



**Conference Program**

**Psychometric Society 69<sup>th</sup> Annual Meeting  
Pacific Grove (Monterey), California**

**June 14-17, 2004**

## Program, Monday, June 14, 2004

<b>7:30</b>	Crocker	Breakfast (Cafeteria serves from 7:30-9:00)
<b>8:15-9:00</b>	Hearst Patio	Workshop Registration
<b>9:00-4:30</b>	Scripps	<b>Pre-Conference Workshop</b> <ul style="list-style-type: none"><li>❖ Multilevel and Latent Variable Modeling of Discrete Data <b>Sophia Rabe-Hesketh</b>, University of California Berkeley <b>Anders Skrondal</b>, Norwegian Institute of Public Health</li></ul>
	Viewpoint	<b>Pre-Conference Workshop</b> <ul style="list-style-type: none"><li>❖ The Kernel Method of Observed Score Test Equating <b>Paul. W. Holland, Alina A. von Davier, Dorothy T. Thayer</b> Educational Testing Service</li></ul>
<b>12:00-1:00</b>	Crocker	Lunch (Cafeteria serves from 12:00-1:00)
<b>2:00-8:00</b>	Hearst	Conference Registration
<b>2:30-4:30</b>	Curlew	Editorial Council Meeting I
<b>4:30-6:30</b>	Curlew	Editorial Council Meeting II
<b>6:00</b>	Crocker	Dinner (Cafeteria serves from 6:00-7:00)
<b>7:00-9:00</b>	Hearst	Welcome Reception (Hosted by CTB/McGraw-Hill)

## Program, Tuesday, June 15, 2004

7:30	Crocker	Breakfast (Cafeteria serves from 7:30-9:00)
7:30-10:30	Chapel	Conference Registration
8:20-8:30	Chapel	<b>Welcome: Willem Heiser</b>
8:30-9:30	Chapel	<b>Keynote Lecture: "Measurement Analogies: Comparisons of Behavioral and Physical Measures"</b> <b>R. Duncan Luce</b> , University of California, Irvine <b>Chair: Willem Heiser</b>
9:35-10:15	Chapel	<b>Invited Lecture: "Double Structure Item Response Models"</b> <b>Paul de Boeck</b> <b>Chair: Lori D. McLeod</b>
	Scripps	<b>Invited Lecture: "Measurement Models Based on Item Exchangeability"</b> <b>Henk Kelderman</b> <b>Chair: Terry Ackerman</b>
	Viewpoint	<b>Invited Lecture: "Rotation Algorithms: From beginning to end (?)"</b> <b>Robert I. Jennrich</b> <b>Chair: Michael Browne</b>
10:15-10:30	Chapel	Coffee Break
10:30-12:10	Chapel	<b>Contributed Session: "Topics in Multivariate Analysis"</b> <b>Chair: Carolyn Anderson</b> <ul style="list-style-type: none"><li>❖ An Evaluation of the Fleishman Transformation for Simulating Non-Normal Data in Structural Equation Modeling <b>Greg Welch, Kevin H. Kim</b></li><li>❖ Robustified Covariance Selection <b>Masashi Miyamura, Yutaka Kano</b></li><li>❖ Partial Invariance and Selection Accuracy in Two Populations <b>Roger E. Millsap, Oi-Man Kwok</b></li><li>❖ Assessing Rater Behavior in Large Scale Assessment <b>Judit Antal, Tamas Antal</b></li><li>❖ What Exactly do Consumers Respond to in a Concept Test? <b>Ling Peng, Adam Finn</b></li></ul>
	Scripps	<b>Contributed Session: "Applications of IRT Models"</b> <b>Chair: Werner Wothke</b> <ul style="list-style-type: none"><li>❖ Generalizability Theory in Item Response Modeling <b>Derek Briggs, Mark Wilson</b></li><li>❖ Defining Minimal Clinically Important Differences: Does Item Response Theory Have the Answer? <b>Lori D. McLeod, Sheri E. Fehnel</b></li><li>❖ Using Paired Comparisons and a One-Faceted Rasch Model to Create the Semantic Construct of Frequency <b>Thomas R. O'Neill</b></li><li>❖ Visualizing Standard Error of Equating Using the Bootstrap and the SEER Methods <b>Christopher W.T. Chiu</b></li><li>❖ Application of a Mixture IRT Model for Cognitive Diagnosis <b>Daniel Bolt, Andrew Mroch</b></li></ul>

