

Thursday May 5 Green Auditorium	Friday May 6 Portrait Room
0830 Registration + Continental Breakfast	0800 Registration
0900 Welcome introduction, goals, logistics	0830 Review of day 1, polls, question and answer
	0840 "Forensic DNA Evidence Interpretation", <b>John Buckleton</b> , National Institute of Standards and Technology
0930 "Perspectives and Challenges from NIST Involvement in Forensic Science", <b>John Butler</b> , National Institute of Standards and Technology	0925: "Quantitative Firearms and Toolmark Analysis: New Developments and Software", <b>Nicholas Petraco</b> , John Jay College of Criminal Justice
1015 Break	1000 Break
1045 "The 'Weight of Evidence' in Law, Statistics, and Forensic Science", <b>David Kaye</b> , Penn State Law	1030 "A new paradigm for forensic science and its implementation in forensic voice comparison", <b>Geoffrey Stewart Morrison</b> , Morrison & Enzinger, Independent Forensic Consultants
1130 – "What is probability", <b>Jim Wayman</b> , San Jose State University	1115 Discussion Moderator: <b>Joe Campbell</b> , MIT Lincoln Laboratory
1200 Lunch (on your own)	1200 Lunch (on your own)
1330 "Evaluating and reporting forensic evidence using the LR framework: statistical challenges" <b>Marjan Sjerps</b> : Netherland Forensic Institute	1330 Panel on Similarity based LR models, <b>Chair: Cedric Neumann</b> , South Dakota State University Panelists: Doug Armstrong, Marjan Sjerps , Hal Stern, Steve Lund
1400 Discussion	
1430 Break	1500 Break
1500 <b>JoAnn Buscaglia</b> : FBI (tentative)	1530 Panel on LR Confidence interval, <b>Chair: Chris Saunders</b> , South Dakota State University Panelists: Danica Ommen, Marjan Sjerps , Hal Stern, Hari Iyer
1530 "Integrating Probabilistic Logic and Quantitative Data into Practice: Latent Print Examination", <b>Henry Swofford</b> U.S. Army Criminal Investigation Laboratory	
1600 Discussion. Moderator <b>Bill Thompson</b> , UC Irvine	1700 Wrap up

### **Panel on similarity based likelihood ratio**

Chair: Cedric Neumann, South Dakota State University

Panelists:

- \* Doug Armstrong, South Dakota State University
- \* Marjan Sjerps, Netherland Forensic Institute
- \* Hal Stern, University of California at Irvine/CSAFE
- \* Steven Lund, National Institute of Standards and Technology

The legal and scientific push towards the statistical quantification of the weight of forensic evidence is impeded by the complexity the various evidence types encountered on crime scenes. Complex forms of forensic evidence, such as fingerprints, tool marks, shoe prints or chemical profiles often live in high dimensional and heterogenous spaces. The need to reduce the complexity of the models has resulted in the apparition of a series of ad-hoc measures of the probative value of some forms of forensic evidence, which rely, by proxy, on the level of similarity (or score) between pairs of objects, instead of being directly based on sets of measurements of these objects. The appropriateness of these ad-hoc methods has been challenged at several occasions. The challenges are based on the argument that these methods do not address the questions of interest to forensic scientists and courts, and do not provide a coherent (in the statistical sense) way of updating prior information in a Bayesian framework. Proponents of these methods have made the argument that since probabilities are inherently subjective (or personal), the probative values calculated by these methods were merely an expression of the personal weight assigned by the forensic scientist to the evidence, and therefore were acceptable. The aim of this panel is to discuss the appropriateness of score-based methods as a mean to quantify and report the weight of forensic evidence, and the place of these methods in a coherent Bayesian paradigm.

### **Panel on the use of interval quantifications for the value of forensic evidence**

Chair: Chris Saunders, South Dakota state university

Panelists:

- \* Danica Ommen, South Dakota State University
- \* Hari Iyer, National Institute of Standards and Technology
- \* Marjan Sjerps, Netherland Forensic Institute
- \* Hal Stern, University of California at Irvine/CSAFE

At the 2012 ENFSI meeting, Ivo Alberink and James Curran proposed an interval quantification of the value of evidence. This led to a lively discussion on the reasonableness of these intervals for the logical and coherent interpretation of forensic evidence. Geoffrey Morrison arranged for a series of short presentations on this issue at the 2015 ENFSI meeting. This resulted in a series of papers published in Law, Probability, and Risk arguing the validity of using these intervals in the formal subjective Bayesian paradigm for evidence interpretation. It appears that the two groups arguing for and against the use of intervals are talking past each other, with one group taking a frequentist stance (or the likelihood paradigm of Edwards and Royall) and the other taking a completely subjective Bayesian view. This panel will be focused on discussing the possibility of and developing a common foundation among the participants to be able to discuss what an interval estimate of the likelihood ratio actually means and its relationship to the formal value of evidence as characterized by the Bayes Factor.