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PROGRAM OF THE 73RD ANNUAL MEETING OF THE PSYCHOMETRIC SOCIETY

The 72rd Annual Meeting of the Psychometric Society (IMPS2008) was held at the University of New Hampshire, United States, June 29–July 2, 2008.

Sunday, June 29

PRESESSION WORKSHOPS

MODELS FOR LONGITUDINAL AND INCOMPLETE DATA. Facilitators: Geert Molenberghs & Geert Verbeke, K.U. Leuven, U. Hasselt

ADVANCED LATENT VARIABLE MIXTURE MODELING. Facilitator: Bengt Muthén, UCLA

FITTING MIXED-EFFECTS MODELS USING THE LME4 PACKAGE IN R. Facilitator: Douglas Bates, Univ. Wisconsin Madison

PRESESSION ACTIVITIES

Welcome Reception

Monday, June 30

STRAFFORD SESSIONS

STATE-OF-THE-ART LECTURE.
Michael Edwards; *Item Factor Analysis: Where We've Been and Where We Might Be Going*

STATE-OF-THE-ART LECTURE.
Jeroen Vermunt; *Latent Class and Finite Mixture Models: Recent Developments*

ADVANCED TOPICS IN LATENT VARIABLE MODELING. (Invited Session) Organizer: Irini Moustaki, London School of Economics
J. Kuha; *Missingness Factors in Latent Variable Modeling*
D. Mavridis; *Goodness-of-Fit Tests and Detection of Atypical Response Patterns in Latent Variable Models Using Posterior Predictive Checks*
E.A. Erosheva; *Unimodal Hierarchical Curve Registration for Count Data: Analyzing Longitudinal Crime Patterns*
A. Skrondal; *Prediction in Multilevel Generalized Linear Models*
I. Moustaki; *Latent Variable Models with Non-Linear Effects*

S17: ADVANCES IN ITEM RESPONSE THEORY MODELS FOR UNFOLDING. (Invited Session) Organizer and Chair: James Roberts, Georgia Institute of Technology

Y. Noel; *The Beta Unfolding Model for Continuous Bounded Responses*
J.S. Roberts; *Accuracy of Alternative Parameter Estimation Methods with the Generalized Graded Unfolding Model*
M. Polak; *A Comparison of Correspondence Analysis with Parametric and Nonparametric IRT Models for Analyzing Single-Peaked Responses*
W.H. van Schuur; *The Circumplex: An Ordinal Circular Unfolding Model for Polytomous Data*

INVITED LECTURE.
Sophia Rabe-Hesketh; *Comparison of Methods for Handling Endogeneous Covariates in Longitudinal Data*

INVITED LECTURE.
Jacqueline Leighton; *Cognitive Diagnostic Assessment for Education: Theory and Applications*

COCHECO/PISCATAQUA/SQUAMSCOTT SESSIONS

STATE-OF-THE-ART LECTURE.
Douglas Steinley; *k-Means Clustering: State-of-the-Art Methodological Developments*

STATE-OF-THE-ART LECTURE.
David Cella; *IRT Modeling Applied to Self-Reported Health and Quality of Life: The Patient Reported Outcomes Measurement Information System (PROMIS)*

INVITED LECTURE.
Shohei Shimizu; *Linear Non-Gaussian Structural Equation Models*

INVITED LECTURE.
Kristin Javaras; *Latent Variable Models for Likert Attitude Data*

KEYNOTE LECTURE.
Bengt Muthén; *Exploratory Structural Equation Modeling*

COCHECO SESSIONS

S10: MISSING DATA APPROACHES. Chair: T. Raykov, Michigan State Univ. East Lansing
J. van Ginkel; *Further Investigation of the Influence of Simple Multiple-Imputation Methods on Psychometrically Important Statistics*
T. Raykov; *Testing Multivariate Mean Collinearity With Missing Data: Potential for Enhanced Power in Group Mean Difference Analysis*
K. Takai; *Test of Independence in a* 2×2 *Contingency Table with Nonignorable Nonresponse*
M. Chajewski; *Impact of Missing Data Imputation on Effect Size Estimation in Categorical Data*

S20: GRADED RESPONSE MODELING. Chair: F. Samejima, Univ. Tennessee
K. Nakamura; *An Analysis of Students' Evaluations of Teaching via a Multi-group Latent Mixture Graded Response Model*
T. Okubo; *Order-Constrained Nominal Categories Model*
F. Samejima; *Some Constancy in Amount of Item Information and Its Loss Caused by Noise*
D.R. Lawrence; *Dual Scaling: A Forced-Classification Analysis of Paired-Comparison Data Subject to a Polytomous Crition Item*

PISCATAQUA SESSIONS

S8: RESPONSE TIME, SPEED TESTS, SPEEDEDNESS AND IRT. Chair: M.G.H. Jansen, Univ. Groningen

M.G.H. Jansen; *A Comparison of Latent Trait Models for Speed Tests with Different Distributional Assumptions*