## Program, Tuesday, June 15, 2004 - Continued

- Viewpoint **Contributed Session: "Multivariate Analysis"**  
**Chair: Ulf Bockenholt**
- ❖ Generalized Structured Component Analysis  
**Heungsun Hwang, Yoshio Takane**
  - ❖ An Improved Method for Generalized Structured Component Analysis  
**Yoshio Takane, Michael A. Hunter, Heungsun Hwang**
  - ❖ Refinements for Random-Effects Meta-Analysis of Correlation Matrices  
**Adam R. Hafdahl**
  - ❖ A Quasi Tucker2 Method Based on Principal Component Analyses of Slices of a Three-Way Array  
**Kohei Adachi**
  - ❖ Estimation of Generalized Linear Latent Variable Models  
**Philippe Huber, Elvezio Ronchetti, Maria-Pia Victoria Feser**
- Curlew **Invited Session: "Psychometric Research Associated with a Large, Operational CAT System"**  
**Chair: Alan Nicewander**
- ❖ The Effects of Item Position on the Calibration of Items Seeded into Adaptive Tests  
**Iosif Krass, Alan Nicewander**
  - ❖ A Stimulation Study of Parametric and Non-Parametric Algorithms for Calibrating 3-PL and Non-3PL Items Seeded into Adaptive Tests  
**Alan Nicewander, Rebecca Hetter, Gray Thomasson, Iosif Krass, Mary Pommerich, Daniel Segall, Kathleen Moreno**
  - ❖ Modeling and Detecting Collaboration: A Multidimensional Item Response Theory Approach  
**Daniel O. Segall**
  - ❖ Evaluating the Scale of Items within CAT Pools Using Adaptive Data  
**Mary Pommerich, Daniel O. Segall, Iosif A. Krass**
- Marlin **Contributed Session: "Reliability"**  
**Chair: Bert F. Green**
- ❖ Studying Stability of Reliability in Repeated Measures Models Eliminating Variable Specificity  
**Tenko Raykov, John Tisak**
  - ❖ The Reliability of Students Evaluating University Teaching: An Analysis of Four-Facet Data by Generalizability Model and Structural Equation Modeling  
**Hideki Toyoda, Kentaro Nakamura**
  - ❖ Investigating the Properties of the Reliability Estimation Formula by Gulliksen  
**Xiang Bo Wang, Louis Mi Wang**
  - ❖ Estimating and Comparing Classical Test Theory Measurement Models  
**Joseph A. Olsen**
  - ❖ Bayesian Consideration of Test-Retest Reliability Coefficients  
**Hidetoki Ishii, Hiroshi Watanabe**
- 12:10-1:20  
Crocker Lunch (Cafeteria serves from 12:00-1:00)
- 1:20-3:00  
Scripps **Invited Session: "Estimation of Proficiency Distributions from Matrix Sample Assessments: Research on Improving Current Practice"**  
**Chair: John Mazzeo**
- ❖ Basics of Large-Scale Educational Surveys  
**Catherine McClellan**
  - ❖ Estimation of Proficiency Distributions from Matrix Sample Assessments: Context and Current Procedures  
**John R. Donoghue**
  - ❖ Comparing Bias, Precision, and Stability of Estimation of Group-Level Statistics Based on High Dimensional and Low Dimensional Population Models  
**Amy R. Drescher, John R. Donoghue, John Mazzeo**
  - ❖ Application of Stochastic EM Methods to Latent Distribution Models  
**Sandip Sinharay, Matthias von Davier**
  - ❖ Current Developments in Estimating Latent Distributions  
**Matthias von Davier**
  - ❖ Summary and Discussion  
**Brian Junker**

