

DRAFT AGENDA

Measurement Science & Standards in Forensic Firearms Analysis

July 10-11, 2012

National Institute of Standards and Technology (NIST), 100 Bureau Drive, Gaithersburg, MD 20899
Room: Building 101 – Portrait Room

Webcast Information

Conference Web Link: go.usa.gov/wZu

Twitter Hashtag: #NISTForensics

July 10, 2012

8:30 AM – 9:00 AM

Arrive at NIST Lecture Room B

- Coffee in NIST Cafeteria

9:00 AM – 9:30 AM

Welcoming Remarks & Framing the Issue

- NIST Opening Remarks - Susan Ballou, Program Manager, NIST, Law Enforcement Standards Office, Forensic Science Program
- Scientific Working Group for Firearms and Toolmarks (SWGUN) Opening Remarks - Doug Murphy, Federal Bureau of Investigation (FBI) Laboratory
- Association of Firearm & Tool Mark Examiners (AFTE) Opening Remarks - Dan Gunnell, Illinois State Police (ISP)

9:30 AM – 10:00 AM

Keynote Address – 40 Years of Firearms Analysis & a Glimpse of the Future

- John Murdock, Private Examiner

10:00 AM – 11:00 AM

Current State of Firearms Analysis: Review of the Field including Strengths & Limitations

- Current Technology Used in the Laboratory – Bill Demuth (ISP)
- Human Performance in Firearms Analysis – Doug Murphy (FBI)
- Discussion

11:00 AM – 11:15 AM

BREAK

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- 11:15 AM – 12:00 PM** **Manufacturing Processes and Materials**
- Manufacturing and Machining – Alkan Donmez (NIST)
 - Discussion
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- 12:00 PM – 12:30 PM** **Introduction to Measurement Science Advances in Firearms Analysis**
- Optical Methods of Surface Measurement – Ted Vorburger (NIST)
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12:30 PM – 1:30 PM **LUNCH (NIST Cafeteria - on your own)**

- 1:30 PM – 3:15 PM** **Measurement Science Advances in Firearms Analysis**
- Confocal Microscopy – David Howitt (UC Davis)
 - Focus Variation – Brad Etter (Alicona)
 - Contact Systems - Marcus Brubaker (University of Toronto)
 - Infrared for Toolmark Identification - Francine Prokoski (Infrared Identification Inc.)
 - Discussion
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3:15 PM – 3:30 PM **BREAK**

- 3:30 PM – 5:00 PM** **Advances in Image and Statistical Analysis in Firearms Analysis**
- Comparison and Interpretation of Impressed Marks Left by a Firearm on Cartridge Cases – Christophe Champod (University of Lausanne)
 - Consecutively Matching Stria (CMS) – John Murdock (Private)
 - 3D Surface to 2D Barcode - David Howitt (UC Davis)
 - Confocal Analysis - Robert Thompson (NIST)
 - Discussion
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Please note that all times are in Eastern Time

July 11, 2012

- 8:30 AM – 9:00 AM** **Arrive at NIST Lecture Room B**
- Coffee in NIST Cafeteria
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- 9:00 AM – 10:15 AM** **Advances in Image and Statistical Analysis in Firearms Analysis – cont.**
- Striation Density –Wei Chu (Intelligent Automation)
 - Contiguous Matching Cells -- John Song (NIST)
 - Principal Component Analysis and other methods – Nick Petraco (John Jay College of Criminal Justice and The Graduate Center)
 - Discussion
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- 10:15 AM – 11:15 AM** **Measurement Uncertainty & Certainty of Conclusions**
- Uncertainty in Firearms Presentation - James Yen (NIST) ,
 - Presentation on Conclusion Statements and How to Introduce Evidence (DNA Example) – Mike Ambrosino (Special Assistant to the US Attorney of DC)
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11:15 AM – 11:30 AM **BREAK**

- 11:30 PM – 12:30 PM** **Industry Panel on Future of the Discipline: Automated Ballistic Search & Identification Systems**
- EVOfinder, - Sergey Perunov (via Teleconference)
 - SBC - Yury Iiyasov (via Teleconference)
 - Forensic Technologies Incorporated (FTI) – Alain Beauchamp
 - Infrared Identification Inc. – Francine Prokoski
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12:30 PM – 1:30 PM **LUNCH (NIST Cafeteria - on your own)**

- 1:30 PM – 2:30 PM** **Role of Standards and Validation to Extend Quantitative Measurement into Practice**
- Physical Standards, Calibrations and Traceability – Brian Renegar (NIST)
 - Adopting New Technology Within an Existing Quality Assurance System – Erich Smith (FBI)
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2:30 PM – 2:45 PM **BREAK**

- 2:45 PM – 4:45 PM** **FACILITATED DISCUSSION:**
What does the future state of firearms analysis look like?
What are the barriers to implementing the future state?
Design a roadmap to get there.
- *Facilitator:* Dr. James Hamby
 - *Knowledge Capture:* John Paul Jones & SAIC
 - Discussion Areas include: NAS Statements, Technology, Risk, Research, Validation, Policy, Standards, Legal Admissibility, Cost, etc.
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- 4:45 PM – 5:00 PM** **Meeting Summary & Next Steps**
- John Paul Jones - NIST
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