

PLENARY SESSION

WEDNESDAY, SEPTEMBER 22, 2004
Windsor III - VI

8:30 am - 9:00 am

WELCOME AND INTRODUCTIONS

GENERAL PROGRAM CHAIR - Michael M. Healy

PRESIDENT - Southern Association of Forensic Scientists (SAFS)
John G. Wegel, Jr.

PRESIDENT - Midwestern Association of Forensic Scientists (MAFS)
Anthony J. Tambasco

PRESIDENT - Mid-Atlantic Association of Forensic Scientists (MAAFS)
Richard E. Meyers

PRESIDENT - Canadian Society of Forensic Science (CSFS)
Frederick Fromm

9:00 am - 9:45 am

**Forensic Science is History: An Attempt to Discover
the Foundations of Forensic Science**
Max M. Houck, West Virginia University

9:45 am - 10:15 am

Light Microscopy – A Tool for All Sections
William L. Chapin
McCrone Associates, Inc.

10:15 am - 10:45 am

BREAK with the Exhibitors

10:45 am - 11:15 am

**The Green River Murders and the Role of Forensic
Microscopy in their Solutions**
Skip Palenik, Microtrace

11:15 am - 11:45 am

**Now That's Funny - Humor from a Forensic Scientist's
Point of View**
Dirk A. Shaw, Indianapolis-Marion County Forensic Services Agency

11:45 am - Noon

Closing Remarks and Announcements

SCIENTIFIC SESSIONS**Drug Chemistry**

Section Chair: Desirée Reid

Thursday, September 23, 2004*Windsor I and II*

- 8:00 am - Noon** **FT-IR Microscopy Applications to Seized Drug Analysis**
Will Wihlborg
- 10:00 am - 10:30 am** **BREAK**
- Noon to 1:00pm** **LUNCH BREAK (on your own)**
- 1:00 pm - 1:30 pm** **Fentanyl in Serum**
Matthew Clabaugh
- 1:30 pm - 2:00 pm** **Retention Indices in Drug Identification**
Kevin Ardoin, Acadiana Crime Lab - New Iberia LA
- 2:00 pm - 2:45 pm** **Identification of Strattera and
Disassembly of a Coffee Grinder Reveals
Methamphetamine Precursor**
John Nied, Wisconsin State Crime Laboratory - Wassau WI
- 2:45 pm - 3:15 pm** **BREAK**
- 3:15 pm - 3:30 pm** **Detection of Signature Chemicals used to Locate Items
Containing Drugs**
Ken Furton, Florida International University - IFRI - Miami FL
- 3:30 pm - 4:00 pm** **Drug Evidence Analyzed by State and Local Crime Labs**
Liqun Wong
- 4:00 pm - 4:30 pm** **SWGDRUG Update**
Conrad Roberson, Georgia Bur. of Investigation - Decatur GA
- Friday, September 24, 2004
Dover
- 8:30 am - Noon** **Roundtable Discussion**