R. Klein Entink; *IRT Parameter Estimation with Response Times as Collateral Information*

D. Serrano; *Response Time IRT*

A. Wang; *Evaluation of Three Test Speededness Models*

S16: PSYCHOMETRICS IN LARGE SCALE AND GENERAL POPULATION EPIDEMIOLOGICAL SAMPLES. (Invited Session) Organizer and Chair: Tim Croudace, Univ. Cambridge

R. Uher; *Characterization of Response to Antidepressants in a Pharmacogenetic Study*

U. Reininghaus; *Improving the Measurement of Patient Reported Outcomes in Mental Health Research Using State of the Art Latent Variable Modeling Procedures*

J. Rust; *Developmental Trajectories of Sex-Typed Behavior in Boys and Girls*

T. Croudace; *Using Psychometric Procedures in Stata to Apply Mokken, Rasch, and Logistic IRT Models to General Health Questionnaire Data in the Health and Lifestyle Survey (HALS)*

SQUAMSCOTT SESSIONS

MIXED-EFFECTS MODELS FOR LONGITUDINAL DATA. (Invited Session) Organizer and Chair: Shelley Blozis, UC Davis

K. Kelley; T*he Average Rate of Change in Longitudinal Models*

J.R. Rausch; *Parametrizations for the Negative Exponential Growth Model*

J.R. Harring; *Modeling Nonlinear Change in Latent Variables over Time*

D.L. Coffman; *Evaluating Individual Fit in Latent Growth Curve Models*

S18: NON-TRADITIONAL INDICATORS FOR JUDGING ITEM AND TEST QUALITY. (Invited Session) Organizer and Chair: Elena Papanastasiou, Univ. Nicosia & EPS

E.C. Papanastasiou; *Item Review as a Non-Traditional Method of Item Analysis*

S.L. Wise; *An Investigation of Rolling Person Fit in Identifying Examinees Who Abandon Test Effort*

G.G. Kingsbury; *The Impact of Individual Validity on Item Calibration*

M.D. Reckase; *If All Tests Measure Multiple Constructs, What Do They Measure Best?*

HUDDLESTON SESSIONS

S11: COMPUTER ADAPTIVE TESTING. (TIDE Session) Chair: R.J. Swartz, Univ. Texas Houston

U.S. Ahmed; *The Impact of Item Selection Method in CAT-DIF Analysis*

J.R. Barrada; *A Method for the Comparison of Item Selection Rules in Computerized Adaptive Testing*

H. Lin; *Improving Item Pool Usage and Content-Balancing in the Measurement of Geriatic Depression*

J. Liu; *Multidimensional Computer Adaptive Strategies in Psychological and Health Assessment*

R.J. Swartz; *CAT Item Selection Procedures for Dichotomous Items—What Do We Lose Being Greedy?*
C. Wang; *Continuous α-Stratification Index for Computerized Item Selection*

S22: TEST EQUATING. (TIDE Session) Chair: L. Keller, Univ. Massachusetts Amherst
L. Keller; *The Long-Term Sustainability of Different Scaling Methods in IRT True Score Equating*
K.T. Han; *Impact of Multidirectional Item Parameter Drift on Test Equating and Proficiency Estimates*
R. Keller; *The Effect of Changing Scaling Methods in IRT True Score Equating*
A. Lin; Comparing Kernel Equating and IRT Equating
P. Parker; *The Examination of the Classification of Students into Performance Categories by Two Different Equating Methods*
L.S. Sotaridona; *From Scannable Test Booklets to Separate Answer Sheets by Third Grade: Implications on Pre-Equating Design*

MUB I SESSIONS

S7: MULTIDIMENSIONAL SCALING. Chair: S.L. France, Rutgers University
S.L. France; *Distance Based Metric Multidimensional Scaling for Complex Data*
A.M. Gundula; *Investigating the Inter-Rater Relibaility of Test Scores: An MDS Analysis*
K. Okada; *Confirmatory Multidimensional Scaling: A Model Selection Using Bayes Factors*
O. Kunina; *Convergence of Skill Profiles for Cognitive Diagnosis Models and Other Multidimensional Scaling Approaches: An Empirical Illustration with a Diagnostic Mathematics Assessment*

S19: LATENT CONSTRUCTS, MEASUREMENT, AND INVARIANCE. Chair: H. Kelderman, Free Univ. Amsterdam
J. Choi; *Simplified Sample Size Determination for Two-Point Repeated Measure Structured Means Modeling on a Single Latent Construct*
H. Kelderman; *Measuring the Nomothetic Meaningfulness of Operational Definitions of an Attribute*
Y.Y. Kim; *A Psychometric Approach to Evaluating Constructs Comparability and its Application to Measure Construct Ability Growth*
V.L. Wilson; *Construct Noninvariance in Growth Modeling*

