W16   Litigating Fingerprint Evidence: Ensuring Transparent and Sound Scientific Foundations

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Learning Overview: After attending this workshop, attendees will better understand the basic tenets of scientific validity, understand how statistical methods may be applied to non-DNA disciplines with specific emphasis on fingerprint evidence, and be better equipped to litigate cases involving pattern evidence domains.

Impact on the Forensic Science Community: This presentation will impact the forensic science community by introducing legal and scientific practitioners to key issues concerning the examination, interpretation, and testimony of forensic pattern evidence domains and discuss a roadmap for litigating forensic evidence to ensure expert testimony is transparent, empirically substantiated, and scientifically valid. This workshop will include recommendations for laying the foundation for the introduction of pattern analysis evidence and discuss the challenges for its admission.

Fingerprint evidence has been admissible in legal proceedings for more than a century and practiced by nearly every forensic laboratory throughout the world. Once viewed as the gold standard of forensic evidence, the fingerprint discipline, in addition to nearly every other forensic discipline, is experiencing a great deal of turbulence as it navigates through the criticisms from the National Research Council (NRC), the President's Council of Advisors on Science and Technology (PCAST), and several other professional working groups and academic commentators. Although the forensic fingerprint discipline was determined to be foundationally valid by the PCAST in 2016, questions remain regarding the validity of the methods when applied to a specific case at hand. The primary concern is the legal field's inability to assess the reliability of fingerprint comparison results for a given case without validated statistical data concerning the strength of the findings, thus bringing into question the scientific validity of fingerprint evidence and threatening its admissibility in criminal courts. These concerns have stimulated a great deal of healthy debate within the forensic fingerprint discipline regarding how forensic science laboratories can move forward considering these criticisms and demonstrate the applied validity of their methods so they may continue to serve the criminal justice community.

Through a combination of lectures and group discussions, this workshop will provide a candid assessment of the current state of the forensic fingerprint discipline through the lenses of scientific validity, discuss existing gaps between the current state of the practice and the ideal future state of the science, and propose a way forward for the forensic fingerprint community to navigate toward a stronger scientific foundation. As a result, forensic science practitioners, laboratory leaders, forensic science policy makers, and criminal and civil litigators will have a much better understanding of the issues related to traditional practices of fingerprint examinations, become familiar with novel methods that can be leveraged by forensic science laboratories to promote more objective, transparent, and standardized practices, and become better positioned to litigate and introduce forensic evidence and advocate for appropriate improvements within their respective jurisdictions.

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