Modern Modeling Methods 2018

Schedule of Concurrent Paper Sessions

Concurrent Paper Session 1: Tuesday 10:30am - 12:00pm

Session 1A: Bayesian Models

Paper	Authors
Understanding Bayesian Nonparametric Methods Through Programming a Dirichlet Process Mixture Model	Yuelin Li Elizabeth A. Schofield Schofield, Elizabeth A. Consulting Center
Bayesian Estimation for Cases of Empirical Underidentification: Examples of Multitrait-Multimethod Data Analysis	Jonathan Helm

Session 1B: Approaches for Modeling Clustered Count Data

Paper	Authors
Approaches for Modeling Clustered Count Data	Ann O'Connell Jing Zhang

Session 1C: Behavioral Applications

Paper	Authors
Gender differences in time varying effects of adolescent affect and suicidal ideation following discharge from psychiatric hospitalization	Leslie A. Brick Marisa E. Marraccini Michael F. Armey Nicole R. Nugent
Trajectories of family formation: the effects of parental divorce in a cross national perspective	Y. (Sapphire) Han A.C. (Aart) Liefbroer C.H. (Cees) Elzinga
Transitions in Substance Use Patterns from Adolescence to Young Adulthood	Gabriel J. Merrin Kara Thompson Bonnie J. Leadbeater

Session 1D: Symposium – Quantitative Methods for Neuroimaging

Symposium	Authors
Leveraging a Between-Person Grouping Algorithm to Estimate Within-Person Brain Dynamics	Adriene M. Beltz Hailey L. Dotterer
Evaluating task-dependent brain connectivity with basis functions in GIMME	Kelly A. Duffy Kathleen M. Gates Jessica R. Cohen
Identifying and estimating relations within and between functional brain networks using MIIVsem and GIMME	Kathleen M. Gates Zachary Fisher Kenneth A. Bollen
Confirmatory Subgrouping of Functional Brain Networks in Children with ADHD	Jessica R. Cohen Kelly A. Duffy Stewart H. Mostofsky
Inference Equifinality: Localizing network models using the jackknife.	Teague R. Henry Jessica R. Cohen

Session 1E: Symposium – Statistical Innovations for Longitudinal Data Analysis

Symposium	Authors
Sparse functional log-contrast regression with longitudinal/functional compositional covariates	Ken Chen
Heavy-tailed longitudinal regression models for censored data: A robust parametric approachs	Larissa A. Matos VActor H. Lachos Tsung-I Lin Luis M. Castro
Joint Principal Trend Analysis for Longitudinal High-dimensional Data	Yuping Zhang Zhengqing Ouyang

Concurrent Paper Session 2: Tuesday 1:15pm – 2:15pm

Session 2A: Bias Reduction Methods

Paper	Authors
Toward Understanding Contradictory Methods for Reducing Selection Bias in Longitudinal Analyses	Hua Lin Robert E. Larzelere
Assessing Omitted Confounder Bias in Multilevel Mediation Models	Ken Kelley

Session 2B: Innovative Longitudinal Approaches

Paper	Authors
An Alternative Nonlinear Growth Model Based on Hyperbolic Sine Function	Oyamakin Samuel Oluwafemi Chukwu Angela Unna Bamiduro Timothy Adebayo
Application of mixed-effect location scale model in a two-group RCT to reveal positive mean changes and decreased dispersion of abstinence attitudes in a longitudinal middle school program.	Harry Piotrowski Donald Hedeker

Session 2C: Advances in Latent Variable Modeling

Paper	Authors
Evaluation of Case Diagnostics in Latent Variable Modeling	Jennifer Koran Fathima Jaffari
Leverage-based confidence intervals for structural equation modelling.	Paul Dudgeon Mariska Barendse Yves Rosseel

Session 2D: Psychometrics Models

Paper	Authors
How to model latent ability levels when the correct answer is unknown: a cognitive psychometric approach	Zita Oravecz
A Comparison of Scoring Methods for Multiple-Choice Multiple-Select Items Using NAEP 2016 DBA data	Xiaying Zheng Young Yee Kim

Session 2E: Modeling Applications in Meta-Analysis

Paper	Authors
Individual participant data meta-analysis with a causal interpretation: Application in adolescent HIV prevention	Heather McGee Daniel Gittins Stone
A Bayesian Network Meta-Analysis of the Relationship between Corruption and Educational Outcomes in the New Millennium	Dandan Chen

