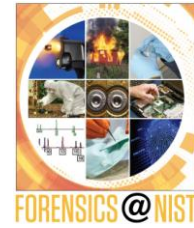


# MEASUREMENT SCIENCE AND STANDARDS IN FORENSIC HANDWRITING ANALYSIS (JUNE 4-5, 2013)



## SPEAKER BIOGRAPHIES

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**Ted Burkes** was initially trained in forensic document examination and worked at the Mississippi Crime Lab from 1991 to 1998. He received additional training and continuing work at the FBI Laboratory from 1998 to present. Mr. Burkes earned status as a Diplomate of the American Board of Forensic Document Examination in 1997. He is a member of the Questioned Document Section of the American Academy of Forensic Sciences, a member and currently the Secretary of the Southeastern Association of Forensic Document Examiners, and is the Chair of the Scientific Working Group for Forensic Document Examination (SWGDOC).

**Dr. JoAnn Buscaglia** is a Research Chemist with the FBI Laboratory in the Counterterrorism & Forensic Science Research Unit. Her research focus includes microscopy and microanalysis of trace evidence, interpretation of analytical data using statistical methods, assessment of the scientific basis for the premises underlying the impression and pattern evidence disciplines, and the evaluation of the accuracy and reliability of examiners' decisions. Prior to joining the FBI Laboratory in 1998, Dr. Buscaglia worked for 10 years in academia and as a consultant for both private- and public-sector forensic, environmental, and industrial hygiene laboratories. In 2013, she was honored for her scientific contributions to forensic science with the Paul L. Kirk Award, the highest honor given by the Criminalistics Section of the American Academy of Forensic Sciences.

**Dr. Michael P. Caligiuri** received his Ph.D. from the University of Wisconsin in 1986 and is currently a professor in the Department of Psychiatry at the University of California, San Diego. Dr. Caligiuri's research focuses on the effect and understanding of drugs and disease on motor control and fine hand movement. He has served as the lead scientist on several federally and industry-sponsored studies identifying treatment response in psychiatric patients and has authored more than 100 peer-reviewed articles on movement disorders, brain imaging, and biomedical instrument development. His current research focuses on kinematic studies of normal and impaired handwriting to understand writer-based sources of movement variability.

**Marie Durina** is the Senior Forensic Documents Examiner at the San Diego Sheriff's Crime Laboratory. Ms. Durina joined the sheriff's crime lab in 1998 as a Forensic Evidence Technician and began her training as a Forensic Document Examiner in 2003 under the tutelage of Dr. Linton Mohammed. She was promoted to Forensic Document Examiner in 2005 and to Senior Forensic Document Examiner in 2011. Ms. Durina has a bachelor's degree in Business Administration from Baruch College, CUNY, a certificate of achievement in Criminal Investigations from Miramar College, and a graduate certificate of academic studies from Oklahoma State University in Forensic Examination of Questioned Documents. Ms. Durina has published three papers related to Forensic Document Examination in peer reviewed scientific journals, and has given numerous presentations and workshops to various forensic organizations and law enforcement agencies. She is one of 113 forensic document examiners in

the United States who are currently certified by the American Board of Forensic Document Examiners (ABFDE), and she now serves on this certifying body's Board of Directors. Ms. Durina is also a member of the American Society of Questioned Documents (ASQDE) and is on the organization's finance committee. In addition, she is a member of the American Academy of Forensic Sciences QD Section (AAFS), a member of the Midwestern Association of Forensic Scientists (MAFS), and a member of ASTM. For the past three years, Ms. Durina has been an active member of the Scientific Working Group for Document Examination (SWGDOC) and works with this group to prepare standards and protocols for the entire Questioned Documents profession.

**Janet Fenner Mason** is a native Texan who graduated from the University of Texas at Austin in 1971 with a Bachelor of Journalism degree. Her interest in photography led her to a position as a photographer and document examiner trainee in Lucile Lacy's questioned document laboratory in Houston. Ms. Fenner Mason studied under and worked with Lucile Lacy for eight years prior to opening her own laboratory in 1985. She is a regular member of the ASQDE and a fellow in the AAFS (QD section), and she has been a Diplomat of ABFDE since 1983. She continues to work full-time as a forensic document examiner in private practice.