MUB II SESSIONS

S9: GOODNESS OF FIT IN SEM. Chair: R.E. Millsap, Arizona State Univ.
R.E. Millsap; *Approximate Fit in SEM Without A Priori Cutpoints*
A. Mooijaart; *Does the Normal Theory Test Statistics Always Detect Nonlinear Terms in Structural Equation Modeling?*
U.H. Olsson; *The Power of Non-Normality Corrected Chi-Square Statistics in Structural Equation Modeling*
A. Satorra; *A Chi-Square Goodness-of-Fit Test Statistic for the Exploratory Factor Model*

S21: COGNITIVE DIAGNOSTIC MODELS. Chair: J. de la Torre, Rutgers Univ.
J. de la Torre; *The Generalized DINA Model*

C.Y. Chiu; *Cluster Analysis for Cognitive Diagnosis: A Robustness Study in Relation to Model Misspecification*
I. Van Mechelen; *A Skill Model for Cognitive Diagnosis Research*
S. Embretson; *Multicomponent Latent Trait Models for Cognitive Diagnosis*

PLENARY ACTIVITIES

Excursion: Night out in Portsmouth, NH

Tuesday, July 1

STRAFFORD SESSIONS

KEYNOTE LECTURE.
Thomas Griffiths; *The Modern Intuitive Statistician*

S25: HIDDEN MARKOV MODELS. (Invited Session) Organizer and Chair: Frank Rijmen, ETS
J. Magidson; *Imposing a Factor Structure on the Latent States in Hidden Markov Models to Improve Interpretatibility and Model Fit*
E. Ip; *Transition Models for Longitudinal Data Analysis with Applications to Studies in Social and Behavioral Sciences*
F. Pennoni; *The Latent Markov Rasch Model*
F. Rijmen; *Beyond HMMs: Full Information Maximum Likelihood Estimation in Limited Time for a General Class of Latent Variable Models*

S32: NEW STATISTICAL MODELS FOR EQUATING TESTS. (Invited Session) Organizer and Chair: Alina von Davier, ETS
W.J. van der Linden; *Local Observed-Score Equating*
A. Béguin; *Mixed IRT Linking: Combining High-Stakes Tests with a Low-Stakes Anchor*
T. Wang; *A Continuized Loglinear Approach to the Modified Frequency Estimation Equating Method under the Common-Item Nonequivalent Groups Design*
Y.-H. Lee; *Alternative Kernels in the Kernel Equating Framework: Logistic and Uniform*

INVITED LECTURE.
Michael Lee; *Bayesian Graphical Modeling in Cognitive Science*

S42: RECENT ADVANCES IN SCORE LINKING. (Invited Session) Organizer and Chair: Sandip Sinharay, ETS
N. Dorans; *Score Equating: Practical Considerations and True Score Models*
S. Sinharay; *Missing Data Assumptions of the Non-Equivalent Groups with Anchor Test Design and their Implications for Test Equating*
D. Harris; *Linking Across Forms in Vertical Scaling*
P.W. Holland; *How to Average Equating Functions if You Must*

2008 DISSERTATION AWARD LECTURE.
Marielle Linting; *Nonparametric Inference in Nonlinear Principal Components Analysis: Exploration and Beyond*

COCHECO SESSIONS

S27: (WEIGHTED) TEST SCORING. Chair: J. Dunn, Measured Progress Dover
S. Mayekawa; *Estimation of Ability Using the Globally Optimal Scoring Weights*
J.C. Powell; *Observing Learning Using All Answers: A Commentary on Test-Scoring Practices*
B.D. Stucky; *Item Response Theory for Weighted Summed Scores*
J. Dunn; *An Investigation of the Robustness of the Test Characteristic Curve Mapping Method of Theta Estimation*

S35: CLASSIFICATION AND CLUSTERING. Chair: E.C. Merkle, Wichita State Univ.
J.G. Clavel; *Total Information Analysis: Applications*
J. Hofmans; *Capturing the Nature of Two-Way Interactions: A Two-Mode Clustering Based Approach*
E.C. Merkle; *Binary Recursive Partitioning: Uses in Psychology*
H.W. Suk; *Fuzzy Clusterwise Partial Least Squares Regression*

INVITED LECTURE.
Ralitza Gueorguieva; *Modeling Longitudinal Trajectories Using Growth and Growth Mixture Models*

S47: MEDIATION EFFECTS IN SEM. Chair: D. Kaplan, Univ. Wisconsin Madison
D. Kaplan; *Statistical Considerations in a Counterfactual Theory of Causation for Non-Experimental Studies with Implications for Structural Equation Modeling*
P.E. Shrout; *Bias Reduction vs. Precision of Estimates in Mediation Analysis*
D. Tofighi; *Covariance Among Regression Coefficients Estimates in a Single Mediator Model*
Y.-F. Yung; *Testing and Contrasting Mediation or Indirect Effects in SEM: An Analytic Approach and its Implementation*

PISCATAQUA SESSIONS

S28: ADVANCED APPLICATIONS TO SUBSTANTIVE ISSUES. Chair: D. Bolt, Univ. Wisconsin Madison
D. Bolt; *Applications of a MIRT Model to Self-Report Measures: Addressing Score Bias and DIF Due to Individual Differences in Response Style*
S. Bouwmeester; *Constructing a Scale to Measure Phonological Awareness*
T.A.Walls; *Context Indices versus Time Indices in General Linear Mixed Models*
J. Zu; *Examining Dynamic Factor Models with Time-Varying Parameters*

