Predictive Modeling with Big Data in Educational Research

Guest Lecture by Frederick L. Oswald, Professor
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12:00 – 1:15 pm, Education 2010

Abstract: This presentation covers (a) basic principles of predictive modeling, compared alongside more traditional analyses, (b) an overview and application of three predictive models (i.e., elastic net regression, random forests, and clustering via weighted partitioning), and (c) a consideration of potential implications for educational research and graduate training.

Dr. Frederick L. Oswald is a Professor in the Department of Psychology at Rice University. As an organizational psychologist, his expertise, extensive publications, and large-scale grant-funded research address issues pertaining to personnel selection, college admission, military selection and classification, and school-to-work transition. He publishes statistical and methodological research in the areas of big data, meta-analysis, measure development, and psychometrics. Currently, Fred is an Associate Editor of Journal of Management, Psychological Methods, Advances in Methods and Practice in Psychological Science, and Journal of Research in Personality, and he also currently serves on 10 Editorial Boards. He serves on the Board of Human Systems Integration (BOHSI) as part of the National Academy of Sciences (NAS), and he served on an NAS committee that just completed a report on measuring intrapersonal and interpersonal skills. He is the current President and a Fellow of the Society for Industrial and Organizational Psychology (SIOP; APA Div. 14), and a Fellow of Evaluation, Measurement, & Statistics (APA, Div. 5), the American Psychological Association (APA), and the Association for Psychological Science (APS). He received his Ph.D. and M.A. in industrial-organizational psychology from the University of Minnesota in 1999.