

Symposium Hours, Posters, and Exhibitor Directory



# FORENSICS @ NIST

November 28-30, 2012 • #NISTForensics

*Detailed Session Agenda Provided Separately*

## Welcome to Forensics@NIST 2012

This three-day symposium will showcase cutting edge forensic science research being performed at NIST. Attendees will learn how NIST's world-class laboratories and staff support many forensic science disciplines. See how material scientists, metrologists, analytical chemists, biological scientists, computer scientists, and forensic science practitioners work together to address the challenges facing the forensic science community and where NIST is going next.

- November 28, 2012: Forensic Biology/DNA, Firearms/Toolmark Analysis, and Fire Research
- November 29, 2012: Trace Analysis/Collection
- November 30, 2012: Computer Forensics, Fingerprints & Biometrics, and Multimedia Forensics

### A message from Willie E. May, Ph.D., Associate Director for Laboratory Programs



Welcome to Forensics@NIST 2012. As you are no doubt aware, the National Academy of Sciences (NAS) released a study in 2009 that was quite critical of the state of forensic science and its impact on the criminal justice system. NIST was directly cited in the NAS report as an agency that should play a key role in addressing the Nation's forensic science challenges. We hope that this symposium provides attendees with a glimpse of the breadth of research and measurement service activities that are ongoing at NIST to provide additional credibility to the field and help to promote the transformation of forensic science from an experience-expert-based practice to a more quantitative science.

- Willie E. May



## Forensics@NIST 2012

### Symposium Hours

(Detailed session agenda provided separately.)

#### Day One - Wednesday, November 28, 2012

##### Forensic Biology/DNA, Firearms Analysis, and Fire Research

Exhibits	8:30 - 5:00
Deployable Forensics Lab (outside)	8:30 - 5:00
Posters	8:30 - 5:00

#### Day Two - Thursday, November 29, 2012

##### Trace Analysis/Collection

Exhibits	8:30 - 5:00
Hands-on Biological Threat, Response and Sample Collection Demonstration	12:50 - 2:20
Deployable Forensics Lab (outside)	8:30 - 5:00
Mobile Decontamination Lab (outside)	9:00 - 5:00
Posters	8:30 - 5:00

#### Day Three - Friday, November 30, 2012

##### Computer & Multimedia Forensics and Fingerprints & Biometrics

Exhibits	8:30 - 4:00
Deployable Forensics Lab (outside)	8:30 - 1:30
Posters	8:30 - 4:00

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### Forensic Biology/DNA, Firearms Analysis, and Fire Research Posters - Lecture Room B

Posters listed as submitted. Authors present on November 28.

#### DNA

1. DNA Sequencing Error Estimation and SNP Validation for Microbial Forensics Applications
2. Characteristics of 24 Commonly Used Autosomal STR Loci
3. Population Statistics on the Proposed Expanded U.S. Core Loci
4. Concordance Testing Comparing STR Multiplex Kits with a Standard Data Set
5. SE33 Variant Alleles: Sequences and Implications
6. Evaluation of Additional Y-STR Loci to Resolve Common Haplotypes
7. An Evaluation of Additional Y-STR Loci in the PowerPlex Y-23 Kit
8. Direct PCR Amplification of STR Loci: Protocols and Performance
9. Rapid Amplification of Commercial STR Typing Kits
10. Validation of PowerPlex 16 HS in Comparison to Identifiler Plus on the ABI 3500 Genetic Analyzer
11. Setting Interpretation Thresholds and Results with Low-Level DNA Analysis

12. The New SRM 2391c: PCR-based DNA Profiling Standard
13. Using SRM 2372 Human Quantitation Standard: Are There Differences Between qPCR Assays?
14. Forensic Performance of Insertion-Deletion Marker Systems
15. Candidate Reference Family Data: A Tool for Validating Kinship Analysis Software
16. Rapid DNA Testing Approaches for Reference Samples

#### Firearms

1. Mathematical Comparisons of Bullets and Cartridge Casings Using 2D and 3D Topography, A. Zheng, R. Thompson, W. Chu, J. Song, J. Yen, B. Renegar and R. Silver
2. The National Ballistics Imaging Comparison, R. Thompson, S. Ballou, T. Vorburger, J. Song, J. Yen, A. Zheng, B. Renegar, R. Silver – NIST; M. Ols – ATF

#### Fire Research

1. Analysis of a Fatal Wind-Driven Fire in a Single-Story House, Adam Barowy and Daniel Madrzykowski
2. Fire Pattern Repeatability, Daniel Madrzykowski and Charles Fleischmann

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Trace Analysis/Collection Posters - Lecture Room A