## Program, Tuesday, June 15, 2004 - Continued

Viewpoint	<p><b>Invited Session: “Multiple Correspondence Analysis and Related Nonlinear Methods”</b> <b>Chair: Kohei Adachi</b></p> <ul style="list-style-type: none"><li>❖ Exploring Nonlinear Inter-Variable Relations by a Variant of Nonmetric Principal Component Analysis <b>Kohei Adachi</b></li><li>❖ Linking Tests by Nonlinear Factor Analysis for Continuous and Binary Variables <b>Tatsuo Otsu</b></li><li>❖ Stability of Category Quantifications in Multiple Correspondence Analysis Under Two Ways to Remove Outlier Dominance: A Case Study <b>Cornelius M. van Putten, Arianne Smits, Mark de Rooij</b></li><li>❖ An Extension of Multiple Correspondence Analysis for Capturing Unobserved Respondent Heterogeneity <b>Heungsun Hwang, William R. Dillon, Yoshio Takane</b></li><li>❖ Dual Scaling Approach to Correlation Between Categorical Variables <b>Shizuhiko Nishisato</b></li></ul>
Curlew	<p><b>Contributed Session: “Topics in Estimation”</b> <b>Chair: Daniel M. Bolt</b></p> <ul style="list-style-type: none"><li>❖ Improving the Accuracy of Ability Estimates through Simultaneous Estimation and Incorporation of Ancillary Variables <b>Jimmy de la Torre</b></li><li>❖ A Comparison of Methods to Investigate an Invariant Ordering of Polytomous Items <b>Janneke te Marvelde</b></li><li>❖ Paired Comparison IRT Model by 3-Value Judgment: Estimation of Item Parameters Prior to the Administration of the Test <b>Koken Ozaki, Hideki Toyoda</b></li><li>❖ A Comparison of Dichotomous and Nominal Polytomous Item Response Theory Models as Applied to Multiple Choice Test Items <b>Jennifer Hatfield</b></li><li>❖ Stability of Some Item Response Theory Monte-Carlo Goodness of Fit Indices <b>Tamas Antal, Judit Antal</b></li></ul>
Marlin	<p><b>Contributed Session: “New Models for the Analysis of Change”</b> <b>Chair: Shelley A. Blozis</b></p> <ul style="list-style-type: none"><li>❖ Exploratory Factor Analysis of Lagged Correlation Matrices <b>Michael W. Browne, Guangjian Zhang</b></li><li>❖ Bootstrapping Dynamic Factor Analysis <b>Guangjian Zhang</b></li><li>❖ Examining the Dynamics of Pleasant and Unpleasant Emotions Using Spectral Analysis and the Rating Scale Model <b>Nilam Ram, Sy-Miin Chow, Kevin J. Grimm, Frank Fujita, John R. Nesselroade</b></li><li>❖ A Monte Carlo Comparison of Methods for Fitting Nonlinear Dynamic Models <b>Sy Miin Chow, John R. Nesselroade</b></li><li>❖ Towards an Integration of Intraindividual and Interindividual Techniques <b>Ellen Hamaker, Peter Molenaar</b></li></ul>
<b>3:00-9:00</b>	Excursion around Monterey – Tickets Sold Separately
<b>3:00-6:00</b>	
Scripps	Meeting of the Board of Trustees
<b>6:00</b>	
Crocker	Dinner (Cafeteria serves from 6:00-7:00)

## Program, Wednesday, June 16, 2004

7:30

Crocker

Breakfast (Cafeteria serves from 7:30-9:00)

7:30-10:30

Chapel

Conference Registration

8:20-10:00

Chapel

**Contributed Session: "Equating and Linking"**  
**Chair: Cees A.W. Glas**

- ❖ Linking Tests  
**Paul Holland**
- ❖ Evaluating Equating Error in Observed-Score Equating  
**Wim J. van der Linden**
- ❖ Population Invariance of Non-Linear Equating Using LSAT Test Data  
**Mei Liu, Paul Holland**
- ❖ Nonparametric IRT Equating  
**Xueli Xu, Young-Sun Lee, Jeff Douglas**
- ❖ A Unified Framework for IRT Scale Linking and Scale Transformations  
**Matthias von Davier, Alina von Davier**