SCIENTIFIC SESSIONS

DNA/Serology

Section Chair: Emily Booth Varan

Thursday, September 23, 2004
Windsor V

Moderator: Emily Booth Varan

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|--------------------------------------|---|
| 9:00 am - 9:30 am | Rapid Separation of Sperm and E-cells from a Mixture by Laser Microdissection
<i>Bob Fasulka, Leica Microsystems, Inc.</i> |
| 9:30 am - 9:50 am | Examination of Semen-free Vaginal Swabs for p30 using the Seratec® Semiquantitative PSA Test Kit
<i>Elida Kafarowski, Centre of Forensic Sciences - Toronto ON</i> |
| 9:50 am - 10:10 am | mRNA Profiling: Body Fluid Identification using Multiplex Real-Time PCR
<i>Jane Juusola, University of Central Florida - Orlando FL</i> |
| 10:10 am - 10:30 am | BREAK |
|
<i>Moderator: Marcella Scott</i> | |
| 10:30 am - 10:45 am | Best Practices for Criminal Offender Databases and New Challenges for Databank Integration with Operational Casework
<i>Peggy Pillion, National DNA Data Bank, RCMP - Ottawa ON</i> |
| 10:45 am - 11:00 am | Assessment and In Vitro Repair of Damaged DNA Templates
<i>Ashley Hall, NCFS - Orlando FL</i> |
| 11:00 am - 11:30 am | Successes and Challenges of a Partnership Program to Examine “Cold” Sexual Assault Cases through DNA Analysis
<i>Alex Welsh, Centre of Forensic Sciences - Toronto ON</i> |
| 11:30 am - Noon | Applications and Validation of the LINEAR ARRAY® Mitochondrial DNA HVI/HVII Region-Sequence Typing Kit
<i>Cassandra D. Calloway, Roche Molecular Systems</i> |
| Noon - 1:30 pm | LUNCH (on your own) |

SCIENTIFIC SESSIONS**DNA/Serology**

Thursday, September 23, 2004 (cont.)

Moderator: Jason Bundy

- 1:30 pm - 1:45 pm** **Modified Whole Genome Amplification Method for STR Analysis using Single or Few Cell Equivalents of Input Genomic DNA**
Erin Hanson, NCFS - Orlando FL
- 1:45 pm - 2:05 pm** **Partners in Crime – A Case Study Involving Collaboration Between Bloodstain Pattern Analysis and Conventional Serological Techniques**
Michelle Fisher, RCMP - Halifax NS
- 2:05 pm – 2:25 pm** **Age Determination: The Identification of Newborns using mRNA Profiling Analysis**
Michelle Alvarez, NCFS - Orlando FL
- 2:25 pm - 2:40 pm** **The Stability of Amplified Product in Forensic Casework during Long Term Storage**
Kris Cano Whitman, Scottsdale PD Crime Lab - Scottsdale AZ
- 2:40 pm - 3:00pm** **Enhanced Trace Evidence Collection**
Salvatore Bianca, Baltimore PD - Baltimore MD
- 3:00 pm – 3:30pm** **Break**

Moderator: Julie Renfro

- 3:30 pm - 4:00 pm** **Light Microscopy: The Forgotten Analytical Tool**
Bill Chapin, McCrone Associates, Inc. - Westmont IL
- 4:00 pm - 4:15 pm** **The FBI's Regional Mitochondrial DNA Laboratory Program**
Mohamed Sedqi, Bureau of Criminal Apprehension - St. Paul MN
- 4:15 pm – 4:45 pm** **Utility of the Y-PLEX™ 12 System in Forensic Casework**
Jaiprakash G. Shewale, Reliagene Technologies - New Orleans LA

SCIENTIFIC SESSIONS**DNA/Serology**

Friday, September 24, 2004

Ascot

Moderator: Gary Daniels

- 9:00 am - 9:20 am** **From Pilot to Process: The Evolution of a Break and Enter Program**
Sarah Johnston, Centre of Forensic Sciences - Toronto ON
- 9:20 am - 9:50 am** **Myriad's Approach to Highly Integrated, Automated Casework Sample Processing**
Benoit Leclair, Myriad Genetic Laboratories, Inc. - Salt Lake City UT
- 10:00 am - 10:30 am** **Break**
- 10:30 am - 11:00 am** **Improving the Efficiency of Processing and Analysis for Offender Samples in a Forensic DNA Laboratory**
John Ryan, Myriad Genetic Laboratories, Inc. - Salt Lake City UT
- 11:00 am - 11:30 am** **Forensic Analysis of Semen in the 21st Century**
Dale L. Laux, Ohio BCI - Richfield OH
- 11:30 am - Noon** **Validation of a Male-Specific, 12-Locus Fluorescent Multiplex: The PowerPlex Y System**
Kimberly Huston, Promega Corporation - Madison WI