S34: MEASUREMENT ISSUES IN LONGITUDINAL DATA MODELING. (Invited Session) Organizer and Chair: Mark Wilson, UC Berkeley
K.E. Masyn; *Modeling Multiple Mechanisms for Zeroes in Longitudinal Processes*
B.J. Feldman; *Measuring and Modeling Adolescent Alcohol Use*
M. Wilson; *Latent Growth Item Response Models*
C.H. Carstensen; *An Application of IRT Models to Causal Inferences from a Pre- and Posttest Design*

S45: CROSSED RANDOM EFFECTS. Chair: S.A. Blozis, UC Davis
S.A. Blozis; *Partially Nonlinear Crossed Random-Effects Models for Longitudinal Data*
S.-J. Cho; *Alternating Imputation Posterior Estimation of Models with Crossed Random Effects*

H. Geerlings; *Modeling Rule-Based Item Generation*
L.H. Scholl; *The Impact of Inappropriate Modeling of Cross-Classified Data Structures on Random-Slope Models*

SQUAMSCOTT SESSIONS

S26: COMPONENT ANALYSIS IN THE S-O-R FRAMEWORK. (Invited Session) Organizer and Chair: Kohei Adachi, Osaka Univ.
T. Murakami; *Individual Differences in Three-Way Rating Scale Data and their Description by Three-Mode PCA*
P. Kroonenberg; *Longitudinal Assessment of Child Behavior: Comparing Models for Three-Way Binary Data*
I. Van Mechelen; *Mapping the S-O-R Structure that Characterize the Contextualized Personality of a Single Individual*
Y. Takane; *Nonlinear Multivariate Analysis via Artificial Neural Network Models*

S33: NEW DEVELOPMENTS IN PERSON-FIT ANALYSIS. (Invited Session) Organizer and Chair: Wilco Emons, Tilburg Univ.
J.M. Conijn; *Person-Fit Analysis Using Multilevel Logistic Regression*
W. Kim; *A New Person-Fit Method for Short Tests*
L. Wang; *Power and Robustness of Multilevel Latent-Trait Differential Person Functioning: A Monte Carlo Comparison with Conventional Person Misfit Statistics*
W.H.M. Emons; *Detection and Diagnosis of Person Misfit from Patterns of Summed Polytomous Item Scores under Parametric and Nonparametric IRT Models*

S43: RC(M) ASSOCIATION AND RELATED MODELS FOR MULTINOMIAL DATA. (Invited Session) Organizer and Chair: Carolyn Anderson, Univ. Illinois Urbana Champaign
M. Kateri; *Bayesian Analysis of the Order Restricted RC Association Model*
M. de Rooij; *Transitional Ideal Point Models for Longitudinal Multinomial Outcomes*
Z. Li; *Loglinear Models as Rasch Models with Collateral Information*
J. van Rosmalen; *Optimal Scaling of Interaction Effects in Generalized Linear Models*

HUDDLESTON SESSIONS

S31: ISSUES IN SEM. (TIDE Session) Chair: T.J. Trierweiler, Fordham Univ.
T.J. Trierweiler; *An Empirical Examination of Current Reporting Techniques in Applied Structural Equation Modeling Research*
H.-Y. Hsu; *Testing the Effectiveness of Fit Indices in Detecting Misspecification in Multilevel Structural Equation Models: A Monte Carlo Study*
K.H. Kim; *Power and Sample Size in Nested Covariance Structure Models*
S. Lee; *Choice Between an Common Factor Approach and a Correlated Uniqueness Model to Specify Method Effects in a Confirmatory Factor Analysis of MTMM Data*
H. Oh; *Multi-Group Confirmatory Factor Analysis: To Evaluate Construct Comparability*
H. Wu; *An Empirical Bayesian Approach to Misspecified Covariance Structures*
F. Yang-Wallentin; *Confirmatory Factor Analysis with Categorical Data: An Evaluation of Different Estimation Methods*

S38: DIFFERENTIAL ITEM FUNCTIONING. (TIDE Session) Chair: J. Casabianca, Fordham Univ.