*Posters listed as submitted. Authors present on November 29.*

1. Ethanol in Water Standard Reference Materials to Support Forensic Testing, Michele M. Schantz, Analytical Chemistry Division, NIST
2. Towards Improvement of Trace Detector Screening for the Analysis of Illicit Drugs, L.T. Demoranville, J.R. Verkouteren, G. Gillen, NIST
3. Nano Particle Generation from Heated Explosives, Robert Fletcher, Marcela Najarro, Tim Brewer, Matthew Staymates and Greg Gillen, NIST
4. Techniques for the Production of Standard Explosive Test Particles, Matthew Staymates, Michael Verkouteren, Jessica Staymates, Robert Fletcher, Tim M. Brewer, and Greg Gillen, NIST
5. Analysis of Trace Quantities of Explosive Materials Using Laser Diode Thermal Desorption- Atmospheric Pressure Chemical Ionization- Tandem Mass Spectrometry, Eric Windsor, NIST
6. Forensic Applications of DART MS, Ed Sisco, USACIL/NIST
7. Electrostatic Effects in Swipe Sampling, R. Fletcher, NIST
8. Age Dating of Fingerprints, Ed Sisco, NIST
9. Forensic Analysis Methodology and Database of Statistically Combined HME Thermal, Mass, and Spectral Signatures, Ashot Nazarian
10. Surrogate Controls for Confidence in Field Measurements, Vang

11. HPLC for Quant of Explosives and Narcotics Standards, Tim Brewer
12. SRMS for Trace Explosives, Bill MacCrehan
13. Inkjet Printing for Trace Detection Standards, Greg Gillen
14. Micro CT Scanning of Explosives, Greg Gillen
15. Confocal Raman of Single Particles, Chris Michaels
16. Fundamental Measurements for Trace Detection of Energetic Materials and Fire Debris, Tara M. Lovestead, Jason A. Widegren, Samuel Allen, and Thomas J. Bruno
17. Reproducible Dynamic Vapor-Time Profiles of Explosives and Non-explosive Canine Training Aids, Bill MacCrehan, Michele Schantz, Stephanie Moore; Chemical Sciences Division, MML
18. Optimization of Negative Chemical Ionization Mass Spectrometry for Explosives for Two Gas Chromatographic/Mass Spectrometric Instruments from Different Manufacturers, Bruce A, Benner, Jr. and Marcela Najarro, NIST
4. Instance Search, Copy Detection, and Semantic Indexing at TRECVID
5. Developing a Forensics Image Examination Rating Scale
6. Evaluation of Latent Fingerprint Technologies (ELFT)
7. Evaluation of Fusion Methods for Latent Fingerprint Matchers
8. Biometrics Research Lab to Support Standards Development and Measurement Science
9. Biometric Sample Quality – The Push Towards Zero Error Biometrics
10. ITL – Standards Development Organization (SDO) of ANSI/NIST-ITL Biometric Interchange Standard – 25 Years of Building Community Consensus with Global Impact
11. Using Challenge Problems to Advance Face and Iris Recognition
12. Assessing Uncertainty in Measurement
13. 3D Shape Analysis, Retrieval and Metrology

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**Computer & Multimedia Forensics and Fingerprints & Biometrics Posters - Lecture Room D**

*Posters listed as submitted. Authors present on November 30.*

1. Computer Forensics (includes NSRL and CFTT)
2. Human Assisted Speaker Recognition
3. Using Attack Graph and Evidence Graph in Computer Forensics Examinations

POCs, Addresses, Phone, Email and Web  
Exhibitors Directory

Exhibitor	Booth #	Days in Attendance
A2LA-American Association for Laboratory Accreditation	101	Nov 28-30 <sup>th</sup>
Secure Outcomes, Inc	102	Nov 28-30 <sup>th</sup>
CAO Group	103	Nov 28-30 <sup>th</sup>
ANSI-ASQ/FQS National Accreditation Board	104	Nov 28-30 <sup>th</sup>
RTI International	105	Nov 28-30 <sup>th</sup>
Foster & Freeman USA Inc	106	Nov 28-30 <sup>th</sup>
Nebraska Wesleyan University	107	Nov 28-30 <sup>th</sup>
The Bode Technology Group, Inc	108	Nov 28-30 <sup>th</sup>
Leica Microsystems, Inc	109	Nov 28-30 <sup>th</sup>
The George Washington University	110	Nov 28-30 <sup>th</sup>
Sirchie	111	Nov 28-30 <sup>th</sup>
ASCLD/LAB	112	Nov 28-30 <sup>th</sup>
Leeds Forensic Systems	113	Nov 28-30 <sup>th</sup>
Agilent Technologies	114	Nov 28-30 <sup>th</sup>
BAE Systems	115	Nov 28 <sup>th</sup>
Bruker Optics	115	Nov 29 <sup>th</sup>
Cybergenetics	116	Nov 28 <sup>th</sup>
Sarstedt, Inc	117	Nov 28 <sup>th</sup>
IFI	120	TBD
RJ Lee Group	121	TBD
Foray Technologies	122	TBD
IntergenX, Inc	123	Nov 28 <sup>th</sup>
Animetrics	124	Nov 30 <sup>th</sup>
SoftGenetics	125	Nov 28 <sup>th</sup>
Evident	125	Nov 30 <sup>th</sup>
Biothreat Collection Demonstration	126	Nov 29 <sup>th</sup>
Stevenson University	126	Nov 30 <sup>th</sup>
Biothreat Collection Demonstration	127	Nov 29 <sup>th</sup>