SCIENTIFIC SESSIONS

General

Section Chair: Grace Lively

Thursday, September 23, 2004

Oxford/York

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|----------------------------|--|
| 8:30 am - 8:45 am | The Forensic Detection of Semen/Saliva Mixtures
<i>Dawn Bialosky and Dale Laux*, Ohio BCI - Richfield OH</i> |
| 8:45am - 9:10 am | Toolmarks – Novel Scientific Evidence? Ramirez Revisited
<i>Charles Meyers, retired FDLE & Michigan State Police</i> |
| 9:10 am - 9:25 am | The Effect of Arson on the Recovery, Identification, and Analysis of Entomological Evidence at a Homicide Scene: Can Time of Death Still be Determined
<i>Gail Anderson, Simon Frasier University - Burnaby BC</i> |
| 9:25 am - 10:00 am | Electrical Accident, Sabotage, Homicide or Other
<i>Helmut Brosz, Brosz and Associates - Markham ON</i> |
| 10:00 am - 10:30am | BREAK |
| 10:30 am - 10:50 am | SPME-GC/MS Analysis of the Volatile Components Comprising an Individual Human Odor Signature
<i>Allison Curran* and Kenneth G. Furton, Florida International University - Miami FL</i> |
| 10:50 am - 11:10 am | Explosive Detection Goes to the Dogs: Scientific Investigation into Canine Olfaction
<i>Ross J. Harper*, Jose R. Almirall, & Kenneth G. Furton, Florida International University - Miami FL</i> |
| 11:10 am - 11:45 am | What do you mean – I need Uncertainty Measurements for Standards,
<i>Susan Ballou, NIST/OLES - Gaithersburg MD</i> |
| Noon - 1:00pm | LUNCH BREAK (on your own) |
| 1:00 pm - 1:30 pm | Using Spectral Information in Forensic Imaging
<i>Gordon Miskelly, University of California - San Diego CA</i> |
| 1:30 pm - 2:10 pm | Accreditation of Forensic Science Academic Programs through AAFS FEPAC
<i>Pete Marone, Virginia Division of Forensic Science - Richmond VA</i> |

SCIENTIFIC SESSIONS**General**

Thursday, September 23, 2004 (cont.)

- 2:10 pm - 2:30 pm** **New Forensic Science Degree Program at Towson University**
Mark Profili, Towson University - Towson MD
- 2:30 pm - 3:00 pm** **Resource Guide for Users of Science & Technology and the National Clearinghouse for Science and Technology and the Law**
Anjali R. Swinton and Carol Henderson, Stetson University College of Law, SciLaw Forensics, Ltd. - Germantown MD*
- 3:00 pm - 3:30 pm** **Break**
- 3:30 pm - 4:00 pm** **Evaluating the Efficacy of a Police Detective Training Program in Forensic Biology/DNA Concepts & Procedures Utilizing a Hierarchical Formative Evaluation,**
Garry J. Bombard, Forensic Institute for Research, Science, and Training, Chicago IL
- 4:00pm - 4:45pm** ***Merry Pease Case: Convicting the Innocent????***
Edward Whittaker, Retired Metro-Dade Police Crime Lab, Independent Examiner - Miami FL

(* denotes presenter)