**Dr. Katrin Franke** is a professor of computer science and the director of the Digital Forensics and Cybercrime Investigation laboratory at Gjøvik University College, Norway. She obtained her Ph.D. at the Artificial Intelligence Institute at the University of Groningen in the Netherlands. She is also an alumna of the Technical University of Dresden in Germany. Dr. Franke's work experience includes conducting research at Fraunhofer IPK, Berlin, Germany; scientific project manager of research and industrial projects for software systems, now operating in banks in several countries; joining the Norwegian Information Security Laboratory (NISLab) since 2007, and obtaining full professorship in 2010. She has also published more than 120 scientific articles, including a patent. Dr. Franke is a founding member and 2008 Chair Founding member and 2008-2012 Chair of TC10 Computational Forensics, Intl. Association of Pattern Recognition (IAPR). She also received the IAPR Young Investigator award in 2009. Her Website is [www.Kyfranke.com](http://www.Kyfranke.com).

**Dr. Donald Gantz** is a professor of statistics and the chair of the Department of Applied Information Technology in the Volgenau School of Engineering at George Mason University. He directs the Document Forensics Laboratory, which has partnered with Gannon Technologies Group to develop cutting-edge methodologies for the quantification and analysis of handwriting and for automated fingerprint matching. They are applying these methodologies to multi-language document exploitation and biometric identification. The lab is staffed by statistics professors, research professors, postdoctoral research fellows and graduate research assistants. Dr. Gantz received a Ph.D. in mathematics from the University of Rochester.

**Lisa Hanson** received her Bachelor of Science from University of Wisconsin, River Falls. She began her forensic career at the Bureau of Criminal Apprehension Forensic Laboratory as a toxicologist and crime scene artist. In 1999 she was transferred to the Questioned Document Section and trained under Senior QD Examiner Debra Springer. After completing her training, she applied for and completed board certification through the American Board of Forensic

Document Examiners in 2006. Ms. Hanson currently works as the Lead Technical Scientist at the BCA Forensic Laboratory in St. Paul, Minn. Ms. Hanson is a member of the Midwestern Association of Forensic Scientists, a provisional member of the American Society of Questioned Document Examiners, an assessor and member of the Technical Advisory Committee for the American Society of Crime Lab Directors, the Scientific Working Group for Questioned Document Examiners and presently works on the Board of Directors for ABFDE.

**John Paul Jones II** is a Program Manager with the National Institute of Standards and Technology's (NIST) Law Enforcement Standards Office (OLEs). He is currently researching the state of the Scientific Working Groups (SWGs) in the forensic industry and executing conferences to promote the application of advancements in measurement science to various forensic science disciplines. Mr. Jones has more than 14 years of scientific and management experience in the forensic industry. He previously served as an Innovation Technology Advisor with the Department of Defense's Defense Threat Reduction Agency where he managed programs that involved deployable forensic laboratories, sensitive site exploitation training, and development of various weapons of mass destruction detection technologies. Mr. Jones also served as a Program Manager with NIJ, where he managed the Forensic Technology Center of Excellence and the National Missing and Unidentified Persons Systems (NamUs). He received his bachelor's degree in biochemistry from Virginia Tech and a master's of business administration from Carnegie Mellon University.

**Dr. Moshe Kam** is the Robert Quinn Professor and Department Head of Electrical and Computer Engineering at Drexel University. He also serves as the Technical Coordinator of the U.S. Department of Defense funded project ACIN (Applied Communication and Information Networking) and as director of the Drexel University's Center for Excellence in Information Assurance Education. Dr. Kam served as principal investigator on more than 20 large-scale projects funded by the NSF, ONR, NSWC, the US Army, Lockheed Martin, and DARPA. Educated in Tel Aviv (Bachelors of Science in Electrical and Electronics Engineering, 1977) and Drexel University (Master of Science, 1985, Ph.D., 1987), Dr. Kam is a Fellow of IEEE "for contributions to the theory of decision fusion and distributed detection," (2001) and recipient of an IEEE Third Millennium Medal. He received a National Science Foundation Presidential Young Investigator Award (1990-1995) and is a Licensed Professional Engineer registered in the State of Pennsylvania. He served The Institute of Electrical and Electronics Engineers as Vice President for Educational Activities and as Director of Region 2 (Eastern USA).

**Jane Lewis** is certified by the American Board of Forensic Document Examiners. Ms. Lewis is a member of ASQDE, a director representing the Questioned Document Section of the American Academy of Forensic Sciences (AAFS), a fellow in the Questioned Document Section of AAFS, and a member of MAFS. In 1985, Ms. Lewis finished an internship in the Questioned Document section of the Secret Service Lab in Washington, DC. She graduated with a Master of Forensic Sciences degree from George Washington University and obtained a job as a document analyst with the FBI in the Hoover Building in Washington, D.C. Ms. Lewis soon moved up the Mall to the Secret Service Lab, but the lure of beer and bratwurst was too strong and she found herself

back home at the Wisconsin State Crime Lab in Milwaukee. Twenty-three years later, Ms. Lewis retired from the Milwaukee Lab and moved on to greener pastures working in private practice in Milwaukee.