A2LA-American Association for Laboratory Accreditation  
5301 Buckeystown Pike, Suite 350  
Frederick, MD 21704  
POC: Ms. Gina McInturff, Marketing/Design Specialist  
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ANSI-ASQ/FQS National Accreditation Board  
500 Montgomery Street  
Alexandria, VA 22314  
POC: Mr. Ben Perillo, Executive Director-Brand Program Director  
Phone: 561.376.5391  
Email: [perilloconsult@aol.com](mailto:perilloconsult@aol.com)  
[www.fqsforensics.org](http://www.fqsforensics.org)

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139 Technology Drive, Suite J  
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19 Fortune Drive  
Billerica, MA 01821  
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CAO Group  
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Foray Technologies  
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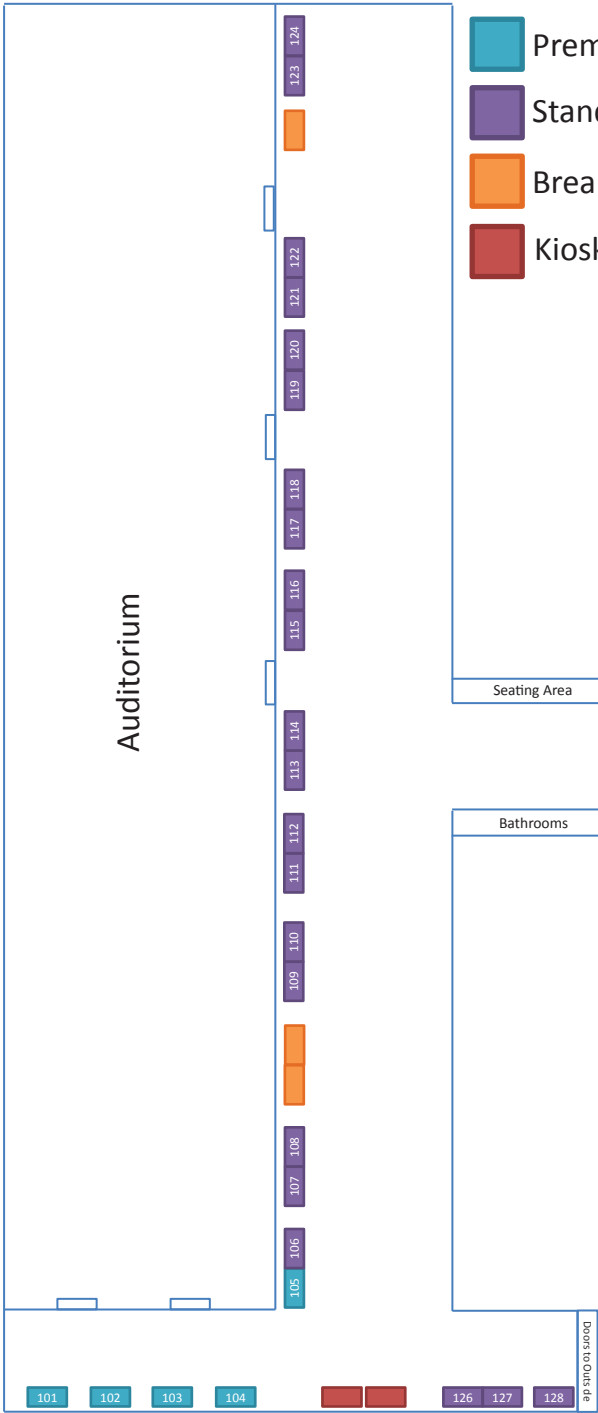
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-  Premier tables
-  Standard tables
-  Break tables
-  Kiosks

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