



Clarkson™

Statistics Workshop

Friday, September 6, 2019

Introduction to Statistical Meta-Analysis

Bimal Sinha, Department of Mathematics and Statistics, UMBC
Snell 214, 9.00 - 10.00 AM

Statistical Meta-Analysis (SMA) deals with the art of efficiently combining information from different independent sources all targeted towards a common goal. Examples of SMA abound in the literature. In this talk a variety of applications will be presented, and basics of SMA will be discussed. Some theoretical contributions will also be covered.

Workshop on Statistical Meta-Analysis

Guido Knapp, Department of Statistics, TU Dortmund University
Snell 241, 10.00 - 12.00 PM, 1.00 - 5.00 PM

Topics:

1. Introduction to meta-analysis
2. Fixed effect and random effects meta-analysis models
3. Combining effect sizes for normally distributed outcomes
4. Meta-analysis for binary data
5. Detecting publication bias and small study effects
6. Explaining heterogeneity by meta-regression and subgroup analysis
7. R packages *meta* and *metafor* for meta-analysis

Organized by Department of Biology, Department of Mathematics, and Data Analytics Program, Clarkson University

Workshop is free of charge; however, **REGISTRATION IS REQUIRED**

For more information about the workshop please contact **Shantanu Sur** (ssur@clarkson.edu), **Sumona Mondal** (smondal@clarkson.edu), or **Andrew Cook** (cookaz@clarkson.edu)

Light refreshments and lunch will be provided to workshop attendees.



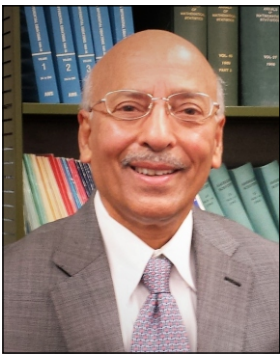
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Bimal Sinha, Ph.D.

Department of Mathematics and
Statistics
University of Maryland



Professor Sinha is the Founder of the Statistics Graduate Program at UMBC. A 1973 Ph.D. in statistics from the University of Calcutta, Professor Sinha is an ex-faculty of the Indian Statistical Institute and the University of Pittsburgh. A Professor of Statistics at UMBC since 1985, Professor Sinha's research activities span topics in theoretical and applied statistics, including multivariate analysis, linear models, ranked set sampling, environmental statistics, statistical meta-analysis, and data analysis under confidentiality protection. He has coedited several volumes, and coauthored four books (John Wiley, Springer, Academic). He is a Fellow of the American Statistical Association and the Institute of Mathematical Statistics, and an elected member of the International Statistical Institute. His research has been funded by the US Environmental Protection Agency for about twenty years. Professor Sinha's research contribution in the area of environmental statistics has been recognized through a Distinguished Achievement Award from the Environmental Statistics Section of the American Statistical Association. In acknowledgment of his research productivity, Professor Sinha was named a Presidential Research Professor in 2008. Furthermore, he received the University System of Maryland Board of Regents Excellence in Research award in 2012. Professor Sinha has served on the editorial board of several national and international statistics journals.

Guido Knapp, Ph.D.

Department of Statistics
TU Dortmund University



Professor Knapp is a faculty member in the Department of Statistics of TU Dortmund University, Germany, since 1992. He got his doctorate in statistics in 1996 as well as his postdoctoral lecture qualification in 2009 from TU Dortmund University. In 2006, he was visiting assistant professor at the Department of Mathematics and Statistics, University of Maryland, Baltimore County, U.S.A., and from 2012 to 2014, he was visiting associate professor at the Institute of Applied Stochastics and Operations Research, TU Clausthal, Germany. He has published many papers on various aspects of statistical meta-analysis. His paper on 'Models for Combining Results of Different Experiments: Retrospective and Prospective' joint with Joachim Hartung won the annual Saaty prize in 2006. He is also co-author of the book 'Statistical Meta-analysis with Applications' joint with Joachim Hartung and Bimal K. Sinha published by Wiley in 2008. In 2018, he was elected as a member of the Society for Research Synthesis Methodology.