J. Casabianca; *Equivalence Testing for DIF*
N. Khalid; *A Stepwise Method for Evaluation of DIF*
F. Li; *A Modified Higher-Order DINA Model for Detecting Differential Item Functioning and Differential Attribute Functioning*
D. Magis; *A Crossed Random Effects Model to Detect DIF*
O. Paccagnella; *Anchoring Vignettes with Sample Selection*
A.E. Wyse; *IRT Theory for DIF Cancellation*

S48: COGNITIVE DIAGNOSTIC MODELING. (TIDE Session) Chair: E. Dogan, American Institutes for Research
E. Dogan; *A Comparison of Rule Space and Item Response Models in Predicting Item and Test Level Examinee Performance*
M. Finkelman; *Test Assembly for Cognitive Diagnosis Models Using Attribute-Level Information*
N. Loye; *Taking up the Challenge to Use a CDM to Improve Q-matrices: An Illustration*
M.-M. Mao; *New Classification Methods in the Attribution Hierarchy Model*
A. Verschoor; *Assembling Parallel Forms alongside a Cognitive Diagnosis Model*
T. Zhang; *Sensitivity of Parameter Recovery and Classification Accuracy for Cognitive Diagnosis Models to Prior Specification under a Bayesian Estimation Framework*

POSTER SESSION

G. Bahn; *Measuring Educational Values of Korean Americans Based on Confucian Five Moral Codes*
J. Cardinale; *Regression in Cross-Cultural Attitude Data that Features Non-Constant Variances*
S.-W. Chang; *Effects of Raw-to-Scale Score Conversions on Equating: The Choice of Score Scale*
P.H. Chen; *The Latent Trait Estimation for the Outliers in Computerized Adaptive Testing Using the Weighted Maximum a Posteriori Estimation*
Q. Chen; 3-*Parameter Logistic Graded Response Model*
Q. Chen; *What Will Happen if Ignoring a Level of Nesting Structure in Multilevel Growth Mixture Modeling?*
H.-J. Choi; *The Impact of Person-Misfit on Scaling and Modeling Students' Growth: Investigating a Bayesian Approach in the Context of a Testlet Model*
R.C. Daniel; *The Effect of Mixed Item Domains on Aptitude Measurement and Response Time*
S. Ding; *Estimating Item Parameters Adaptive in CAT under the 2PLM*
F.D. Fargo; *Advances in the Identification of Sexual Offender Subtypes through Finite Mixture Modeling: Child and Adolescent Victims*
K. Fukunaka; *Generation of Direct Graphs and Chain Graphs by Using SEM*
R. Garcia; *Power Differences in Testing Fixed and Random Effects*
D. Grelle; *Criterion Dynamism and Growth Mixture Modeling: Exploring Selection Assessment Utility by Identifying Latent Classes of Performance Change over Time*
M. Heo; *Science Motivation and Epistemological Beliefs of South Korean High School Students Who Aspire Toward Science*
Y. Hong; *Comparison among Major Value-Added Models: A General Model Approach*
D. Horton; *An Examination and Interpretation of the Factor Structure and Validity of the Suicide Prevention Screening Guidelines*
S. Jahng; *Variance of Successive Difference in Stationary Time Series with Autocorrelation: A Temporal Instability Parameter*
Song Jung; *Development of a Shortened Form of the MMPI-2 using Full-Information Item Factor Analysis Method*

K. Kato; *Improving Efficiency of Cognitive Diagnosis by Considering Incorrect Responses in Multiple-Choice Items: A Computerized Adaptive Testing Perspective*

I. Kawahashi; *A Paired Comparison Model Including Individual Difference in Utility and Social Desirability*

I.-H. Kim; *Problems of and Suggestions for Multi-Group Confirmatory Factor Analysis in Structural Equation Modeling*

K.A. Kupzyk; *A Comparative Study of Traditional and Bootstrap Methods for Tests of Mediation*

K. Kyungtae; *A Monte Carlo Study of Parameter Estimation in IRT*

S.P. Lane; *Using Dynamic Factor Analysis to Assess Within-Person Reliability in Longitudinal Designs*

J. Lee; *Optimizing the Number of Items for each Module in Multi-Stage Testing*

Y.-H. Lee; *An Alternative Way to Test Interaction Effects Between Dummy Variables*

Z. Lu; *Robust Procedures for SEM with Missing Data*

H.H. McIntyre; *Application of Profile Analysis Using Multidimensional Scaling (PAMS) to a Battery of Emotional Intelligence Tests*

Y. Miyazaki; *Latent Effects Factor Model*

T. Otsu; *Building a Statistical Database of NCT Test Items*

L. Price; *Deriving Optimal Neuroimaging Models Using Bayesian Model Averaging*

P.J. Rosopa; *On the Effects of Measurement Error on Statistical Inferences Based on Heteroscedasticity-Consistent Covariance Matrices*

J.C. Setzer; *Parameter Recovery of an Explanatory Modified Effort-Moderated Item Response Model*

H.S. Shim; *A New IRT Model to Estimate Differential Latent Change Trajectories in a Multi-Stage, Longitudinal Assessment*

C.-Y. Shyu; *The Investigation of Impact of Scale-Transformation on Cross-Lingual Linking*

J. Song; *Non-Graphical Factor Extraction: Application to the Adolescent Smoking Consequences Questionnaire (ASCQ)*

A. Tala; *Robust Interdisciplinary Measurement and Analysis of Wellbeing. Some Methodological Issues and Application*

J.C. ten Holt; *Construction and Evaluation in Practice: Factor Analysis Versus Item Response Theory*

