

Program, Sunday, July 6, 2003

9:00 – 17:00 PRE-CONFERENCE WORKSHOP ON “FUNCTIONAL DATA ANALYSIS”
Jim Ramsay and Regina Nuzzo, McGill University, USA

17:00-19:00 REGISTRATION

19:00-20:30 WELCOME RECEPTION

Program, Monday, July 7, 2003

Room 1

- 8:00-9:00 REGISTRATION
- 9:00-9:10 OPENING
- 9:10-10:10 **Keynote lecture: “Modern Developments in Predictive Learning”**
Jerome H. Friedman
Chair: Roberta Siciliano
- 10:10-10:50 **Invited Lecture: “Should Coefficient Alpha Be Replaced by Model-based Reliability coefficients”**
Peter Bentler
Chair: Willem J. Heiser
- 10:50-11:20 COFFEE BREAK
- 11:20-13:00 **Invited Session: “Random-effect approaches to traditional issues in item response modelling”**
Chair: Paul De Boeck
- ❖ *Random-Effect DIF Analysis via Hierarchical Generalized Linear Modeling*
Akihito Kamata
 - ❖ *Modeling fixed and random item feature effects*
Mark Wilson, Yiyu Xie
 - ❖ *Random-effect models for guessing*
Guido Del Pino, Jorge Gonzales, Katalin Balazs
 - ❖ *Random local item dependencies*
Dirk J.M. Smits, Paul De Boeck
- 13:00-14:30 LUNCH
- 14:30-16:10 **Contributed Session: “Latent Class Analysis”**
Chair: Jeroen Vermunt
- ❖ *Conceptual Issues in Latent Class Latent Trait Modeling*
Henk Kelderman
 - ❖ *Self-disclosure in the Work Environment: Quantitative and Qualitative Individual Differences*
A.M. de Meij, H. Kelderman, H. van der Flier
 - ❖ *Assessing the Influence of Item Characteristics on Strategy Use in Transitive Reasoning Tasks using Latent Class Analysis*
Samantha Bouwmeester
 - ❖ *Bayesian posterior estimation of parameters and standard errors in latent class models*
Francisca Galindo, Jeroen K. Vermunt
 - ❖ *On the Identifiability and Estimability of Latent Class Models: A Bayesian Analysis*
Ernesto San Martín, Paul De Boeck
- 16:10-16:40 COFFEE BREAK
- 16:40-18:20 **Contributed Session: “Person Fit in Item Response Theory”**
Chair: Klaas Sijtsma
- ❖ *The Detection of Malingering Using IRT Person-fit Methods*
Rob R. Meijer, Anna Villa T. Dagohoy
 - ❖ *The distribution of person-fit indices conditional on the estimated proficiency level and the detection of underachievement at a placement test*
Gilles Raïche, Jan-Guy Blais
 - ❖ *Randomized Item Response Model*
Jean-Paul Fox
 - ❖ *In comparing equated scores: A graphical model*
Christopher W.T. Chiu
 - ❖ *Estimation of mixture IRT models: a Bayesian approach*
Stijn De Knop, Iven van Mechelen
- 18:20 END OF THE DAY

