



## Criminalistics Section - 2016

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### **B91 Embracing Change: Transitioning Pattern Evidence Research Into Forensic Science Operations**

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After attending this presentation, attendees will understand the essential factors for the successful transition of pattern evidence research into operational practice.

This presentation will impact the forensic science community by describing the key factors for insuring the successful transition of pattern evidence research into practice, as well as some of the impediments to such transition. Understanding the factors for successful transition will help forensic practitioners rapidly adopt new technology and will enhance the accuracy and reliability of forensic science.

Forensic science research and development efforts have seen a significant rise over the past decade, which may be attributed to many factors. The increased lay knowledge of forensic science and the “CSI effect” resulted in expectations of high-tech methods as “common practice” in forensic science; more universities began offering forensic science coursework and degree programs, which in turn focused more research attention on forensic science issues. The 2009 National Research Council of the National Academy of Sciences (NAS) Report, *Strengthening Forensic Science in the United States – A Path Forward*, which questioned the accuracy and reliability of some of the oldest and most renowned forensic science disciplines, specifically called for research to assess the scientific foundations of the pattern evidence disciplines.<sup>1</sup> Finally, more federal research funds became available for both basic and applied research in forensic science disciplines in light of the 2009 NAS Report.

However, increases in funding and research effort do not always yield a significant increase in useful products transitioned into operational practice. It is important to note that only a small fraction of research and development in most scientific endeavors ever reach successful completion, and an even smaller percentage are put into practice. With the forensic sciences receiving increased scrutiny as well as increased research resources, it is more important than ever to insure the successful transition of research products into the operational forensic laboratory.

Lessons learned from the transition of pattern evidence research into operational practice will be presented. Factors contributing to successful implementation as well as impediments to transition will be discussed using examples from research in latent prints and questioned documents. Examples of research transitions will include small, incremental changes to methods and practice, adoption of novel analytical methods, and research that provided foundational support for continued practice or significantly changed the analysis or interpretation of the discipline.

#### **Reference(s):**

1. National Research Council, National Academy of Sciences (2009) *Strengthening Forensic Science in the United States: A Path Forward* (National Academies Press, Washington, DC).

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#### **Research, Pattern Evidence, Criminalistics**