SCIENTIFIC SESSIONS

Questioned Documents

Section Chair: Todd Welch

Ascot

Thursday, September 23, 2004

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|-----------------------------|---|
| 8:30 am - 9:00 am | Securing and Inspection of ID Documents with Digital Watermarking
<i>Garth Zambory</i> |
| 9:05 - 9:20 am | Differentiation of Xerographically Produced Documents: A Case Study
<i>Albert Lyter, Federal Forensic Associates, Inc. - Raleigh NC</i> |
| 9:25 am - 10:00 am | Leopold-Loeb Revisited: Document Examiners Help Unravel “The Perfect Crime”
<i>Larry Olson, IRS National Forensic Laboratory - Chicago IL</i> |
| 10:00 am - 10:30 am | Break |
| 10:30 am - 11:00 am | Leopold-Loeb Revisited: Document Examiners Help Unravel “The Perfect Crime” - conclusion |
| 11:05 am - 11: 25 am | The International Graphonomics Society, What It Stands For
<i>MaryAnn Czermak - Palo Cedro CA</i> |
| 11:30 am - 11:50 am | A Validation Study For The Reliability Of Examinations Involving Multiple Suspected Writers
<i>David Parrett*, Gary Szabo, Oklahoma County District Attorney - Oklahoma City OK</i> |
| 11:50 am - 1:00 pm | LUNCH (on your own) |
| 1:05 pm - 1:20 pm | Yes It Is – No It Isn’t?
<i>Clarke Mercer*, Jim Hayes, Greenfield Police Dept. - Greenfield IN</i> |
| 1:25 pm - 1:40 pm | Fracture Matches; A Preliminary Look At Validating Whether Paper Tears Are Unique
<i>Mary Bacon, Todd Welch, Ferris State Univ. - Grand Rapids MI</i> |

(* denotes presenter)

SCIENTIFIC SESSIONS**Toxicology**

Section Chair: Ron Bell

*Dover*Thursday, September 23, 2004

9:30 am - 11:30 am	Analytical Toxicology Considerations in Drugs and Driving Cases <i>Bruce A. Goldberger, Ph.D., DABFT, University of Florida - Gainesville FL</i>
11:30 am - 1:00 pm	Lunch (on your own)
1:00 pm - 1:20 pm	Development and Implementation of a Proficiency Testing Program for Drugs in Body Fluids <i>Adrienne Stevenson, Canadian Pari-Mutuel Agency - Ottawa ON</i>
1:20 pm - 3:00 pm	TBA
3:00 pm - 3:30 pm	Break
3:30 pm - 4:30 pm	TBA

SCIENTIFIC SESSIONS**Trace Evidence**

Section Chair: Chris Henderson

Thursday, September 23, 2004
Windsor III and IV

- 8:00 am - 8:30 am** **Optical and Infrared Analysis of Forensic Evidence**
Thomas J. Tague Jr., Bruker Optics - Billerica MA
- 8:30 am - 8:45 am** **Changing Trends in Forensic Hair and Fiber Analysis
in a DNA Centered World**
Marcin Kaminski, Centre for Forensic Science - Toronto ON
- 8:45 am - 9:00 am** **Hanging by a Hair: Animal Derived Trace Evidence in
Criminal Investigations**
Joy Halverson, QuestGen Forensic - Davis CA
- 9:00 am - 9:30 am** **UV-Vis-NIR Microspectral Analysis of Gemstones**
Dr. Paul Martin, SEE/Craic Technologies, Inc. - Los Angeles CA
- 9:30 am - 10:00 am** **Matching Matches, Part 1**
Thomas J. Hopen, ATF - Atlanta GA
- 10:00 am - 10:30 am** **BREAK**
- 10:30 am - 11:00 am** **Forensic Analysis of Automotive Airbag Contact**
Glenn Schubert, Illinois State Police - Carbondale IL
- 11:00 am - 11:25 am** **ReEvaluation of Density Discrimination in the Forensic
Examination of Glass Fragments**
Scott Ryland, Florida Dept. of Law Enforcement - Orlando FL
- 11:25 am - 11:45 am** **The Characterization of Denim Fibers Using Visible
Microspectrophotometry**
Danielle Albert, Michigan State Police - Northville MI
- 11:45 am - 11:45 am** **The Presence of Graphite Flake in the Primer Surfacer
Used on Saturn Vehicles**
Madlen Ginzburg-Margau, Centre of Forensic Sciences - Toronto ON
- Noon - 1:00 pm** **LUNCH (on your own)**

SCIENTIFIC SESSIONS**Trace Evidence**

Section Chair: Chris Henderson

Thursday, September 23, 2004 (cont.)

