

MICHIGAN STATE UNIVERSITY
Department of Statistics and Probability

COLLOQUIUM

Zhiliang Ying
Columbia University

Statistical Modeling and Analysis of Process Data

Thursday, April 20, 2023
10:20 AM - 11:10 AM [Eastern Time](#)
C405 Wells Hall, Simulcast on Zoom

Abstract:

Measurement theory has played a foundational role in educational assessment. Classical item response theory models are widely used for analysis of results from tests involving multiple choice questions. The emergence of complex problem solving items and related process data in recent years calls for new statistical models and machine learning tools. This talk discusses some recent developments of statistical models, theory and machine learning algorithms for process data, and their applications to large scale educational assessment tests.

Bio:

Zhiliang Ying received BS (1982, mathematics) from Fudan University, MA (1985, Statistics) and PhD (1987, Statistics) from Columbia University. From 1987 to 1993, he was Assistant and Associate (with tenure) Professor of Statistics at University of Illinois at Urbana-Champaign. In 1994, after one year at Columbia University, he joined Rutgers University where he also served as Director of Institute of Biostatistics. He has been professor of statistics at Columbia University since 2000. Zhiliang Ying's research activities span methodological research in statistics, and its applications in other disciplines. They include areas of survival analysis, semiparametric models, sequential analysis, computerized adaptive testing, cognitive diagnosis, stochastic control, statistical methods for financial data among other. He has published over 170 journal articles and served as consultant to major pharmaceutical companies as well as medical research centers. Zhiliang Ying is a fellow of the Institute of Mathematical Statistics (1995), of the American Statistical Association (1999) and of the American Educational Research Association (2021). He served as President of the International Chinese Statistics Association (2003). He is a recipient of the Morningside Gold Medal of Applied Mathematics (2004), NCME Annual Award (2008), AERA Division D Significant Contribution to Educational Measurement and Research Methodology Award (2011).

Zoom details can be found at: <https://stt.natsci.msu.edu/stt-colloquium-zoom-info/>

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