Scripps

**Contributed Session: "Estimation and Model Specification"**  
**Chair: Andreas G. Klein**

- ❖ Model Selection in Latent Variable Models when Common Statistical Assumptions are Violated  
**Ab Mooijaart**
- ❖ Model Specification Searches Using Genetic Algorithms for Factor Analysis  
**Hirotu Murohashi, Hideki Toyoda**
- ❖ Structural Equation Model Analysis of Missing and Heterogeneous Data  
**Wai-Yin Poon, Sik-Yum Lee**
- ❖ A Unified Maximum Likelihood Approach to Structural Equation Models with Missing Non-Standard Data  
**Sik-Yum Lee, Xin-Yuan Song**
- ❖ ML Analysis of a Multi-Sample Nonlinear Structural Equation Model with Fixed Covariates and Ordinal Variables  
**Xin-Yuan Song, Sik-Yum Lee**

Viewpoint

**Contributed Session: "Scaling and Clustering"**  
**Chair: Patrick E. Shrout**

- ❖ Multidimensional Scaling of Fechnerian Distances  
**Hans Colonius, Ehtibar N. Dzhafarov**
- ❖ Fechnerian Scaling of Discrete Object Sets  
**Ehtibar N. Dzhafarov, Hans Colonius**
- ❖ Profiling Local Optima in K-Means Clustering: Developing a Diagnostic Technique  
**Douglas Steinley**
- ❖ The Robustified Centroid Method  
**Choulakian Vartan, Allard Jacques, Almhana Jalal**
- ❖ Diagnostic Tools for Modeling Attitudinal Data  
**Ratna Nandakumar, Lawrence Hotchkiss**

Curlew

**Contributed Session: "Topics in Data Analysis"**  
**Chair: Brian Junker**

- ❖ Outlier Detection in Test and Questionnaire Data  
**Klaas Sijtsma, Andries van der Ark**
- ❖ Distribution Theory for the Power Method  
**Todd C. Headrick**
- ❖ Robustness of a Multivariate Normal Approximation for Imputation of Incomplete Binary Data  
**Coen A. Bernaards, Thomas R. Belin, Joseph L. Schafer**
- ❖ Multiple Imputation of Item Scores in Test and Questionnaire Data, and Influence on Psychometric Results  
**Joost R. van Ginkel**
- ❖ The Level-of-Imputation Question for Massively Missing Composite Variable Data  
**Todd E. Bodner**

## Program, Wednesday, June 16, 2004 – Continued

Marlin

**Contributed Session: “Differential Item Functioning”**

**Chair: Sandra Neustel**

- ❖ Adjustment of BIB Data for DIF Testing  
**Hua-Hua Chang, Jiahe Qian, Pei-Hua Chen, Ying Cheng**
- ❖ Evaluating DIF in Psychological Scales: Is Statistical Significance Enough?  
**Maria Orlando, Kitty S. Chan**
- ❖ An Assessment of DIF on the Basis of Race/Ethnicity in The Massachusetts Youth Screening Instrument (Maysi~2) Among a Sample of Incarcerated Adolescent Offenders  
**Randall MacIntosh, Elizabeth Cauffman**
- ❖ Detection of Differential Item Functioning in Computerized Adaptive Testing Using Measurement Error Models  
**Xin Feng, Zhiliang Ying**
- ❖ A Bayesian IRT Model for Comparative Item Performance under Dual Administration Modes  
**Louis T. Mariano, Maria Orlando**

**10:00-10:15**

Chapel

Coffee Break

**10:15-11:55**

Chapel

**Contributed Session: “Multidimensional Models”**

**Chair: Kelly Godfrey**

- ❖ Parameter Recovery in Markov Monte Carlo Chain (MCMC) Estimation of a Generalized MIRT Model  
**Mary Ann Simpson, Terry A. Ackerman**
- ❖ Multidimensional Models for Tests Consisting of Mixed Item Types  
**Lihua Yao, Richard D. Schwarz**
- ❖ Significant Characteristics of Anchor Items in the Common-Item, Nonequivalent Groups Design  
**Tsung-Hsun Tsai, Robert Sykes, Matthew Gordon**
- ❖ Bivariate Functional Regularization for the Detection of Cortical Region Transition  
**Wen Zhang, James O. Ramsay**