- 1:00 pm - 1:30 pm** **The Characterization of Automobile Body Fillers**
Sara McNorton and Guy Nutter - Windsor ON*
- 1:30 pm - 2:00 pm** **Away in the Manger, No room for aknife?**
David A. Green, Lake County Crime Lab - Painesville OH
- 2:00 pm - 2:15 pm** **Light Microscopy: The Forgotten Trace Evidence Analytical Tool?**
William Chapin, McCrone Associates, Inc. - Westmont IL
- 2:15 pm - 2:30 pm** **Aging of Shoes and Its Effect on Shoeprint Impressions**
J. Matney Wyatt, Hamilton Co. Coroner's Laboratory - Cincinnati OH
- 2:30 pm - 2:45 pm** **Tinkering with Glitter**
Susan T. Gross, Minnesota BCA - St. Paul MN
- 2:45 pm - 3:00 pm** **Forensic Analysis of Trace Explosives**
Raychelle Burks, University of Nebraska - Lincoln NE
- 3:00 pm - 3:30 pm** **BREAK**
- 3:30 pm - 4:00 pm** **Bones of Contention – The Investigation of a Cadaver
Dog Handler**
Amy L. Michaud - Federal Bureau of Investigation - Quantico VA
- 4:00 pm - 4:30 pm** **Passive Exposure and Persistence of GSR on Bystanders to a
Shooting: Can a Bystander be Differentiated from a Shooter
Based on GSR?**
Elspeth Lindsay, Center of Forensic Sciences - Toronto ON
- 4:30 pm - 5:00 pm** **Research in Explosives Analysis at the National Center for
Forensic Science**
Michael E. Sigman, NCFS - Orlando FL

(* denotes presenter)

SCIENTIFIC SESSIONS**Trace Evidence**

Friday, September 24, 2004

Cambridge

- 8:30 am - 9:00 am** **Characterizing Smokeless Powders Using Ion Chromatography and Scanning Electron Microscope**
Douglas J. Klapec, ATF Forensic Lab - Beltsville MD
- 9:00 am - 9:30 am** **Pounce and Blotting Sand**
Thomas J. Hopen, ATF - Atlanta GA
- 9:30 am - 10:00 am** **Practical Smokeless Powder Comparisons**
Cynthia L. Wallace, ATF - Ammendale MD
- 10:00 am - 10:30 am** **BREAK**
- 10:30 am - 11:00 am** **Analysis of Fireworks for Particles of the Type Found in Primer Residue (GSR)**
Michael A. Trimpe, Hamilton Co. Coroner's Lab - Cincinnati OH
- 11:00 am - 11:30 am** **Improving the Detection of Ignitable Liquids and Organic High Explosives by Tandem Mass Spectrometry**
Jeannette M. Perr, Florida International University - Miami FL

POSTER SESSIONS**General Section****WEDNESDAY, SEPTEMBER 22, 2004***Westminster Room***1:00 pm - 3:00 pm**

- 1) **Hanging by a Thread: Enhancing the Forensic Value of Dyed Cotton Trace Evidence through the Application of Novel Techniques in Fiber Discrimination**
Rachel Russo, Cuyahoga Co. Coroner's Office - Cleveland OH
- 2) **Indented Writing Reveals Forged Confession**
Sandra L. Miller, Pennsylvania State Police - Harrisburg PA
- 3) **Introduction of the Midwest Forensics Resource Center**
Dr. Todd Zdorkowski, Midwest Forensics Resource Center - Ames IA
- 4) **Secondary Transfer of DNA between Questioned Documents via the ESDA Platen**
Heather Shalley, RCMP Forensic Lab Services - Regina SK
- 5) **"Bullet Spin Cast-off Bloodstains?"**
Cheryl Lozen, Michigan State Police - Northville MI
- 6) **Effects of Latent Print Processing on the Ability to Recover DNA**
Dale L. Laux, Ohio Bureau of Criminal Investigation - Richfield OH
- 7) **Assessing the Use of PDMS and Fe-PDMS Composites for the Extraction of Herbicides from Water**
Stephanie K. Bell
- 8) **Reducing the Interference of Household Bleaches on Luminol Chemiluminescence**
Dr. Gordon Miskelly, University of California - San Diego CA
- 9) **Fingerprinting of Diesel Spills**
Dr. Gordon Miskelly, University of California - San Diego CA