Concurrent Paper Session 3: Tuesday 2:30pm – 3:30pm

Session 3A: Categorical Latent Variable Models

Paper	Authors
Performance of Latent Growth Curve Models with Binary Variables	Jason T. Newsom Nicholas A. Smith
Multilevel SEM for ordinal data in the 'wide' format approach	Mariska Barendse Yves Rosseel

Session 3B: Text Analysis Models

Paper	Authors
Using Text Mining to Identify Themes in Focus Group Data	Holmes Finch Maria Hernandez Finch Jill Walls Scott Hall
Waste Not, Want Not: A Methodological Illustration of Quantitative Text Analysis	Laura Castro-Schilo Steven A. Miller

Session 3C: Centering Predictor and Mediator Variable in Multilevel and Time-Series Models with Random Slopes

Paper	Authors
Centering Predictor and Mediator Variable in Multilevel and Time-Series Models with Random Slopes	Tihomir Asparouhov Bengt Muthen

Session 3D: Modern Data Modeling Approaches

Paper	Authors
Handling Missing Data in Social Network Analysis: A Comparison of Approaches	Nathan T. Abe Elizabeth A. Sanders Elizabeth A. Dietrich
Data Mining Techniques to Estimate Propensity Scores with Continuous Treatments	Zachary K. Collier

Concurrent Paper Session 4: Wednesday 8:00am – 9:00am

Session 4A: Models for Single Case Designs

Paper	Authors
Bayesian Model Averaging for Single-Case Experimental Design Effect Size Estimation	Mariola Moeyaert S. Natasha Beretvas Sijyn Zhang Emily Rodabaugh
Power Estimates to Test Predictor Effects in Two-Level Modeling of Single-Case Data	Diana Akhmedjanova Mariola Moeyaert

Session 4B: Model Selection Techniques

Paper	Authors
Revisiting Model Selection from Fisher's Scientific Paradigm: An argument against the dichotomization of evidence.	Allen G. Harbaugh Wenbin Teng
Comparing Classical Information Criteria with the APC criterion	Abuzar Md. Shafiullah Arden Miller

Session 4C: Measurement Invariance Applications

Paper	Authors
Factorial Structure of Attitudes and Social Norms Scales in Math: Testing Measurement Invariance Across Cultural Groups	Sounghwa Walker Keith Widaman
Examining the Factor Structure and Measurement Invariance of Science Attitude Items across Genders	Ji Yoon Jung Anne Traynor

Session 4D: Reproducing ANOVA Using SEM

Paper	Authors
Dust Yourself Off and Try Anew: Reproducing ANOVA using SEM	Jonathan Helm

Concurrent Paper Session 5: Wednesday 9:15am – 10:15am

Session 5A: Exploratory Data Analysis

Paper	Presenter
Comparison of exploratory data mining approaches for understanding adolescent recovery capital	Emily A. Hennessy Emily E. Tanner-Smith Andrew J. Finch
Exploratory Mediation Analysis with Many Mediators	Erik-Jan van Kesteren Daniel Oberski

Session 5B: Latent Class Tree Models

Paper	Authors
Using Latent Class Trees to Classify New Students in an Adaptive Assessment Progression	John P. Madura
An improved latent class (LC) paradigm to obtain meaningful segments in the presence of scale confounds: Scale Adjusted Latent Class (SALC) Tree modeling	Jay Magidson

Session 5C: Modeling Single Case Designs

Paper	Authors
Analysis of Single-Case Experimental Count Data Using the Linear Mixed Effects Model: A Simulation Study	Lies Declercq Laleh Jamshidi S. Natasha Beretvas Mariola Moeyaert John M. Ferron Wilm Van den Noortgate Belen Fernandez-Castilla
Synthesizing Single-Case Studies via Multilevel Models: Limitation of Model Complexity	Ke Cheng Zhiyao Yi John Ferron Mariola Moeyaert S. Natasha Beretvas Wilm Van den Noortgate

Session 5D: Latent Variable Modeling

Paper	Authors
Estimation and Application of the Latent Group Model	Joseph Bonito Jennifer L. Ervin Sarah M. Staggs
Quantifying estimation uncertainty by examination of fungible parameter estimates in SEM	Jordan L. Prendez Jeffrey R. Harring