**Brian Lindblom** has been a Forensic Document Examiner for almost 30 years, having received his initial training at the Royal Canadian Mounted Police (RCMP) Central Forensic Laboratory in Ottawa. He worked in that lab for seven years before opening a private practice in 1987. He is a member of the Canadian Society of Forensic Science, the American Society of Questioned Document Examiners, and the American Academy of Forensic Sciences. Mr. Lindblom holds a diploma from the Forensic Science Society (U.K.) and is an American Board of Forensic Document Examiners Diplomate. Mr. Lindblom is a co-editor and principal contributing author of the *Scientific Examination of Questioned Documents, 2<sup>nd</sup> Edition* published by CRC Press.

**Dr. Raymond Marquis** graduated in Forensic Sciences in the University of Lausanne (Switzerland) and received his Ph.D. in Forensic Sciences in the field of handwriting examination, with experience in validating the fundamentals of this discipline through the analysis of character shape. Dr. Marquis also worked as a researcher in continuation of his Ph.D. studies at the Institut de Police Scientifique (School of Criminal Sciences of the University of Lausanne). In parallel, he has been working as a questioned document examiner for civil, penal and private cases.

**Kenneth E. Melson** is a professorial lecturer in law at The George Washington University law School. For more than 30 years he has taught law and forensic science courses at both the law school and the Department of Forensic Sciences. In addition to teaching, Mr. Melson works in the General Counsel's office at the Office of Inspector General, U.S. Postal Service. Prior to that position, Mr. Melson was the Senior Advisor on Forensic Science in the Office of Legal Policy at the U.S. Department of Justice from August of 2011 to September of 2012. He also served as a co-chair of the Subcommittee on Forensic Science, Committee on Science of the National Science and Technology Council within the Executive Office of the President. In April of 2009, he was named as Acting Director of the Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF) by President Barack Obama, where he served until August 2011. Prior to his service at the ATF, Mr. Melson was appointed by the Attorney General as the Director of the Executive Office for U.S. Attorneys, where his responsibilities included administrative oversight of the 94 U.S. Attorneys' Offices and being a liaison among the U.S. attorneys, other federal agencies, and Department of Justice (DOJ) components. After serving as a state prosecutor in Arlington County, Va., for almost 10 years, Mr. Melson joined the United States Attorney's Office for the Eastern District of Virginia in 1983, becoming the First Assistant United States Attorney in 1986, a post he held until his departure in 2007. Mr. Melson is a graduate of the National Law Center at The George Washington University. He is a Past President of the American Academy of Forensic Sciences (AAFS) and a Distinguished Fellow. Mr. Melson is also a past chair of the Council of Scientific Society Presidents. For more than 15 years, Mr. Melson represented DOJ as a board member of the American Society of Crime Laboratory Directors/Laboratory Accreditation Board (ASCLD/LAB). He currently serves on the editorial board of the Journal of Forensic Sciences and on the Ethics Committee for the AAFS. He has also published in scientific texts and legal journals.

**Dr. Linton Mohammed** is a private practitioner in the San Francisco Bay area. He has been a document examiner for more than 25 years and has testified more than 100 times in the United States, England, and the Caribbean. He is certified by the American Board of Forensic Document Examiners, Inc. and holds a Diploma in Document Examination from the Forensic Science Society. He is a past-president of the American Society of Questioned Document Examiners and is a fellow of the American Academy of Forensic Sciences (Questioned Documents Section). His doctoral research at La Trobe University (Australia) was focused on signature examination.

**John Paul Osborn** is a forensic document examiner with more than 30 years of experience in the century-old Osborn family practice. He was trained under the supervision of his late father, Paul Osborn, and granted professional certification by the American Board of Forensic Document Examiners. Mr. Osborn has been published in the Journal of Forensic Sciences and has presented research in the field to organizations including the American Academy of Forensic Sciences and the American Society of Questioned Document Examiners. Mr. Osborn has appeared as a witness in numerous civil and criminal cases during his career, regularly working for United States Attorney's Offices and area district attorneys, as well performing work for non-profit legal organizations such as the Legal Aid Society and St. Johns University Elder Law Clinic.

