



DIGITAL & MULTIMEDIA SCIENCES



Thursday

Computer & Media Forensics

*Moderator: Walter T. Hart, MBA
Department of Homeland Security
San Francisco, CA*

- 8:30 a.m. - 8:50 a.m. **B1** **Evidence From Explosives Correlated With Digital Evidence Examinations**
*Carrie M. Whitcomb, MSFS**
- 8:50 a.m. - 9:05 a.m. **B2** **Standardization of Digital Forensic Research Techniques**
*Carey R. Murphey, PhD**
- 9:05 a.m. - 9:20 a.m. **B3** **Understanding the Costs of Conducting Computer Forensic Examinations**
*Douglas G. Elrick, BA**
- 9:20 a.m. - 10:05 a.m. **B4** **A Case Study: Overcoming Anti-Forensic Methods Used on External Storage Drives**
Michael Andrew; Steven Hailey*
- 10:05 a.m. - 10:20 a.m. **Break**

*Moderator: Rhesa G. Gilliland, MS
Drug Enforcement Administration
Lorton, VA*

- 10:20 a.m. - 10:35 a.m. **B5** **A Virtual Architecture for Digital Forensic Tool Validation**
J. Philip Craiger, PhD; Chris Marberry, BS; Greg Dorn, BS; Scott Conrad, BS*
- 10:35 a.m. - 11:05 a.m. **B6** **Smart Unpacking: Methods for Characterization and Extraction of Embedded Content**
*Benjamin Long, BBA**
- 11:05 a.m. - 11:20 a.m. **B7** **Fixed Size and Variable Size Block Hashes for File Identification**
*Douglas R. White, MS**
- 11:20 a.m. - 11:50 a.m. **B8** **Computer Forensic Tool Testing Strategies**
*James R. Lyle, PhD**

*Moderator: John J. O'Brien, MA
United States Army
Fort Meade, MD*

- 1:30 p.m. - 2:15 p.m. **B9** **Applying Advanced Search Techniques to Digital Forensics**
*Brian D. Carrier, PhD**



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- 2:15 p.m. - 2:30 p.m. **B10** **An Odyssey Into Lesser Known Regions of Embedded Metadata in Microsoft File Formats**
*Eoghan Casey, MA**
- 2:30 p.m. - 2:45 p.m. **B11** **The Impact of Multicore CPUs and Graphics Processing Units (GPUs) on Digital Forensics Tool Design**
*Golden G. Richard III, PhD**
- 2:45 p.m. - 3:00 p.m. **B12** **Spam Image Clustering: A Novel Approach in Revealing Common Sources of Spam**
Chengcui Zhang, PhD; Wei-Bang Chen, MS; Richa Tiwari, MS; Xin Chen, PhD; Gary Warner, BS*
- 3:00 p.m. - 3:15 p.m. **Break**

Moderator: *Marla E. Carroll, BS*
Forensic Video & Audio Associates, Inc.
Plantation, FL

- 3:15 p.m. - 3:40 p.m. **B13** **Apple iPods® – Recent Research, Analysis, and a Cautionary Tale**
*Jessica Reust Smith, MFS**
- 3:40 p.m. - 4:00 p.m. **B14** **Using Computational Forensic Linguistics to Screen Pedophilic Communications**
Carole E. Chaski, PhD; Raye Croghan, BS*
- 4:00 p.m. - 4:15 p.m. **B15** **Application of Natural Language Processing to the Digital Forensic Process**
Mark Pollitt, MS; Anne Diekema, PhD*
- 4:15 p.m. - 4:45 p.m. **B16** **Forensic Analysis of Spector Pro®**
*Don L. Lewis**

Friday

Audio, Video, and Image Forensics

Moderator: *Kenneth Marr, MS*
Federal Bureau of Investigation
Quantico, VA

- 8:30 a.m. - 9:00 a.m. **B17** **Testing of Image Quality of In-Car Video Systems**
Herbert L. Blitzer, MBA; Jerry Jeffers, MS*
- 9:00 a.m. - 9:30 a.m. **B18** **A Subjective Video Quality Test Method for the Assessment of Recorded Surveillance Video**
*Mark A. McFarland, ME**
- 9:30 a.m. - 9:50 a.m. **B19** **Examining Photo Response Non-Uniformity for the Comparison of Cameras**
Zeno J. Geradts, PhD; Maarten van der Mark, BS; Wiger Van Houten, MS*



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9:50 a.m. - 10:10 a.m. **B20** **Determination of Time of Recording With Electric Network Frequency (ENF)**
*Maarten Huijbrechtse, BS; Zeno J. Geradts, PhD**

10:10 a.m. - 10:25 a.m. **Break**

*Moderator: Douglas S. Lacey, BS
DL Technology, LLC
Fredericksburg, VA*

10:25 a.m. - 10:40 a.m. **B21** **Car Speed From CCTV Images**
Bart Hoogeboom, MS; Ivo Alberink, PhD*

10:40 a.m. - 11:00 a.m. **B22** **Dimensional Analysis of Video Footage**
*Gerda Edelman; Jurrien Bijhold, PhD**

11:00 a.m. - 11:25 a.m. **B23** **Quantifying Measurement Variation and Evidential Value When Performing Body Height Estimations in Digital Images**
Ivo Alberink, PhD; Bart Hoogeboom, MS; Annabel Bolck, PhD*

11:25 a.m. - 11:40 a.m. **B24** **Face Recognition on CCTV Material Using a Biometric System: Limitations and Opportunities**
*Arnout C. Ruijrok, PhD**

11:40 a.m. - 12:00 p.m. **B25** **A Morphological Classification of Eyebrows to Aid in Forensic Facial Comparisons**
Matthew E. Graves, MFS; Carl R. Kriigel, BS; Cristy B. Pruitt, MFS*

12:00 p.m. - 12:15 p.m. **B26** **Future Tools for Forensic Digital Audio Analysis**
Kenneth Marr, MS; David J. Snyder III, BS*; William L. Hinton, BS**

12:15 p.m. - 12:30 p.m. **Discussion**

Poster Session

11:00 a.m. - 1:30 p.m. **B27** **The Virtual Digital Forensics Laboratory**
*Mark R. McCoy, EdD**

11:00 a.m. - 1:30 p.m. **B28** **The Persistence of Image Files on Digital Camera Memory Cards**
*Brian J. Gestring, MS**