



Joint MUMS Program Transition - SPUQ Workshop
May 14-17, 2019
SPEAKER/ABSTRACT

Jan Hannig, University of North Carolina at Chapel Hill
"Are Reported Likelihood Ratios Well Calibrated?"

Abstract:

Many computer programs and software systems used in the interpretation of forensic evidence have as their output Bayes factors also commonly referred to as likelihood ratios. For example, it is not unusual to see it reported that the DNA recovered at the crime scene is a million times more likely under the assumption that the defendant is a contributor to the crime stain than under the assumption that the defendant is not a contributor. In this talk we summarize existing approaches for examining the validity of likelihood ratio systems and discuss a new statistical methodology, based on generalized fiducial inference, for empirically examining the validity of such likelihood ratio assessments. Using data from a number of sources, such as glass, paint and DNA evidence, we illustrate our approach by examining LR values calculated using standard approaches in forensic literature.

Joint work with Hari Iyer at National Institute of Standards and Technology