**Brent Ostrum** is a senior forensic document examiner with the Canada Border Services Agency (CBSA) in Ottawa, Canada. He began his career more than 25 years ago with the Royal Canadian Mounted Police before joining the CBSA in 2002. Mr. Ostrum is an ABFDE Diplomate and the sitting chairman of Document Section of the CSFS. He serves as a volunteer member of the Executive Council for St2ar. Mr. Ostrum is a student of logic, statistical inference, and evidence evaluation. His research interests include assessment of examiner competency, method validation issues and the broad application of image and data processing to FDE problems.

**David Parrett** retired as the director and an examiner with the ASCLD/LAB International accredited Oklahoma County District Attorney's State Laboratory. Mr. Parrett is currently in private practice, and continues as an inspector/assessor for ASCLD/LAB. He currently serves on the ASCLD/LAB Proficiency Review Committee and is a member of the American Academy of Forensic Sciences Questioned Document Section, Midwestern Association of Forensic Scientists Questioned Document Section and the Southwestern Association of Forensic Document Examiners. Mr. Parrett received a Bachelor of Arts and MBA from the University of Central Oklahoma. He has served as an adjunct faculty member with the UCO Forensic Science Institute, established by former FBI laboratory director Dwight Adams.

**Dr. Christopher Saunders** is currently an assistant professor of statistics at South Dakota State University. He has also held positions with George Mason University and the MITRE Corporation. Dr. Saunders was introduced to statistical research in forensic handwriting analysis as an Intelligence Community Post Doctorial Research Fellow supporting the FBI and

the broader intelligence community. In general, his research focuses the statistics related to the interpretation and presentation of forensic evidence: usually in relationship to high dimensional data that naturally arises in such areas as the quantifications of handwriting data.

**Matthias Schulte-Austum** has developed and designed image processing algorithms and solutions for OCR applications since 1994. He has served in a technical leadership position in Siemens AG since 2004, managing the image processing development team in Konstanz, Germany. Since 2007 the team has broadened the scope of its work, taking on various related applications, including writer identification. Mr. Schulte-Austum has a master's degree in information science from the University of Konstanz in Konstanz, Germany, a bachelor's degree in electrical engineering from the Fachhochschule in Osnabrück, Germany and a bachelor's degree in combined engineering from Coventry Polytechnic in Coventry, UK.

**Kirsten Singer** is a forensic document examiner with the Department of Veterans Affairs, Office of Inspector General, forensic document laboratory in Washington, D.C. She received her training in forensic document examination with the Virginia Division of Forensic Science, and then worked federally with the IRS and U.S. Postal Inspection Service laboratories before transferring to VA OIG. Ms. Singer has a bachelor's degree from the University of Virginia, and a Master's of Forensic Science from George Washington University. She has been a document examiner for 27 years, and is a member of the American Academy of Forensic Sciences, the American Society for Questioned Document Examiners, and is the current President of the American Board of Forensic Document Examiners.

**Dr. Sargur Srihari** is a computer scientist whose work is on automated systems for pattern recognition and machine learning. The principal impact of his work has been on statistical methods, on the analysis and recognition of handwriting and in computational methods for forensic impression evidence. Dr. Srihari is currently a SUNY Distinguished Professor in the Department of Computer Science and Engineering at the University at Buffalo, The State University of New York where he also holds adjunct professorships in the Department of Biostatistics and in the Department of Electrical Engineering. He teaches courses in machine learning and probabilistic graphical models. With support from the United States Postal Service for over 20 years, he founded CEDAR, the Center of Excellence for Document Analysis and Recognition, in 1991, which had a major impact. He also played a leading role in establishing the International Conference on Document Analysis and Recognition, the International Conference on Frontiers in Handwriting Recognition, and the International Workshop on Computational Forensics. Dr. Srihari has served on the National Academy of Sciences Committee on Identifying the Needs of the Forensic Science Community (2007-08), the National Library of Medicine Board of Scientific Counselors (2001-07), the National Institute of Standards and Technologies' Expert Working Group on Human Factors in Latent Print Analysis (2008-10). He has chaired committees of the International Association for Pattern Recognition. He is presently chairman of CedarTech, a corporation for university technology transfer. His honors include Outstanding Achievements Award of IAPR/ICDAR in Beijing China in 2011, Distinguished alumnus of the Ohio State University College of Engineering in 1999, Fellow of the International Association for Pattern Recognition in 1996, Fellow of the Institute of Electrical and Electronics

Engineers (IEEE) in 1995, and Fellow of the Institute of Electronics and Telecommunications Engineers (IETE, India) in 1992. Dr. Srihari has authored more than 300 research papers, 65 of which are in journals (including one in the first issue of IEEE Transactions on Pattern Analysis and Machine Intelligence) and seven United States patents. Dr. Srihari received Bachelor of Science degrees in physics and mathematics from the Bangalore University (National College) in 1967, a B.E. in electrical communication engineering from the Indian Institute of Science, Bangalore in 1970, and a Ph.D. in computer and information science from the Ohio State University, Columbus in 1976.