R.C. Tsai; *Random Utility Models for Approval Voting*

S. Usami; *Generalized Graded Unfolding Model with Manifest Variables*

R. van der Leeden; *Multilevel Analysis of Daily Process Data: Immediate and Prolonged Cardiac Effects of Momentary Assessed Stressful Events and Worry Episodes*

C. Wang; *Modeling the Error Covariance Structure in Latent Growth Models*

W. Wang; *Linking People's Perceptions and Physical Components of Sidewalk Environments via Rough Sets Theory*

Y. Wang; *Factor Analytic Models and Cognitive Diagnostic Models: How Comparable Are They?—A Comparison of R-Rum and Compensatory MIRT Model with Respect to Cognitive Feedback*

S. Zhang; *Applying Bootstrap and Jackknife to Estimate Variability of Variance Components in Generalizability Theory*

Y.-P. Zhang; *TAT Pre-Referral Intervention for Students with Learning Difficulties & Behavioral Problems*

Z. Zhang; *Modeling Situation Interpretations and Cognitive Trajectories in a Clinical Problem Solving Process with Bayesian Network*

MUB I SESSIONS

S29: IRT RELAXED MODELS. Chair: D.J. Hessen, Utrecht Univ.
D.J. Hessen; *Parameter Estimation and Likelihood Ratio Tests for Parametric Constant Latent Odds-Ratios Models*
R. Ligtvoet; *A Coarse Approach to IRT for the Evaluation of an IIO*
K. Miyazaki; *A Bayesian Semiparametric Item Response Model with Dirichlet Process Priors*
K. Shojima; *Neural Test Theory: A Nonparametric Test Theory Using the Mechanism of a Self-Organizing Map*

S37: PRINCIPAL COMPONENT ANALYSIS. Chair: T. Murakami, Chukyo Univ.
K. Adachi; *Joint Procrustes Analysis in the S-O-R Framework*
V. Choulakian; *On the Rank of Three-Way Arrays*
A.R. Hafdahl; *Meta-Analysis for Functions of Heterogeneous Correlation Matrices*
T. Murakami; *Prototype Transformations of Principal Components for Developing Psychometric Scales*

S44: FACTOR ANALYSIS AND MIXTURE MODELS, BOUNDED DATA, AND CLOSELY MATCHED SEMS. Chair: M. Smithson, Australian National Univ. Canberra
L. Dumenci; *Performance of Relative Fit Statistics in Distinguishing Mixtures of a One-Factor Model and a Null Model for Binary Items*
P.F. Halpin; *Empirical Criteria for Model Selection: Linear Factor and Finite Mixture Structures*
M. Smithson; *Mixed Regression Models for Doubly Bounded Metric Data*
L. Li; *Cutoff Criteria for Comparing Closely Matched Structural Equation Models*

MUB II SESSIONS

S30: BAYESIAN METHODS. Chair: J.-P. Fox, Univ. Twente
J.-P. Fox; *Advanced Posterior Predictive Assessment*
J. Ryoo; *Efficiency of Bayesian Estimation with Gibbs Sampling in IRT Models*
Y. Sheng; *An Investigation of IRT Models with Hierarchical Priors*
S. Xu; *A Two-Parts Mixed-Effects Model for Time-Use Data: A Comparison of Maximum Likelihood and Bayesian Estimation*

S36: DIMENSIONALITY ISSUES. Chair: M.D. Reckase, Michigan State Univ. East Lansing
M.D. Reckase; *Addressing the Number of Dimensions Problem in Multidimensional IRT*
J. Brasfield; *A Simulation Study to Detect Dimensionality Across Subgroups of Examinees*
R.A. Ricks; *An Investigation of Stout's T Procedures for Small Datasets*
M. Seo; *Formulation of a Dimtest-Based Effect-Size Measure (DESM) and Evaluation of DESM Estimator Bias*
J. Zhang; *Asymptotic Normality of DETECT Index and a New Significance Test for Unidimensionality*

S46: LATENT REGRESSION AND MULTIPLE DATA SETS. Chair: D. Borsboom, Univ. Amsterdam
D. Borsboom; *Measurement Invariance Versus Selection Invariance: Is Fair Selection Possible?*
M. von Davier; *Stochastic Approximation Methods for Estimation of Latent Regression Item Response Models*

T. Wilderjans; *Simultaneous Analysis of Coupled Data Blocks that are Subject to Different Amounts of Noise*
Y. Takane; *Regularized Multiple-Set Canonical Correlation Analysis*

MUB DINING HALL

S39: GRADUATE STUDENTS LUNCH MEETING. Chair: Jimmy de la Torre, Rutgers Univ.
Panelists: Roger Millsap, Terry Ackerman, Bo Wang, Jeremy Miles; Optimizing Your Probability
of Success: Life Beyond Graduate School

PLENARY ACTIVITIES

Excursion: Isle of Shoals Harbor Cruise

Wednesday, July 2

STRAFFORD SESSIONS

KEYNOTE LECTURE.
David Kenny; *Fixed and Random Effects Communicating to Each Other: Examples from Dyadic Research*

