



Jurisprudence Section - 2014

E8 Measurement Science and Standards in Forensic Handwriting Examination

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The goal of this presentation is to teach attendees about the current pertinent research relating to forensic handwriting examination and the future direction of research and case work. Attendees will also learn about the impact of this research on court cases involving forensic handwriting examination.

This presentation will impact the forensic science community by providing attorneys with solid case preparation materials in forensic document cases.

The Questioned Documents Section of the American Academy of Forensic Sciences (AAFS), the American Society of Questioned Document Examiners (ASQDE), the American Board of Forensic Document Examiners (ABFDE), the Federal Bureau of Investigation (FBI), and the Scientific Working Group on Forensic Document Examination (SWGDOC) all joined the Law Enforcement Standards Office (OLES) of the National Institute of Standards and Technology (NIST) as co-sponsors of the *Measurement Science and Standards in Forensic Handwriting Analysis Conference* on June 4-5, 2013, at the NIST campus in Gaithersburg, Maryland. All speakers were invited by the organizing committee to present on a tightly controlled theme. Quantitative measurements rather than qualitative aspects of forensic handwriting examination were emphasized. The program brought together forensic document examiners, researchers, statisticians, and an attorney to present the current state of the science and to design a roadmap for the future of forensic handwriting examination.

Forensic document examiners immerse themselves in significant texts and research in support of the science, but clients, attorneys, judges, and law enforcement personnel are uneducated about the complexity and scope of the work. This presentation will summarize the current research in support of forensic handwriting examination presented at this conference.

Since the *Daubert* decision was handed down by the Supreme Court, forensic handwriting examination has faced many judicial challenges, the most recent of which concerns the expression of similarity between the questioned and known specimens. Movement from a qualitative to a quantitative description of the expert's conclusions may give the courts more comfort.

Topics will include: the current state of handwriting examination; the foundational science behind handwriting identification, reproducibility and reliability studies; advances in measurement science in handwriting analysis; advances in statistics for handwriting examination; the legal implications of quantitative testimony; and, other analysis tools to support metrics.

The future of the handwriting identification portion of forensic document examiners' work will include the expanding use and analysis of digital signatures. Research on electronically captured signatures by William Flynn and the use of acceleration/deceleration plots in forensic analysis of electronically captured signatures by Kathleen Annunziata Nicolaidis will be discussed along with cases recognizing this work.

Forensic Document Examination, Measurement, Standards