Program, Monday, July 7, 2003

Room 2

- 10:10-10:50 **Invited Lecture:** “*Seeing the trees AND the wood - methods for visualising multi-question survey responses*”
Antony Unwin
Chair: Claudio Conversano
- 10:50-11:20 **COFFEE BREAK**
- 11:20-13:00 **Invited Session:** “*Bayesian approach to Latent Variables Modeling*”
Chair: Kazuo Shigemasu
- ❖ *A New Bayesian Information Complexity & Model Selection Criteria*
Hamparsum Bozdogan
 - ❖ *Factor Analysis and Outliers: Bayesian Approach*
Wolfgang Polasek
 - ❖ *Estimating IRT Abilities using Weighted Observed Scores*
Shin-ichi Mayekawa
 - ❖ *Bayesian Hierarchical Analysis of Choice Data*
Kazuo Shigemasu, Takahiro Hoshino, Satoko Kojima
- 13:00-14:30 **LUNCH**
- 14:30-16:10 **Contributed Session:** “*Nonparametric Regression*”
Chair: Paul Eilers
- ❖ *Thresholding Nonparametric Regression*
Wen Zhang
 - ❖ *Combining regression trees and linear regression to detect a specific type of interaction effects*
Elise Dusseldorp, Jacqueline J. Meulman
 - ❖ *Constrained P-spline regression*
Kaatje Bollaerts, Iven van Mechelen, Paul Eilers
 - ❖ *Treatment of Local Minima in Categorical Multiple Regression*
Anita J. van der Kooij, Jacqueline Meulam, Willem J. Heiser
 - ❖ *Estimating Polytomous Item Response with Free-knot splines*
Matthew S Johnson, Ilaria Di Matteo
- 16:10-16:40 **COFFEE BREAK**
- 16:40-18:20 **Contributed Session:** “*Unfolding and Choice Behaviour*”
Chair: Michel van de Velden
- ❖ *Multidimensional Analysis of Rankings Permutations*
Giuseppe Giordano
 - ❖ *Interpreting degenerate solutions in unfolding by use of the vector model and a signed distance model*
K. van Deun, P.J.F. Groenen, W.J. Heiser, F.M.T.A. Busing, L. Delbeke
 - ❖ *Avoiding degeneracy in metric unfolding by penalizing the intercept*
Frank M.T.A. Busing
 - ❖ *A Likelihood Based Item Fit Statistic for the Generalized Graded Unfolding Model*
James S. Roberts
 - ❖ *A comparison of Correspondence Analysis, Multidimensional Unfolding and the Generalized Graded Unfolding Model for single-peaked data*
Marieke Polak, Willem J. Heiser, Mark De Rooij, Frank Busing
- 18:20 **END OF THE DAY**

Program, Monday, July 7, 2003

Room 3

11:20-13:00

Invited Session: "Bayesian model selection"

Chair: Andrea Pastore

- ❖ *A semiparametric predictive Bayesian approach for ARMA model selection*
Lea Petrella, Stefano F. Tonellato
- ❖ *Variable Architecture Bayesian Neural Networks*
Silvia Bozza, Petro Mantovan, Rosa Anna Schiavo
- ❖ *System equation definition in state-space models via automatic discount*
Andrea Pastore

13:00-14:30

LUNCH

14:30-16:10

Contributed Session: "Computer Aided Testing – 1"

Chair: Mary Pommerich

- ❖ *Bayesian Item Selection Criteria in Constrained Adaptive Testing*
Bernard P. Veldkamp
- ❖ *Automated Test Assembly for Criterion-Referenced Equivalent Tests*
Chuan-Ju Lin
- ❖ *Randomized Comparison of Conventional, Computerized, and Computerized Adaptive Administration of Ordinal Polytomous Attitude Items*
A. Michiel Hol, Harrie C.M. Vorst, Gideon J. Mellenbergh
- ❖ *An application of the rule space theory for a computer adaptive diagnosis and instruction (CADI) system*
Sung-Hoon Kim
- ❖ *Item Bank Extension Models*
Hiddo A. Huitzing

16:10-16:40

COFFEE BREAK

16:40-18:20

Contributed Session: "Structural Equation Models - 1"

Chair: Peter Bentler

- ❖ *Examination of Mediation Effect Differences: A Covariance Structure Modeling Approach*
Tenko Raykov, Mark Brennan, Joann Reinhardt, Amy Horowitz
- ❖ *Including time-invariant covariates in the latent growth curve model*
Reinoud D. Stoel, Godfried van den Wittenboer, Joop Hox
- ❖ *On Muth'en's Maximum Likelihood for Two-level Covariance Structure Models*
Ke-Hai Yuan, Kentaro Hayashi
- ❖ *Do the Test Statistics for ML, NWLS and GLS Follow a Non-central Chi-square Distribution under Model Misspecification?*
Ulf Henning Olsson, Tron Foss, Einar Breivik, Sigurd W. Troye
- ❖ *Factor Analysis of Ordinal Variables: Further Comparisons of UBN, NOR and POM*
Karl G. Joreskog, Irini Moustaki