S52: FITTING DYNAMIC MODELS: RECENT PROGRESS AND UNRESOLVED ISSUES. (Invited Session) Organizer and Chair: Sy-Miin Chow, Univ. North Carolina Chapel Hill
S.-M. Chow; *Examining Individual Shifts in Learning Dynamics in Group-based State-Space Models*
G. Zhang; *A Sandwich-Type Standard Error Estimator for Vector Autoregressive Moving Average Models*
E.L. Hamaker; *How to Study Regime-Switches in Affect*
L. Cai; *A Metropolis-Hastings Robbins-Monro Algorithm for Maximum Likelihood Estimation in Latent Variable Models*

S60: ADVANCES IN PSYCHOMETRIC MODELING OF LARGE EDUCATIONAL SURVEY DATA. (Invited Session) Organizer and Chair: Matthias von Davier, ETS. Discussant: K. Yamamoto, ETS
M. von Davier; *Overview: Psychometric Modeling of Educational Survey Data*
E.J. Gonzalez; *Current Operational Analyses of Large Scale Survey Data and Publicly Available Databases*
D. Li; *Random Effects Models for Large Scale Assessment*
M. Dean; *Cognitive Diagnostic Approaches to Analyzing Performance in the TIMSS (1995) Advanced Mathematics Test*
X. Xu; *NAEP Reading Data Analysis Using GDM framework*

STATE-OF-THE-ART LECTURE.
Brian Junker; *Beyond MCMC*

PAST PRESIDENTS SESSION. Chair: Willem Heiser, Leiden Univ.
Written contributions from: Roger Shepard (73–74), Douglas Carroll (75–76), Duncan Luce (76–77), Roderick McDonald (85–86), Jan de Leeuw (87–88), Bengt Muthén (88–89), Robert Mislevy (93–94), Shizuhiko Nishisato (95–96), Fumiko Samejima (96–97), Wim van der Linden (99–00), Susan Embretson (98–99), Willem Heiser (03–04), Roger Millsap (06–07)

PRESIDENTIAL ADDRESS.
Paul De Boeck; Random Item IRT Models

PSYCHOMETRIC SOCIETY BUSINESS MEETING

COCHECO/PISCATAQUA/SQUAMSCOTT SESSIONS

STATE-OF-THE-ART LECTURE.
Marieke Timmerman; *Principal Component Analysis and Generalizations*

COCHECO SESSIONS

S55: FACTOR ANALYSIS. Chair: B. Goodrich, Harvard Univ.
B. Goodrich; *Semi-Exploratory Factor Analysis and Associated Software*
K.J. Kan; *A Dynamical Model of General Intelligence: The Positive Manifold of Intelligence by Mutualism*
D. Molenaar; *Factor Analytic Modeling of Ability Differentiation*
S. Unkel; *Simultaneous Parameter Estimation in Exploratory Factor Analysis by Weighted Least Squares*

S62: DIAGNOSTIC STATISTICS. Chair: A. Maydeu-Olivares, Univ. Barcelona
A. Maydeu-Olivares; *Constructing Chi-Square Goodness-Of-Fit Tests for Multinomial Data that Are More Powerful than Pearson's X2*
G. Raîche; *Multidimensional Item Response Theory Models Integrating Additional Inattention, Pseudo-Guessing, and Discrimination Person Parameters*
L.A. van der Ark; *A New Reliability Coefficient Based on Latent Class Analysis*
W.P. Zijlstra; *Detecting Various Types of Outlying Behavior in Questionnaire Data*

PISCATAQUA SESSIONS

S56: DUAL SCALING. Chair: S. Nishisato, Univ. Toronto
S. Nishisato; *Total Information Analysis: An Extension of Dual Scaling*
T. Karelitz; *Thinking Outside the Diagonal: An Exploratory Framework for Evaluating Agreement in Rectangular Contingency Matrices*
Sunho Jung; *Nonsymmetric Correspondence Analysis and Simpson's paradox*
H. Hwang; *Simultaneous Two-Way Clustering of Multiple Correspondence Analysis*

S64: ERROR VARIANCE AND CONFIDENCE INTERVALS. Chair: D. Thissen, Univ. North Carolina Chapel Hill

D. Thissen; *Implementation of a Supplemented EM Algorithm to Compute the Error Covariance Matrix for ML Parameter Estimates in Item Response Theory Models*

Y. Konya; *Interval Estimations Based on Normalizing Transformations by Two Approaches*

J.A. Bovaird; *On the Finite Population Correction in Multilevel Modeling: Implications for Nesting Within Geographic Region*

B. Brossman; *A Comparison of Confidence Intervals and Tolerance Intervals for Stratified Domains under the Compound Binomial Model*

SQUAMSCOTT SESSIONS

S53: ITEM RESPONSE THEORY WITH NONNORMAL LATENT DISTRIBUTIONS. (Invited Session) Organizer and Chair: Carol Woods, Washington Univ. St. Louis. Discussant: David Thissen, Univ. North Carolina Chapel Hill