Scripps

**Contributed Session: “Latent Class and Generalized Linear Models”**

**Chair: Paul De Boeck**

- ❖ Multivariate Latent Markov Models for Arbitrary Length Time Series: An Implementation and Application  
**Ingmar Visser**
- ❖ Studying Cognitive Developmental Stages: A Comparison of the Binomial Mixture Model and the Latent Class Model  
**Samantha Bouwmeester**
- ❖ High Breakdown Inference in the Mixed Linear Model  
**Samuel Copt, Maria-Pia Victoria-Feser**
- ❖ Generalized Linear Models with Ordinally-Observed Covariates  
**Timothy R. Johnson**

Viewpoint

**Invited Session: “Association Models and Related Methods”**

**Chair: Paul Holland (Carolyn J. Anderson)**

- ❖ The Analysis of Change, Newton’s Law of Gravity and the RC(M) – Association Model  
**Mark de Rooij**
- ❖ A Family of Longitudinal Association Models with Latent Variables  
**Jee-Seon Kim, Jeroen K. Vermunt**
- ❖ Relationships Between Item Response Theory Models and Log-Multiplicative Association Models  
**Carolyn J. Anderson, Hsiu-Ting Yu**
- ❖ Empirical Comparisons of Estimates of Item Response Theory Models and Log-Multiplicative Association Models  
**Hsiu-Ting Yu, Carolyn J. Anderson**

## Program, Wednesday, June 16, 2004 - Continued

- Curlew **Invited Session: "Applications of MCMC Methods to Item Response Theory"**  
**Chair: Wim J. van der Linden**
- ❖ Analysis of Variance and Regression Using Multilevel IRT  
**Cees A.W. Glas, Jean-Paul Fox**
  - ❖ Hierarchical and Multidimensional Models for Measuring Developmental Growth in Educational Achievement  
**Richard J. Patz, Lihua Yao**
  - ❖ Multilevel Modeling of Speed and Accuracy on Test Items  
**Wim J. van der Linden**
  - ❖ The Power of Posterior Predictive Checks  
**Gunter Maris**
  - ❖ Model Evaluation and Selection in Cognitive Diagnosis: An Analysis of Fraction Subtraction Data  
**Jimmy de la Torre**

- Marlin **Contributed Session: "Models for Longitudinal Data"**  
**Chair: Robert C. MacCallum**
- ❖ Efficient Estimation of Nonlinear Effects in Both Cross-Sectional and Longitudinal SEM  
**Andreas G. Klein**
  - ❖ Statistical Methods for the Analysis of Repeated Measurements Data: A Model Comparison Approach  
**Jeffrey Harring**
  - ❖ A Second-Order Structured Latent Curve Model for Normal Repeated Measures  
**Shelley A. Blozis**
  - ❖ Growth Mixture Modeling of Cognitive Abilities in the Berkeley Studies  
**Kevin J. Grimm, John J. McArdle, Fumiaki Hamagami**
  - ❖ A Growth Model for Multilevel Ordinal Data  
**Eisuke Segawa**

11:55-1:00

Crocker Lunch (Cafeteria serves from 12:00-1:00)

1:00-1:40

Chapel **Invited Lecture: "Structural Equation Models for Complementary Data"**  
**Albert Satorra**  
**Chair: Ab Mooijaart**

Scripps **Invited Lecture: "Testing Differences between Models: Power Analyses and Null Hypotheses"**  
**Robert C. MacCallum, Michael W. Browne, Li Cai**  
**Chair: Roger Millsap**

Viewpoint **Invited Lecture: "A Joint Space Model of Asymmetric Multidimensional Scaling"**  
**Akinori Okada, Tadashi Imaizumi**  
**Chair: Shizuhiko Nishisato**

1:45-3:25

Chapel **Contributed Session: "Extending IRT Models"**  
**Chair: David Thissen**