POSTER SESSIONS**Analytical Section****THURSDAY, SEPTEMBER 23, 2004***Westminster Room***9:00 am - 11:00 am**

- 1) **Low Level Analysis of Fentanyl in Serum by LC/MS**
Matthew Clabaugh
- 2) **Canine and SPME/GC/MS Detection of Microbial Volatile Organic Compounds emitted from two problematic Indoor Molds: *Penicillium chrysogenum* and *Aspergillus versicolor***
Robert Griffith, Florida International University - Miami FL
- 3) **Trace-Fiber Color Discrimination by HPLC-DAD using both Ion-Suppression and Ion-Pairing Reagents**
Laura Chaplinsky and Lori Wilson, Eastern Kentucky University - Richmond KY
- 4) **Ignitable Liquids Reference Collection for Fire Debris Analysis, Training and Validation**
Mary Williams and Carl Anglesea
- 5) **Forensic Elemental Analysis of Glass by Laser Induced Breakdown Spectroscopy (LIBS), Laser Ablation ICPMS and X-Ray Fluorescence**
Sayuri Umplerrez, Florida International University - Miami FL
- 6) **Narcotics Detection by the EntryScan 3 Using Ion Mobility Spectrometry (IMS)**
Nicole Manley
- 7) **Field Sampling and Analysis Methods for Arson Investigation**
Laura Conner, Florida International University - Miami FL
- 8) **Supercritical Fluid Extraction of Organic Compounds from Adsorbents Used to Collect Human Scent Evidence**
Paola A. Prada
- 9) **Identification of Volatile Organic Compounds Produced by Decomposing Human Blood and Those Detected by Cadaver Dogs**
Wilma Jeffris

POSTER SESSIONS**DNA Section****THURSDAY, SEPTEMBER 23, 2004**

- 1) **A Quantifiler Human Quantification Kit Validation Based on Peak Height Reproducibility in STR Reactions** – *Mark Danus, BRTLabs - Baltimore MD*
- 2) **Validation of Automated Extraction using Promega’s DNA IQ System Kit and Beckman’s Biomek 2000 for Forensic Casework** – *Tim Petree and Jillian White, Florida Department of Law Enforcement - Orlando FL*
- 3) **Validation of Quantifiler Quantitation Kits using the ABI 7000 and ABI Prism 3100 Genetic Analyzer** - *Janel Borries, Florida Department of Law Enforcement - Tampa FL*
- 4) **The Comparison of Common Extraction Methods for Leucocrystal Violet Treated Bloody Shoe Impressions** - *Vicki Bellino and Erin Chaney, Florida Department of Law Enforcement - Orlando FL*
- 6) **Automated DNA Extraction from Forensic Casework Samples Using a Modified DNA IQ System and the MultiPROBE II Forensic Workstation** - *Lois Tack, Perkin Elmer Life and Analytical Sciences - Downers Grove IL*
- 7) **Preliminary Evaluation of XTRANA’s Xtra Amp DNA Extraction System for Potential Use with Mass Disaster Samples** – *Peggy Pillion, RCMP National DNA Databank - Ottawa ON*
- 8) **Internal Validation of a Procedure to Extract Amplifiable DNA from Skeletal Remains** – *Alana Lee, Northern Regional Laboratory, Centre of Forensic Sciences - Sault Ste. Marie, ON*