**Peter Tytell** has been a private practice document examiner in New York for more than 40 years. He trained with his parents, Pearl and Martin, and took courses at Georgetown, the Institute of Paper Chemistry, Rochester Institute of Technology, and many other seminars and workshops. He has made numerous presentations and has taught and lectured in the U.S. and other countries. He is a diplomate of the ABFDE and a member of ASQDE and of the American Academy of Forensic Sciences Questioned Document section and received the section's Ordway Hilton Award. In the area of standards, he has been active in the work of SWGDOC and is a long-time member and a Fellow of the American Society for Testing and Materials; he has served as Membership Secretary of ASTM Committee E30 on Forensic Sciences for the last six years, was the Chairman of the Sub-Committee E30.02 on Questioned Documents for its first decade, and is a recipient of the ASTM Award of Merit and the ASTM Forensic Sciences Award.

**Rigo Vargas** has been a forensic document examiner for 15 years and currently works for the Mississippi Crime Laboratory in Biloxi, MS. Mr. Vargas earned a bachelor degree in biology with a minor in chemistry from Indiana University in 1996 and trained at the Mississippi Crime Laboratory from 1998 until 2000 under the tutelage of Frank Hicks. He is a diplomate of the American Board of Forensic Document Examiners (ABFDE) and a regular member of the Southeastern Association of Forensic Document Examiners (SAFDE) and the American Society of Questioned Document Examiners (ASQDE). Mr. Vargas is the current vice chairman of the Scientific Working Group for Forensic Document Examination and the past chairman of ASTM's E30.02 subcommittee for questioned documents.

**Thomas W. Vastrick** is an ABFDE board-certified forensic document examiner with more than 35 years of experience in both government and private practice. Mr. Vastrick received his training from the U.S. Postal Inspection Service. He is a member of the American Society of Questioned Document Examiners and is QD Section Chair of the American Academy of Forensic Sciences. Mr. Vastrick has written one book on forensic document examination and was a contributing author to two others. In 2010, Mr. Vastrick's proposal to NIJ to fund a comprehensive statistical study of handwriting and hand printing characteristic frequency of occurrence was approved; the study began in 2011. At the MSSFHA Conference, Mr. Vastrick will report on how the study began, the methodologies used and the current status of his project.

**Mark Walch** is the president of Gannon Technologies Group and inventor of the graph-based recognition technology that is the foundation of FLASH ID. The same concepts that drive FLASH ID also provide the basis for other biometric tools. The original concepts were developed to

recognize handwriting in multiple languages, and they ultimately proved to be very powerful pattern-matching tools not only for handwriting, but also fingerprints and other forms of impression evidence. Mr. Walch holds advanced degrees from the University of Michigan and Yale University.

**Heather Waltke** is the associate director for the Office of Investigative and Forensic Sciences at the National Institute of Justice, the research, development and evaluation agency of the U.S. Department of Justice (DOJ). Prior to accepting the position at DOJ, Heather was the lead forensic document examiner at the U.S. Treasury Department's Bureau of Financial Management Service. During her 11 years performing forensic document analysis at the U.S. Treasury Department, she examined U.S. Treasury checks for alterations, counterfeiting, and performed forensic handwriting comparisons in cases of suspected forgery. Ms. Waltke has a Masters of Forensic Science from George Washington University.

**Dr. Jeffrey P. Woodard** earned his Bachelor of Science in electrical engineering at the University of Idaho, his MBA at Rensselaer Polytechnic Institute, his M.S. in electrical and computer engineering from the University of California at Santa Barbara, and his Ph.D. in Psychology at Pacifica Graduate Institute. He is a principal engineer at MITRE CORP where he specializes in image processing. He is a member of Sigma Xi and a senior member of the IEEE. Dr. Woodard has served on the editorial board for numerous journals and conferences. He has published numerous peer-reviewed journal and conference articles and has been awarded nine patents.