- ❖ An IRT Model with a Parameter-Driven Process for Change  
**Frank Rijmen**
- ❖ Dynamic Item Response Models  
**Peter van Rijn**
- ❖ Estimating Acquaintance Volume with a Hierarchical IRT Model  
**Francis Tuerlinckx**
- ❖ A Comparison of Latent Trait Models for Speed Tests with Different Distributional Assumptions  
**Margo G.H. Jansen**
- ❖ A New Approach to Computer Adaptive Assessment with IRT Construct-Modeled Item Bundles (Testlets): An Application of the BEAR Assessment System  
**Kathleen Scalise**

## Program, Wednesday, June 16, 2004 - Continued

- Scripps**      **Contributed Session: "Evaluating Model Fit"**  
**Chair: Margo G.H. Jansen**
- ❖ Does the Satorra-Bentler Scaled Chi-Square Statistic Approximate Zero when the Kurtosis Approximates Infinity  
**Tron Foss, Karl G. Joreskog, Ulf Henning Olsson**
  - ❖ Indifference Regions for Goodness of Fit Indices in SEM  
**Victor L. Willson, Zhongmiao Wang**
  - ❖ A Statistically Justified Pairwise ML Method for Incomplete Nonnormal Data: A Comparison with Direct ML and Pairwise ADF  
**Victoria Savalei**
  - ❖ Empirical Power and Type I Error Rates for Cross-Level Interactions in Multilevel Analysis  
**Duan Zhang, Victor L. Willson**
  - ❖ Residuals Based Examination of Fit for Non-Dynamically Consistent Models  
**Nathan A. Vandergrift**
- Viewpoint**      **Invited Session: "Perspectives on Item Response Modeling"**  
**Chair: Mark Wilson**
- ❖ Explanatory Measurement: A Case Study of Modeling Coping with Stress  
**Paul De Boeck**
  - ❖ Modeling Partial Information in Multiple Choice Items  
**Derek Briggs, Alicia Alonzo, Cheryl Schwab, Mark Wilson**
  - ❖ Type I Error and Power of Multidimensional and Unidimensional DIF Methods in a Multidimensional Test: MRCML DIF Model, RCML DIF Model, and SIBTEST  
**Insu Paek, Mark Wilson**
  - ❖ User-Defined Fit Statistics for the RCML Models  
**Margaret L. Wu, Raymond J. Adams**
- Curlew**      **Invited Session: "Nonnormal Structural Equation Modeling"**  
**Chair: Yutaka Kano & Ke-Hai Yuan**
- ❖ Between ICA and SEM  
**Yutaka Kano, Shohei Shimizu**
  - ❖ Standard Errors and Asymptotic Robustness in Multilevel Models with Distributional Violations  
**Ke-Hai Yuan, Peter M. Bentler**
  - ❖ Exploratory Causal Inference Using Nonnormality  
**Shohei Shimizu, Aapo Hyvarinen, Yutaka Kano**
  - ❖ Corrected Version of AIC for Selecting Multivariate Normal Linear Regression Models in a General Nonnormal Case  
**Hirokazu Yanagihara**
  - ❖ Asymptotic Robustness of the Normal Theory Asymptotic Biases Under Nonnormality in Structural Equation Modeling  
**Haruhiko Ogasawara**
- Marlin**      **Invited Session: "Scaling Techniques in Various Data Analytic Settings"**  
**Chair: Mark de Rooij**
- ❖ Statistical Inference in Feature Network Models and Additive Trees  
**Laurence E. Frank, Willem J. Heiser**
  - ❖ On Ordering Properties of Classical Optimal Scaling  
**Matthijs J. Warrens**
  - ❖ Correspondence Analysis as an Alternative to Principal Component Analysis for Single-Peaked Data  
**Marika Polak, Willem J. Heiser, Mark de Rooij**
  - ❖ Scaling of Democracy: Exploring Changes Over Time  
**Rien van der Leeden, Marika Polak, Renske Doorenspleet**
- 3:25-3:40**  
Chapel      **Coffee Break**
- 3:40-4:20**  
Chapel      2004 Dissertation Award Presentation and Address  
2004 ETS Student Travel Awards Presentation

## **Program, Wednesday, June 16, 2004 - Continued**

**4:20-5:20**

Chapel

**Presidential Address: "Geometric Representation of Association between Categories"**  
**Willem Heiser, Leiden University**  
**Chair: William Stout**

