MEASUREMENT SCIENCE AND STANDARDS IN FORENSIC HANDWRITING ANALYSIS CONFERNECE

June 4, 2013 - AGENDA

Time	Session
8:30 – 9:00 AM	Visit Registration Desk: NIST Lecture Room A in Building 101
9:00 – 9:30 AM	**Welcome and Opening Remarks** ▪ John Paul Jones II, Program Manager, Law Enforcement Standards Office (OLES), National Institute of Standards and Technology (NIST) ▪ Heather Waltke, Associate Director, Office of Investigative and Forensic Sciences, National Institute of Justice (NIJ) ▪ Ted Burkes, Scientific Working Group on Forensic Document Examinations (SWGDOC) Chair, Federal Bureau of Investigation (FBI) ▪ Jane Lewis, American Academy of Forensic Sciences (AAFS) Questioned Documents (QD) Section Director and Private Examiner
9:30 – 10:15 AM	**CURRENT STATE OF HANDWRITING ANALYSIS** **Forensic Handwriting Examinations: The Progression to our Current State** ▪ John Paul Osborn, Forensic Document Examiner, Osborn & Son ▪ Peter Tytell, Forensic Document Examiner ▪ Rigo Vargas, Questioned Documents Section Chief, Mississippi Crime Laboratory
10:15 – 10:30 AM	Break
10:30 – 12:00 PM	**FOUNDATIONAL SCIENCE BEHIND HANDWRITING** **Neuroscience behind the Motor Control and Motor Equivalence of the Handwriting Function** ▪ Michael Caligiuri, PhD, Professor, University of California, San Diego **Handwriting Stroke Kinematics** ▪ Linton Mohammed, PhD, D-ABFDE, Forensic Document Examiner, Forensic Science Consultants, Inc. **Cognitive Theoretical Perspectives in Studies of Forensic Document Examination including "What Examiners Look At" (i.e. Eye-tracking)** ▪ Mara Merlino, PhD, Assistant Professor of Psychology, Kentucky State University *Moderated by Jane Lewis, AAFS-QD Section Director, Private Examiner*
12:00 – 1:00 PM	Lunch: On Your Own in NIST Cafeteria
1:00 – 2:30 PM	**REPRODUCIBILITY AND RELIABILITY STUDIES** **Performance of Forensic Document Examiners – Including Reliability and Repeatability** ▪ Moshe Kam, PhD, Professor, Drexel University **Homogeneous Writing Research** ▪ Marie Durina, Senior Forensic Document Examiner, San Diego Sheriff's Crime Laboratory **Lineup: The Reliability of Examinations Involving Multiple Suspected Writers** ▪ David Parrett, Forensic Document Examiner *Moderated by Rigo Vargas, Questioned Documents Section Chief, Mississippi Crime Laboratory*
2:30 – 2:45 PM	Break
2:45 – 5:00 PM	**ADVANCES IN MEASUREMENT SCIENCE IN HANDWRITING ANALYSIS** **Introduction to Quantitative Systems for Forensic Handwriting Comparisons** ▪ JoAnn Buscaglia, PhD, Research Chemist, FBI **WANDA: A Measurement Tool for Forensic Document Examiners** ▪ Katrin Franke, PhD, Professor of Computer Science and Director of the Digital Forensics and Cybercrime Investigation Laboratory at Gjøvik University College **The Forensic Language-Independent Analysis System for Handwriting Identification (FLASH ID)** ▪ Mark Walch, President CEO, Gannon Technologies Group, and Donald Gantz, PhD, Statistician, George Mason University **CEDAR FOX and iFOX** ▪ Sargur Srihari, PhD, Professor, SUNY – Buffalo **D-Scribe** ▪ Matthias Schulte-Austum, Siemens AG, Senior Software Development Engineer and Siemens Key Expert Pattern Recognition **Scale Invariant Feature Transform (SIFT): Writer Recognition by Computer Vision** ▪ Jeffrey P. Woodard, PhD, Researcher, The MITRE Corporation *Moderated by JoAnn Buscaglia, PhD, Research Chemist, FBI*

8:30 – 9:00 AM	Visit Registration Desk: NIST Lecture Room A in Building 101
9:00 – 10:30 AM	**ADVANCES IN STATISTICS FOR HANDWRITING ANALYSIS #1**

Trends in Frequency Occurrence of Handwriting and Hand Printing Characteristics
- Thomas W. Vastrick, Forensic Document Examiner

Error, Confidence and (Un)certainty – Deconstructing Authorship Opinions Using a Forced-Call Testing Protocol
- Brent Ostrum, Senior Forensic Document Examiner, Canada Border Services Agency

Understanding Individuality of Handwriting Using Score-Based Likelihood Ratios
- Christopher Saunders, PhD, Mathematical Statistician, South Dakota State University

The Development of Individual Handwriting Characteristics and the Statistical Evaluation of Different Combination Likelihoods of These Individual Characteristics
- Lisa Hanson, Forensic Document Examiner, Minnesota Bureau of Criminal Apprehension Laboratory

Moderated by John Paul Jones II, Program Manager, NIST

10:30 – 10:45 AM	Break
10:45 – 11:30 PM	**ADVANCES IN STATISTICS FOR HANDWRITING ANALYSIS #2**

Handwriting Evidence Evaluation Based on the Shape of Characters: Application of Multivariate Likelihood Ratios
- Raymond Marquis, PhD, Institute of Forensic Science, University of Lausanne

Statistical Basis to Determine Probabilities of Occurrence of Handwriting Characteristics
- Kirsten Singer, Forensic Document Examiner, D-ABFDE, Department of Veteran Affairs, OIG
- Sargur Srihari, PhD, Professor, SUNY – Buffalo

Moderated by Jane Lewis, AAFS-QD Section Director, Private Examiner

11:30 – 12:30PM	**LEGAL IMPLICATIONS OF QUANTITATIVE TESTIMONY**

Update from the Working Group on Presenting Forensic Science Evidence Using Quantitative and Qualitative Terms (QQWG)
- Melissa Taylor, Management Analyst, NIST

Presenting Quantitative Techniques and Conclusions in Court
- Kenneth E. Melson, Professional Lecturer in Law, George Washington University Law School and Office of the Inspector General, U.S. Postal Service

Moderated by JoAnn Buscaglia, PhD, Research Chemist, FBI

12:30 – 1:30 PM	Lunch: On Your Own in NIST Cafeteria
1:30 – 2:45 PM	**OTHER ANALYSIS TOOLS TO SUPPORT METRICS**

Using the Statistical Functions of Write-On ^{2} Software to Assess Natural Variation in Handwriting
- Brian Lindblom, Forensic Document Examiner, Document Examination Consultants, Inc., Ottawa Canada

Scanned Images: How Well Do They Depict the Subtle Features in Handwriting?
- Janet Fenner Masson, Forensic Document Examiner

Current Bank Check Scanning Practices
- Jane Lewis, AAFS-QD Section Director, Private Examiner

Moderated by Kirsten Singer, FDE, D-ABFDE, Department of Veteran Affairs, OIG

2:45 – 3:00 PM	Break
3:00 – 4:30 PM	**FACILITATED DISCUSSION**

- What does the future state of handwriting analysis look like?
- What are the barriers to implementing the future state?
- What does a roadmap to achieve the future state look like?

Facilitated by John Paul Osborn, Forensic Document Examiner, Osborn & Son, and Rigo Vargas, Questioned Documents Section Chief, Mississippi Crime Laboratory
Knowledge Capture by SAIC and John Paul Jones II

4:30 PM	**MEETING SUMMARY AND NEXT STEPS**