18:20

END OF THE DAY

Program, Monday, July 7, 2003

Room 4

- 11:20-13:00 **Invited Session: "Data Editing"**
Chairs: Photis Stavropoulos and Roberta Siciliano
- ❖ *Towards better edit imputation*
John Charlton
 - ❖ *New ways of specifying edits*
Photis Stavropoulos, George Petrakos, Gregory Farmakis
 - ❖ *Incremental Recursive Partitioning for Data Editing*
Claudio Conversano, Francesco Mola, Roberta Siciliano
 - ❖ *Using robust tree-based models to identify errors in long-tailed data*
Ray Chambers
- 13:00-14:30 **LUNCH**
- 14:30-16:10 **Contributed Session: "Analysis of Rating Data"**
Chair: James Roberts
- ❖ *Practical Analysis of Rating Data*
Gunter Maris, Timo Becher
 - ❖ *Evaluating the quality of rater-mediated assessments*
George Jr Engelhard
 - ❖ *Extended logistic models as a general solution for the method of constant stimuli*
Giulio Vidotto, Eraldo Nicotra
 - ❖ *Item Parameter Recovery, Standard Error, and Fit Statistics of the BIGSTEPS*
Cheng-Te Chen, Wen-Chaing Wang
 - ❖ *Intra-assessor inconsistency in setting performance standards*
Hans J. Vos
- 16:10-16:40 **COFFEE BREAK**
- 16:40-18:20 **Contributed Session: "Validation Studies"**
Chair: Denny Borsboom
- ❖ *Influence of perceived environmental characteristics on psychological adjustment during early adolescence*
Maria Cristina Martini, Alessio Vieno, Massimo Santinello
 - ❖ *Re-specifying Strategies and Models to Evaluate University Teaching Quality*
Marisa Civardi, Emma Zavarrone
 - ❖ *An analysis of nomination and rating scales measures of sociometric dimensions by Multitrait-Multimethod (MTMM) procedures*
Rosario Martínez-Arias, J. Carlos Suarez-Falcon
 - ❖ *Construct Validation of Measurements with Typical Response Tasks*
Sanneke J. Schouwstra
 - ❖ *Cost-Optimal Assessment Scheduling for Outcome Management in Psychotherapy*
Robert Percevic
- 18:20 **END OF THE DAY**
- 18:30-19:30 Meeting of the Editorial Council, part I
19:30-21:00 Meeting of the Editorial Council, part II

Program, Monday, July 7, 2003

Room 5

14:30-16:10

Contributed Session: “*Differential Item Functioning/Structural Equation Modelling*”
Chair: Chees Glas

- ❖ *Examining Sources of Differential Item Functioning*
Kadriye Ercikan, Kim Koh, Sharon Barnett
- ❖ *Detecting DIF in polytomous items across multiple populations: issues and techniques*
Jerry Welkenhuysen-Gybels
- ❖ *Detection of Differential Item Functioning for Polytomous Items*
Ya-Hui Su, Wen-Chung Wang
- ❖ *Structural Equation Modeling Using Ability Parameters*
Hiroto Murohashi, Hideki Toyoda
- ❖ *Paired comparison analysis by using SEM*
Kouken Ozaki, Hideki Toyoda

16:10-16:40

COFFEE BREAK

16:40-18:20

Contributed Session: “*Applications of Item Response Theory and related methods*”
Chair: Margo Jansen

- ❖ *The role of the measure process in evaluation of public services: a case study*
Laura Pagani, Maria Chiara Zanarotti
- ❖ *The Rasch Model to Measure the Service Quality*
Francesca De Battisti, Giovanna Nicolini, Silvia Salini
- ❖ *A latent trait analysis of inventories designed to study health status in elderly*
Li-Chiao Huang
- ❖ *Data Analysis of two-tier items via a probabilistic modeling approach*
Hak Ping Tam, Kailin Young
- ❖ *Customers behaviours and preference analysis: a data-mining based approach*
Simona Balzano, Francesco Palumbo

18:20

END OF THE DAY

Program, Tuesday, July 8, 2003

Room 1

- 8:40-9:20 **Invited Lecture:** : “*The Relationship Between the Structure of Interindividual and Intraindividual Differences: A Theoretical and Empirical Vindication of Developmental Systems Theory*”
Peter Molenaar
Chair: Brian Junker
- 9:20-11:00 **Invited Session:** “*New developments in nonparametric item response theory*”
Chairs: Klaas Sijtsma and L. Andries van der Ark
- ❖ *Mokken Scale Analysis Using Restricted Optimization Techniques*
Alexandra A. H. van Abswoude
 - ❖ *Detection and Diagnosis of Misfitting Item-Score Vectors*
Wilco H.M. Emons
 - ❖ *Constant Latent Odds-Ratios models and the Mantel-Haenszel null hypothesis*
Dave J. Hessen
 - ❖ *The Effect of Missing Data Imputation on Mokken Scale Analysis*
L. Andries van der Ark, Klaas Sijtsma
- 11:00-11:30 **COFFEE BREAK**
- 11:30-12:10 **Invited Lecture:** “*Detection of structural changes in generalized linear models*”
Jaromir Antoch
Chair: John Gower
- 12:10-13:10 **Keynote Lecture:** “*Visualization and Classification via Contiguity Analysis*”
Ludovic Lebart
Chair: Francesco Mola
- 13:10 **END OF THE DAY**
- 13:10-14:40 **LUNCH**
- 16:00 **EXCURSION**