**5:20-6:20**

Chapel

Business Meeting of the Psychometric Society

**7:00-9:00**

Crocker

Banquet

## Program, Thursday, June 17, 2004

7:30

Crocker

Breakfast (Cafeteria serves from 7:30-9:00)

8:30-10:10

Chapel

**Contributed Session: "Estimation and Computation"**

**Chair: Fumiko Samejima**

- ❖ Item Response Theory with Estimation of the Latent Population Distribution Using Spline-Based Densities  
**Carol M. Woods, David M. Thissen**
- ❖ Infinite Slope Estimates in Item Response Theory  
**David Thissen, Cheryl D. Hill**
- ❖ Multimodal Likelihoods in IRT-Based Response-Pattern Scoring: Will the Real Maximum Likelihood Score Please Stand Up?  
**Werner Wothke, George Burket, LiSue Chen, Furong Gao, Lianghai Shu, Mike Chia**
- ❖ Comparison of the Marginal Bias and Standard Error of Proficiency Level According to True and Estimated Proficiency Levels  
**Gilles Raiche, Jean-Guy Blais**
- ❖ Bayesian Estimation of a Latent Trait Model with Bounded Continuous Latent Variables  
**Elena A. Erosheva**

Scripps

**Contributed Session: "Measurement Problems in Substantive Domains"**

**Chair: Tenko Raykov**

- ❖ Using a Quadratic Discriminant Model to Predict Baccalaureate Nursing Students' Passing Rate on NCLEX-RN  
**Xiaoying Jiang, Grace E. Kissling**
- ❖ A Longitudinal Examination of the Dimensionality and Predictors of Sport Confidence  
**Mark Otten**
- ❖ Reading Comprehension of Primary School Students – A Unified Cognitive Process or Interacting Component Processes?  
**Claus H. Carstensen, Andreas Voss, Wilfried Bos**
- ❖ What is Good for Science is not Good Enough for Public Policy  
**Dennis Hocevar, Susan Page Hocevar**
- ❖ An Application of the Andersen/Rasch Multivariate Measurement Model within the Framework of Evidence-Centered Design to Explore Students' Problem-Solving in Physics  
**Chun-Wei (Kevin) Huang, Robert J. Mislevy**

Viewpoint

**Contributed Session: "Test Assembly and Item Selection"**

**Chair: Wilco H.M. Emons**

- ❖ Using IRT to Design a Fixed Length Test  
**Mark D. Reckase**
- ❖ A Method for Determining Multiple Non-Overlapping Linear Test Forms  
**Ron Armstrong, Dmitry Belov**
- ❖ A Trend Model for Monitoring Item Security Under Continuous Testing  
**Tim Davey, Elizabeth Stone**
- ❖ An Application of Integer Programming to Optimal Test Assembly with Psychometric and Scheduling Constraints  
**Irina Grabovsky, David Swanson**
- ❖ Combinatorial Analysis for Determining Item Pool Usability in Computerized Adaptive Testing  
**Dmitry Belov, Alexander Weissman**

