



## **Steps towards the statistical interpretation of multi-element forensic evidence**

James M. Curran

The 2009 National Academy of Science Report "Strengthening Forensic Science in the United States: A Path Forward" held the treatment of DNA evidence up as a gold standard for the interpretation and presentation of forensic evidence. Whether one agrees that DNA is, in fact, such a gold standard or not, the point remains that the advances in the (statistical) interpretation of evidence have not progressed as far as they have in DNA. In this talk I will discuss why we need statistical interpretation of forensic evidence, and why the Bayesian, or Likelihood Ratio approach fits most closely with the requirements of the court. I will also talk about the issues that are peculiar to the treatment of evidence arising from multi-element concentration data, and the current challenges to a full adoption of the Bayesian methodology