Program, Tuesday, July 8, 2003

Room 2

- 8:40-9:20 **Invited Lecture:** *"The Fuzzy Approach to Multivariate Statistical Analysis: Recent Developments"*
Renato Coppi
Chair: Akinori Okada
- 9:20-11:00 **Invited Session:** "New developments and innovative uses of three-way methods"
Chair: Roberto Rocci
- ❖ Modelling of Interindividual and Intraindividual differences by Multilevel Simultaneous Component Analysis
Marieke E. Timmerman
 - ❖ Bootstrap Confidence Intervals for Three-way Methods
Henk A.L. Kiers
 - ❖ Simultaneous component and cluster analysis: the between and the within approaches
Roberto Rocci, Maurizio Vichi
 - ❖ Procrustes analysis as an aid for aligning molecules in medicinal chemistry
Pieter M. Kroonenberg, William Dunn, Jacques J.F. Commandeur
- 11:00-11:30 **COFFEE BREAK**
- 11:30-12:10 **Invited Lecture:** *"Multidimensional Scaling in the city-block metric: L1 and L2 norm optimization methods using MATLAB"*
Larry Hubert
Chair: Yoshio Takane
- 13:10 **END OF THE DAY**
- 13:10-14:40 **LUNCH**
- 16:00 **EXCURSION**

Program, Tuesday, July 8, 2003

Room 3

9:20-11:00

Invited Session: "Asymmetric Multidimensional Scaling"

Chair: Giuseppe Bove

- ❖ *Fitting complex difference system models to longitudinal asymmetric proximity matrices*
Naohito Chino
- ❖ *A series of distance models for square contingency tables*
Mark De Rooij
- ❖ *Asymmetric multidimensional scaling based on joint space model*
Akinori Okada, Tadashi Imaizumi
- ❖ *Interpreting graphical representation of asymmetric data*
Takayuki Saito

11:00-11:30

COFFEE BREAK

13:10

END OF THE DAY

13:10-14:40

LUNCH

16:00

EXCURSION

Program, Tuesday, July 8, 2003

Room 4

9:20-11:00

Invited Session: *“Recent Advances in Multivariate Data Analysis with special references to canonical correlation analysis”*

Chair: Haruo Yanai

- ❖ *A simple technique for regularization in redundancy analysis and kernel redundancy analysis*
Yoshio Takane, Haruo Yanai
- ❖ *Ability of correspondence analysis to find latent structures: Comparison with association model*
Tatsuo Otsu
- ❖ *On Generalized Canonical Correlation Analysis among M Sets of Variables*
Haruo Yanai, Yoshio Takane
- ❖ *The canonical correlation in Multi-Way Layout*
M. Adam, J. Maroulas