## Program, Thursday, June 17, 2004 - Continued

Curlew	<b>Contributed Session: “Computerized Adaptive Testing”</b> <b>Chair: Francis Tuerlinckx</b> <ul style="list-style-type: none"><li>❖ An Investigation of Stratified and Maximum Information Item Selection Procedures in Computerized Adaptive Testing <b>Hui Deng, Tim Ansley</b></li><li>❖ Violations of Ignorability in Computerized Adaptive Testing <b>Cees A.W. Glas</b></li><li>❖ Defining and Finding Optimal Designs for uMFS CATs <b>Michael C. Edwards, David Thissen</b></li><li>❖ Influence of the Number and Magnitude of Testlets in Computerized Adaptive Testing <b>Po-His Chen, Wen-Chung Wang</b></li><li>❖ Two-Phase Item Selection with Realistic Content Balancing Constraints in Computerized Adaptive Testing <b>Ying Cheng, Hua-Hua Chang, Yi Qing</b></li></ul>
Marlin	<b>Contributed Session: “Applications to Substantive Problems”</b> <b>Chair: Ratna Nandakumar</b> <ul style="list-style-type: none"><li>❖ A Multilevel Covariance Structure Model for Causal Connection Research of Group Effectiveness <b>Jun Corser Li</b></li><li>❖ Exploratory Positioning Analysis: Multi-Mode Multivariate Analysis for Semantic Differential Data <b>Hideki Toyoda, Akihiro Saito</b></li><li>❖ Using Structural Equation Modeling to Assess the Role of Rules Problem Solving as in the Raven’s Matrices Test <b>Jennifer L. Ivie</b></li><li>❖ Accounting for Factors Affecting the SAT Performance of Asian American and Pacific Islander Students <b>Xiang Bo Wang, Wayne Camara, Jennifer Kobrin, Ying Zhou</b></li><li>❖ Post High School Career Expectations: A Comparative Study Between Pittsburgh (USA) and Essen (Germany) <b>Julius M.M. Kitutu</b></li></ul>
<b>10:10-10:30</b> Chapel	Coffee Break
<b>10:30-11:30</b> Chapel	<b>Keynote Lecture: “Mixture Model-Based Clustering of High-Dimensional Data”</b> <b>Geoff McLachlan, University of Queensland, Brisbane</b> <b>Chair: Lawrence Hubert</b>
<b>11:30-1:00</b> Crocker	Lunch (Cafeteria serves from 12:00-1:00)
<b>1:00-2:00</b> Scripps	<b>Contributed Session: “Applications of IRT to Testing Problems”</b> <b>Chair: Mark Reckase</b> <ul style="list-style-type: none"><li>❖ Identifying the Test Form <b>Leonardo Sotaridona, Launa Hodgson, Erica Connelly</b></li><li>❖ Empty Bubble: Which Test Form Should the Response Be Scored With? <b>Furong Gao</b></li></ul>
Viewpoint	<b>Invited Session: “Large-Scale Student Profile Scoring – Foundations and Methods”</b> <b>Chair: Lou DiBello</b> <ul style="list-style-type: none"><li>❖ Introduction to Profile Scoring <b>Jeff Douglas, Louis Roussos, Bill Stout</b></li><li>❖ Applications to Operational Tests – Next Generation TOEFL <b>Lou DiBello, Jon Templin, Bob Henson</b></li><li>❖ Fast Classification and Other Operational Issues for Large Scale Testing <b>Andrew Ho, Diego Zapata, Jon Templin</b></li><li>❖ Roundtable Discussion of Foundational Issues <b>William Stout</b></li></ul>

## Program, Thursday, June 17, 2004 – Continued

Curlew	<p><b>Contributed Session: “Assessing Person Fit”</b> <b>Chair: Samantha Bouwmeester</b></p> <ul style="list-style-type: none"><li>❖ Lagrange Multiplier Person Fit Tests for Polytomous IRT Models <b>Anna Villa T. Dagohoy, Cees A.W. Glas</b></li><li>❖ Person-Fit Analysis for Polytomous Items in Personality Assessment <b>Wilco H.M. Emons</b></li><li>❖ The Effect of Misfitting Response Vectors on Item Calibration and Test Equating <b>Leonardo S. Sotaridona, Seung W. Choi, Rob R. Meijer</b></li></ul>
Marlin	<p><b>Contributed Session: “Graded Response Model”</b> <b>Chair: Bruce Bloxom</b></p> <ul style="list-style-type: none"><li>❖ LPE Graded Response Model, A Natural Expansion of the Logistic Positive Exponent Family of Models for Dichotomous Responses <b>Fumiko Samejima</b></li><li>❖ Precision of Parameter Estimates for the Graded Item Response Model <b>Cheryl D. Hill</b></li><li>❖ Ordered Category Attribute Coding Framework for Cognitive Assessment <b>Tzur Karelitz</b></li></ul> <p><b>Ad Hoc Activities (Check Bulletin Board)</b></p>
<b>2:00</b>	<b>End of Meeting</b>
<b>6:00</b>	
Crocker	Dinner (Cafeteria serves from 6:00-7:00)
<b>8:00-10:00</b>	Bonfire Party

## Notes

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