| Thursday May 5 Green Auditorium                                 | Friday May 6 Bldg. 215, Rm. C103                                |
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| 0830 Registration + Continental Breakfast                       | 0800 Registration   |
| 0900 Welcome introduction, goals, logistics                     | 0830 Review of day 1, polls, question and answer                |
|   | 0840 John Buckleton: DNA  |
| 0930 <b>John Butler</b> , NIST                                  | 0925: Firearms  |
| 1015 Break  | 1000 Break  |
| 1045 <b>David Kaye</b> , presenting the identification findings | 1030 Geoffrey Morrison: voice                                   |
| 1130 - <b>Jim Wayman</b> , what is probability                  | 1115 Discussion Moderator: Joe Campbell, MIT Lincoln Laboratory |
| 1200 Lunch (on your own)  | 1200 Lunch (on your own)  |
| 1330 <b>Marjan Sjerps</b> : Netherland Forensic Institute       | 1330 Cedric Neumann: Similarity based LR models                 |
| 1400 Discussion   | Doug Armstrong, Marjan Sjerps , Hal Stern, Steve Lund           |
| 1430 Break  | 1500 Break  |
| 1500 <b>JoAnn Buscaglia</b> : FBI (tentative)                   | 1530 Chris Saunders: LR Confidence interval                     |
| 1530 <b>Henry Swofford</b> Army Crime Lab (tentative)           | Danica Ommen, Marjan Sjerps , Hal Stern, Hari Iyer              |
| 1600 Discussion. Moderator <b>Bill Thompson</b> (UC Irvine)     | 1700 Wrap up  |
| 1730 Adjourn  | 1730 Adjourn  |

## 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

<u>Chair</u>: 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.