11:00-11:30

COFFEE BREAK

13:10

END OF THE DAY

13:10-14:40

LUNCH

14:00-15:45

Meeting of the Board of Trustees

16:00

EXCURSION

Program, Wednesday, July 9, 2003

Room 1

- 8:40 –9:20 **Invited Lecture: “IRT components of a broader psychometric modelling toolkit”**
Brian Junker
Chair: Paul de Boeck
- 9:20-11:00 **Invited Session: “Models for Response Times”**
Chair: Margo Jansen
- ❖ *Handling outliers in estimating the diffusion model for reaction time data*
Francis Tuerlinckx, Roger Ratcliff
 - ❖ *Psychometric modeling of response speed and accuracy with mixed and conditional regression.*
Gerard J.P. van Breukelen
 - ❖ *The Effect of Model Based Imputation of Missing Data on the Estimation of the Parameters in Rasch's Speed Tests Model*
Margo G.H. Jansen
 - ❖ *Response Latencies and Item Order in a Web-based Questionnaire*
Tom Backer-Johnsen
 - ❖ *Cognitrone: Issues of test fairness and construct validity*
Jorg Prieler, Markus Sommer
- 11:00-11:30 **COFFEE BREAK**
- 11:30-13:10 **Contributed Session: “Computer Aided Testing –2”**
Chair: Bernhard Veldkamp
- ❖ *A Confirmatory Linking Procedure for Evaluating the Scale of CAT Pools*
Mary Pommerich, Daniel O. Segall
 - ❖ *Information theoretic approaches to item selection*
Alexander Weissman
 - ❖ *An Empirical Study of Computerized Adaptive Test in Macau*
Shing On Leung
 - ❖ *Controlling Item Exposure and Test Overlap in Computerized Adaptive Testing*
Shu-Ying Chen, Young-Sun Park, Won-Sik Lee, Jae-Hwa Lee
 - ❖ *Modern Testing Needs and Student Profile Scoring*
Louis V. Di Bello
- 13:10-14:40 **LUNCH**
- 14:40-16:20 **Invited Session: “Measurement Equivalence and Beyond”**
Chair: Peter Molenaar
- ❖ *Increases in intelligence and measurement invariance*
Jelte M. Wicherts
 - ❖ *Measurement invariance and construct validity*
Denny Borsboom
 - ❖ *A comparison of item response models: Dynamic versus static*
P.W. van Rijn, P.C.M. Molenaar
 - ❖ *Ergodicity, local homogeneity and measurement invariance between subjects*
Ellen Hamaker, P. Molenaar
- 16:20-16:50 **COFFEE BREAK**
- 16:50-17:00 **Announcement of the 2002 Ph.D. Award Winner**
- 17:00-18:00 **Presidential Address: Jacqueline J. Meulman**
- 18:00-18:50 **Business Meeting of the Psychometric Society Members**
- 18:50 **END OF THE DAY**
- 21:00 **CONFERENCE DINNER**

Program, Wednesday, July 9, 2003

Room 2

- 8:40 –9:20 **Invited Lecture:** “*Group Average Models*”
John Gower
Chair: Ludovic Lebart
- 9:20-11:00 **Invited Session:** “*Clustering for Three-Mode Data*”
Chair: Pieter M. Kroonenberg
- ❖ *Three-way classification models: An overview*
Iven van Mechelen
 - ❖ *Mixture method clustering of Mixed Three-Mode Three-Way Data*
Kaye Basford, Lyn Hunt
 - ❖ *Mixture method clustering of Mixed Three-Mode Three-Way Data with Missing Information*
Lyn Hunt, Kaye Basford
 - ❖ *Simultaneous three-mode clustering and component using simulated annealing*
Hisao Miyano
- 11:00-11:30 COFFEE BREAK
- 11:30-13:10 **Contributed Session:** “*Special Response Models*”
Chair: Gerard van Breukelen
- ❖ *Samejima’s Continuous Response Model for Item Response Time*
Eiji Muraki, Yasuhito Hagiwara
 - ❖ *A Bayesian IRT estimation procedure for speeded tests*
Anton A Béguin
 - ❖ *Differential Speededness Assessed Under Controlled Conditions*
Mei Liu, Louis Roussos
 - ❖ *Componential Nedelsky Models*
Timo Bechger, Gunter Maris
 - ❖ *The Scaling and Psychometric Properties of an Acute Pain Scale for use in Dogs*
Matthew Burnell, Marian Scott, Andrea Nolan, Jacky Reid
- 13:10-14:40 LUNCH
- 14:40-16:20 **Invited Session:** “*Neural Networks*”
Chair: Michele La Rocca
- ❖ *Fast Bayesian Implementation of Hierarchical Mixtures of Experts and Stochastic Neural Networks*
Samuel P. Wong
 - ❖ *Evolving wavelet networks*
Tommaso Minerva, Irene Poli
 - ❖ *Subsampling to Assess the Reliability of Neural Network Models*
Michele La Rocca, Cira Perna
- 16:20-16:50 COFFEE BREAK
- 18:50 END OF THE DAY
- 21:00 CONFERENCE DINNER

Program, Wednesday, July 9, 2003

Room 3

8:40 –9:20

Invited Session: “*Independent Component Analysis in Psychometrics*”
Chair: **Yutaka Kano**

- ❖ *Beyond linear ICA*
Christian Jutten
- ❖ *Confirmatory’ ICA*
Shohei Shimizu, Yutaka Kano
- ❖ *ICA with padded source signals and nonnormal factor analysis*
Yusuke Miyamoto, Yutaka Kano, Shohei Shimizu, Aapo Hyvarinen
- ❖ *A Projection Pursuit Methodology for Blind Signal Extraction*
Sergio Cruces, Andrzej Cichocki