C. Woods; *Ramsay-Curve Differential Item Functioning*

X. Xu; *On Sensitivity of the Latent Ability Distribution*

N. Lin; *Davidian-Curve Item Response Theory and F-Information of Item Parameters*

S61: RESPONSE TIME AND RESPONSE ACCURACY. (Invited Session) Organizer and Chair: Günter Maris, CITO & Univ. Amsterdam

G. Maris; *Scoring Rules Based on Response Time and Quality*

H. van der Maas; *Using RT in Adaptive Testing*

F. Tuerlinckx; *Some Disturbing Facts about the Relation Between IRT and Response Times*

W. van der Linden; *Conceptual Issues in Response-Time Modeling*

HUDDLESTON SESSIONS

S59: ISSUES IN IRT. (TIDE Session) Chair: J. Verkuilen, CUNY

J. Verkuilen; *Principles for Specification and Parameterization of Ideal Point Item Response Models*

N. Yang; *Identifying Item Type on Mixed Unfolding/Monotone Instruments*

W.-C. Lee; *Information Functions for Transformed Scores*

L. Shu; *A Comparison of Rasch Model Parameter Estimates between PARDUX and WINSTEPS*

J. Smith; *Alternative IRT Models: Incorporating Guessing Appropriately*

L. Yao; *Application of a Testlet Effect Model to Performance Assessments with Multiple Scoring Rubric*

S66: PROFICIENCY BASED CLASSIFICATION (ACCURACY) AND STANDARD SETTING. (TIDE Session) Chair: L. Roussos, Measured Progress Dover

L. Roussos; *A Validity Study Comparing the Results of Skills Diagnosis and Standard Setting*

Y. Cheng; *Classification Accuracy and Consistency under the IRT Framework and Optimal Cut-Score Setting*

A. Ho; *Using Parametric Assumptions to Frame Trends in Categorical Proficiency Data under the No Child Left Behind Act*

M. Lei; *An Alternative Method for IRT Classification Accuracy Estimation*

N.A. Thompson; *Item Exposure in Computerized Classification Testing*

MUB I SESSIONS

S57: MULTILEVEL MODELING APPROACHES. Chair: J.S. Kim, Univ. Wisconsin Madison
J.S. Kim; *Multilevel Model Specification Tests Using the Generalized Methods of Moment (GMM) Estimation Techniques*
Y. Hong; *Parameter Estimation with Small Sample Size: A Higher-Order IRT Approach*
J.-Y. Wu; *Comparing the Efficiency of Robust Estimators and Multilevel Models on Analyzing Multilevel Data—A Monte Carlo Study*
F. Ye; *Multilevel IRT Model and Multilevel SEM in Estimating the Effect of Multilevel Covariates on a Latent Trait Measured by Dichotomous Items*

S63: DYNAMIC (MIXTURE) MODELING. Chair: P.S. Malone, Univ. South Carolina Columbia
P.S. Malone; *Parallel-Process Discrete-Time Survival Modeling Via Latent Transition Analysis*
R. Sun; *Misspecifications in Growth Mixture Modeling*
M. Yang; *Using State-Space Models with Regime Switching to Represent the Dynamics of Facial EMG Data*
H.-T. Yu; *Interpret and Test the Latent Classes Transition of the Mixed Latent Markov Models*

MUB II SESSIONS

S58: LOCAL DEPENDENCE MODELING AND INTERACTION. Chair: N. Kahraman, National Board of Medical Examiners Philadelphia
J. Braeken; *Model Selection in Copula IRT Models for Local Item Dependencies*
M. Sano; *Detecting Overestimation of Slope Parameter under Surface Local Dependence*
T. Umehara; *Support Vector Machine for the Dataset Including Multivariate Discrete Variables*
N. Kahraman; *Assessing the Underlying Structure of Communication and Data Gathering Skills on a Sample of SMLE Step* 2 *CS Cases Using Confirmatory Factor Analysis*

S65: ADVANCED MODELING AND DATA APPROACHES. Chair: K.A. Bollen, Univ. North Carolina Chapel Hill
K.A. Bollen; *Model Identification and Computer Algebra*
M.W. Browne; *Locating Person Points on the Circumplex*
K. Hayashi; *Penalized Boosting Algorithm for Mislabeled Data*
K. Jöreskog; *Factor Analysis of Ordinal Data: FIML vs. DWLS*

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S54: SEM/CFA AND MANOVA. Chair: K. Shigemasu, Univ. Tokyo
K. Shigemasu; *An Application of Bayesian Confirmatory Factor Analysis to Behavioral Genetics*
H. Finch; *Comparison of MANOVA and a Structural Equation Modeling Method for Comparing Observed Score Group Means on Multiple Dependent Variables: A Simulation Study*
N. Iwama; *The Paired Comparison Method Utilizing a Multi Sample Analysis in SEM for the Case of Many Objects*
K. Jung; *The Regularized Reduced-Rank Growth Curve Models (GMANOVA)*

PLENARY ACTIVITIES

Conference Banquet