
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Thomson Reuters (Discussion of Commercial Products or Services).
National Institute of Standards and Technology (Employee).
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Erie County Medical Examiner’s Office (Employee).
Sergey Mamedov, PhD - B84
Discloses no financial relationships with commercial entities.
Holland Maness, DMD - G26
Discloses no financial relationships with commercial entities.
Michael Marciano, MS - B99
Life Technologies Corporation, Promega Corporation (Discussion of Commercial Products or Services).
National Institute of Justice (Grant Support).
Ioan Marginean, PhD - B159
Perkin Elmer, Inc (Discussion of Commercial Products or Services and Discussion of Unlabeled/Investigational Use of Product/Device).
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Charla Marshall, PhD
New England BioLabs (Discussion of Commercial Products or Services). - B179
Armed Forces DNA Identification Laboratory (Employee). - B179, W23
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Discloses no financial relationships with commercial entities.
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Luca Massaro, MD - E85, F1, I31
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Discloses no financial relationships with commercial entities.
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Higher Education Personnel Improvement Coordination (Grant Support).
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Tarrant County Medical Examiner’s Office (Employee).
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United States Air Force Office of the Armed Forces Medical Examiner (Employee). - H143
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Practical Homicide Investigation (Discussion of Commercial Products or Services).
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Texas State University (Other Financial/Material Support).
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QIAGEN, Inc, Thermo Fisher Scientific, Inc (Discussion of Commercial Products or Services).
BLAST (Basic Local Alignment Search Tool), Geneious Pro Software (Discussion of Unlabeled/Investigational Use of Product/Device).
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Grady Early Grant (Grant Support).
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FINANCIAL DISCLOSURE

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Scribner (Discussion of Commercial Products or Services).
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R.J. Reynolds Tobacco Company (Discussion of Commercial Products or Services).

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Pfizer, Inc, SCIEX, Thermo Fisher Scientific, Inc (Discussion of Commercial Products or Services). - B129N
George Washington University (Employee). - W20
National Science Foundation (Grant Support). - B123, B129

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ALFRED Database, FROG-kb Database (Discussion of Commercial Products or Services). - B141
National Institute of Justice (Grant Support). - B141
National Forensic Laboratory Information System (Other Financial/Material Support). - B29

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National Institute of Justice (Grant Support). - B185

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Maryland Responds Medical Reserve Corps to the Office of the
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GoPro, Inc (Discussion of Commercial Products or Services).
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Aribex, DENTSPLY International, Patterson Companies, Inc
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National Institutes of Health, IRP, National Institute on Drug
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Applied Biosystems, ZyGem Corporation, Ltd (Discussion of
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Copan Flock Technologies, Copan Italia, Life Technologies
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Noras MRI Products GmbH, Siemens Corporation (Discussion of
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FINANCIAL DISCLOSURE

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- H57, K11
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- B100
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Louis Stokes Alliance for Minority Participation (Grant Support).
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Argos GPS, ESRI, Movebank (Discussion of Commercial Products or Services).
National Science Foundation, Louisiana State University (Grant Support).
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Cessna Aircraft Company, General Dynamics Corporation (Discussion of Commercial Products or Services).
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CyberMed, Inc (Discussion of Commercial Products or Services).
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EMD Millipore Corporation, Life Technologies Corporation, Promega Corporation, QIAGEN, Inc (Discussion of Commercial Products or Services).
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Jantz R.L./Ousley, S.D. (Discussion of Commercial Products or Services).
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Thermo Fisher Scientific, Inc (Discussion of Commercial Products or Services). - B182, E63
Promega Corporation (Discussion of Commercial Products or Services). - E63
National Institute of Justice (Grant Support). - B182
George Washington University (Employee). - E63
Justin L. Poklis, BS - W14
JEOL, Ltd, (Discussion of Commercial Products or Services).
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Electronic Cigarettes (Discussion of Unlabeled/Investigational Use of Product/Device).
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  - B8
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  (Discussion of Commercial Products or Services). - B191
  TU Graduate Student Association (Grant Support). - B8, B191

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  Agilent Technologies, Beacon Technologies, Inc, Phenomenex, Inc
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  Penguin Random House, FOX Broadcasting Company (Discussion
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FINANCIAL DISCLOSURE

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FINANCIAL DISCLOSURE

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QIAGEN, Inc (Discussion of Commercial Products or Services) - B145
Virginia Commonwealth University (Grant Support) - B145
Free Software Foundation, Inc, Thermo Fisher Scientific, Inc
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- C23
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Financial Disclosure 255
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National Institute of Standards and Technology (Employee). - BS3
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JEOL, Ltd, (Discussion of Commercial Products or Services).  
National Institute on Health Center for Drug Abuse (Grant Support).
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Sirchie Finger Print Laboratories (Discussion of Commercial Products or Services). - B85
National Institute of Justice (Grant Support). - B85
Stoney Forensic, Inc (Employee). - F38
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FINANCIAL DISCLOSURE

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- K1, K45

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- B173

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Future Technologies, Inc, InnoGenomics Technologies, LLC (Discussion of Commercial Products or Services).
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