11:00-11:30

COFFEE BREAK

11:30-13:10

Contributed Session: “*Structural Equations Models – 2*”
Chair: **Karl Joreskog**

- ❖ *Use of nonnormality in SEM*
Shohei Shimizu, Yutaka Kano
- ❖ *Propensity score weighted multiple group structural equation modeling*
Takahiro Hoshino
- ❖ *Asymptotic biases in factor analysis and structural equation modeling*
Haruhiko Ogasawara
- ❖ *Pseudo maximum likelihood estimation in SEM — Scale score versus multiple indicator*
Yutaka Kano
- ❖ *Imposing Constraints in Cholesky-Decomposed Covariance Matrices*
Paul Dudgeon, Richard Bell, Philippa Pattison

13:10-14:40

LUNCH

14:40-16:20

Invited Session: “*Statistical tools in an actuarial perspective*”
Chair: **Emilia Di Lorenzo**

- ❖ *Methodological problems in Solvency Assessment of an Insurance Company*
Rosa Coccozza, Emilia Di Lorenzo, Marilena Sibillo
- ❖ *Risk components in the Solvency Valuation: the Cash Flow Analysis*
Maria Rosaria Coppola
- ❖ *Parametric and non-parametric statistical models for the control of insurance companies*
Paolo De Angelis, Emilia Di Lorenzo
- ❖ *Flexible Guarantees In Insurance Policies: A probabilistic Model*
Piera Mazzoleni

16:20-16:50

COFFEE BREAK

18:50

END OF THE DAY

21:00

CONFERENCE DINNER

Program, Wednesday, July 9, 2003

Room 4

- 9:20-11:00 **Invited Session: “Generalized Linear Latent Variable Models”**
Chair: Angela Montanari
- ❖ *Factor models with covariate effects on the manifest and latent variables: a comparison of the LISREL and the IRT approach.*
Irini Moustaki, Karl Joreskog, Dimitris Mavridis
 - ❖ *The goodness of fit problem in generalized latent variable models for ordinal data*
Silvia Cagnone, Stefania Migani
 - ❖ *Combining Mixtures of Classifiers*
Claudio Conversano, Roberta Siciliano
- 11:00-11:30 **COFFEE BREAK**
- 11:30-13:10 **Contributed Session: “Non response and missing data”**
Chair: Peter G.M. van der Heijden
- ❖ *Relationships between two methods for dealing with missing data in PCA*
Yoshio Takane, Yuriko Oshima-Takane
 - ❖ *Mapping nonresponse*
Ineke A.L.Stoop
 - ❖ *The Performance of Missing Data Imputation Methods for Maximum Likelihood Estimation in Structural Equation Modeling*
Hyung Ki So
 - ❖ *Estimating the effect of psychological treatment for Depression from an RCT with partial compliance a subsequent loss to follow-up*
Mohammad Maracy, Graham Dunn
 - ❖ *IRT models for Non-ignorable Missing Data Processes*
Cees A.W.Glas, Jonald L. Pimentel
- 13:10-14:40 **LUNCH**
- 14:40-16:20 **Invited Session: “Visual Exploration of large categorical data sets”**
Chair: Adalbert F. X. Wilhelm
- ❖ *Visual Mining of Discrete Data*
Adalbert F. X. Wilhelm
 - ❖ *Categorical Displays of a Million Cases*
Heike Hofmann
 - ❖ *The Other Side of Observations*
Daniela Di Benedetto
- 16:20-16:50 **COFFEE BREAK**
- 18:50 **END OF THE DAY**
- 21:00 **CONFERENCE DINNER**

Program, Wednesday, July 9, 2003

Room 5

- 11:30-13:10 **Contributed Session: "Polytomous Item Response Theory"**
Chair: Martijn Berger
- ❖ *Latent variable analysis of partially ordered responses with an application to frequency and intensity of anger-related emotions*
Michel Meulders, Paul De Boeck, Edward H. Ip
 - ❖ *A Model For Subjective Probability Data*
Gunter Maris
 - ❖ *A comparison of the efficiency of polytomous and dichotomous items for latent trait estimation*
Valeria Lima Passos, Martijn P.F. Berger
 - ❖ *Model Specificaton for Cognitive Assesment of Proportional Reasoning*
Rhiannon Weaver
 - ❖ *A noniterative item parameter solution in EM cycles of the continuous response model*
Kojiro Shojima
- 13:10-14:40 LUNCH
- 16:20-16:50 COFFEE BREAK
- 18:50 END OF THE DAY
- 21:00 CONFERENCE DINNER

