

Noel Cressie

Distinguished Professor, Program in Spatial Statistics and Environmental
Statistics, The Ohio State University

Title

Statistical Science: A Tale of Two Unknowns

Abstract

Science's passion is to answer the "Why" question and, in its pursuit, it often comes across the "Where" and "When" questions. Good data collection involves a protocol that specifies where (i.e., spatial locations) and when (i.e., temporal instants) the measurements were taken. Hence, it is possible to think about uncertainties in science as being partly explained by spatial variability and temporal variability. Ronald A. Fisher was very aware of spatial dependence in field trials; an externally imposed process of randomization was his way of dealing with it. This talk weaves a tale of two unknowns, and I make a case that Fisher would not have been so opposed to Thomas Bayes' work if he had recognized "the other unknown." No prior knowledge about Fisher and Bayes is assumed!