Concurrent Paper Session 6: Wednesday 10:30am – 12:00pm

Session 6A: Educational and Social Applications

Paper	Authors
Political Regulations of Sexuality: the Sexual Minorities' Rights in European Countries	Dmitrii S. Tolkachev
School performance and environmental factors among students in Kenya context: Dealing with endogeneity	Mwarumba Mwavita Simon Wagura
Getting a Clear Picture of Kindergarten Learning and Performance	Ya Mo Nell Sedransk

Session 6B: Mixture Modeling Applications

Paper	Authors
Modeling of Self-Report Behavior Data using the Generalized Covariates in a Uniform and Shifted Binomial Mixture Model	Holmes Finch Maria Hernandez Finch
Cluster Effects on Parameter Estimation in Multilevel Regression Mixture Models	Chi Chang M Lee Van Horn

Session 6C: Bayesian Thinking

Paper	Authors
Operationalizations of inaccuracy of prior distributions in simulation studies: implications for recommendations made for applied researchers	Milica Miocevic
Towards Bayesian analogs to REML Variance Components: A Gentle Introduction for the Newcomer	Jonathan Templin Tyler Hicks
Risk ratios for contagious outcomes	Olga Morozova Ted Cohen Forrest W. Crawford

Session 6D: Symposium – Substance Use Focused Mediation Modeling

Symposium	Authors
The Factor Structure of Self-Esteem and Its Relationship to Alcohol Use in American Indian Adolescents	Melissa R. Schick Tessa Nalve Natasha Prasad Nichea S. Spillane
How do text-messaging smoking cessation interventions confer benefit? A multiple mediation analysis of Text2Quit.	Bettina B. Hoeppner Susanne S. Hoeppner Lorien C. Abroms
Early onset marijuana use is associated with learning inefficiencies	Randi M. Schuster Susanne S. Hoeppner Anne E. Evins Jodi M. Gilman
A reinforcement sensitivity model of affective and behavioral dysregulation in marijuana use and associated problems	Noah N. Emery Jeffrey S. Simons

Session 6E: Symposium – Recent Advanced in Online-Updating Methods for Regression-type Models Involving Big Data Streams

Symposium	Authors
Online Updating of Statistical Inference in the Big Data Setting	Elizabeth D. Schifano
Online Updating of Survival Analysis in the Big Data Setting	Jing Wu
Proportional Hazards Tests and Diagnostics in the Online Updating Setting	Yishu Xue

Concurrent Paper Session 7: Wednesday 1:15pm – 2:15pm

Session 7A: Modeling Applications

Paper	Authors
Natural Language Processing: An Analysis of Treatment Participant Journals	Dakota Cintron
The longitudinal associations between substance use, crime, and social risk among emerging adults: A longitudinal within and between-person latent variables analysis	Gabriel J. Merrin Jordan P. Davis Daniel Berry Elizabeth D'Amico Tara M. Dumas

Session 7B: Modeling Health Disparities

Paper	Authors
Modeling health disparities with a unique combinations of 1-on-1 matching and latent difference and latent change scores	Emil Coman Christina Wilson Alysse Melville Judith Fifield
A methodical review of the causal role of socioeconomic determinants of health disparities	Emil Coman

Session 7C: Symposium – Advances in Handling Complex Nested Data Structures in Multivariate Multilevel Models

Symposium	Presenter
A New Way for Handling Student Mobility with Longitudinal Data in Educational Research	Congying Sun Audrey Leroux Christopher Cappelli
Evaluation of a Piecewise Growth Model for Multiple Membership Data Structures	Christopher Cappelli Audrey Leroux David Fikis
Multilevel Latent Class Analysis for Cross-Classified Data Structures	Katherine Masyn Audrey Leroux

Session 7D: Measurement Models

Paper	Authors
Comparison of the Multiple Indicators, Multiple Causes Model and Hierarchical Generalized Linear Model to Detect, Moderate, and Mediate Differential Item Functioning	Kevin Krost
Dimensionality of Force Concept Inventory: The Comparison of Bayesian Item Response Models	Xiaowen Liu Eric Loken

Session 7E: Sensitivity Analysis in Latent Growth Curve Mediation Models

Paper	Authors
Sensitivity Analysis in Latent Growth Curve Mediation Models	Davwood Tofighi Yu-Yu Hsiao Eric S. Kruger David P. MacKinnon M. Lee Van Horn Katie Witkiewitz