Program, Thursday, July 10, 2003

Room 1

- 8:40 –9:20 **Invited Lecture:** “*New developments in Randomized Response*”
Peter G.M. van der Heijden
Chair: Ineke Stoop
- 9:20-11:00 **Invited Session:** “*PLS Structural Equation Modeling for Customer Satisfaction: Methodological and Application Issues*”
Chair: Vincenzo Esposito Vinzi
- ❖ *Comparison between PLS and LISREL approaches for Structural Equation Modeling: Application to the measure of Customer Satisfaction.*
Michel Tenenhaus
 - ❖ *PLS structural equation modelling for Customer Satisfaction - Methodological and application issues*
Kai Kristensen, Jacob Kjær Eskildsen, Hans Jørn Juhl, Peder Østergaard
 - ❖ *Explaining Customer Loyalty: an extension to the ECSI Model*
Manuel José Vilares, Pedro Simões Coelho
- 11:00-11:30 **COFFEE BREAK**
- 11:30-13:10 **Contributed Session:** “*Nonparametric Item Response Theory*”
Chair: Andries van der Ark
- ❖ *Item Ordering Theories Based on Nonparametric Item Response Theory*
Hsiang-Chuan Liu, Tian.Wei Sheu, Bor-Chen Kuo, Shu-Chuan Shih, Ching-Lin Shih
 - ❖ *Analyzing psychopathology data: a case for nonparametric IRT*
K. Rob R.Meijer, Joost J. Baneke
 - ❖ *Nonparametric IRT: multivariate isotonic probabilistic models (d-ISOP)*
Hartmann Scheiblechner
 - ❖ *Properties of Homogeneity Analysis of Dichotomus Test Items*
Matthijs Warrens
 - ❖ *The correlation coefficient as an effect size measure within the framework of ITS*
Wen-Chung Wang, Ying-Yao Cheng
- 13:10-14:40 **LUNCH**
- 14:40-15:20 **Invited Lecture:** “*Psychometrics, Dynamics and Functional Data Analysis*”
Jim Ramsay
Chair: Jerome H. Friedman
- 15:20-17:00 **Contributed Session:** “*Factor Analysis*”
Chair: Yutaka Kano
- ❖ *Positive loadings and factor correlations for positive manifold data*
Wim P. Krijnen,
 - ❖ *Recovering Preipsative Latent Factor Scores from Ipsative Measures: A Simulation Study*
Mike W.L. Cheung,
 - ❖ *Confirmatory Factor Analysis with Ordinal Variables: A Simulation Study*
Fan Yang-Wallentin
 - ❖ *A comparison of three methods of common factor analysis*
Gregor Socan
 - ❖ *Factor Structure of a Testlet-Based Test*
Soonmook Lee, Kyoung Sook Choi, In-Soo Choe
- 17:00-17:30 **COFFEE BREAK**
- 17:30-18:30 **Keynote Lecture:** “*Probability Models for Lifetime Data in Reliability and Survival Analysis*”
Ingram Olkin
Chair: Jacqueline Meulman
- 18:30-18:40 **CLOSING**
- 18:40 **END OF THE MEETING**

Program, Thursday, July 10, 2003

Room 2

- 8:40-9:20 **Invited Lecture:** “*Bayesian ANOVA for high dimensional problems with applications to DNA microarray analysis*”
Sunil J. Rao
Chair: Jaromir Antoch
- 9:20-11:00 **Invited Session:** “*Multimode analysis: substantive relevance*”
Chair: Iven van Mechelen
- ❖ *Mixture models for simultaneous reduction and classification*
Roberto Rocci, Maurizio Vichi
 - ❖ *An empirical comparison between two methods for three-mode clustering*
Pieter M. Kroonenberg
 - ❖ *Three-way modeling of individual differences in sequential personality-related processes*
Eva Cuelemans
 - ❖ *Asymmetric multidimensional scaling of relationships among managers*
Akinori Okada, Tadashi Imaizumi, Hiroshi Inoue
- 11:00-11:30 COFFEE BREAK
- 11:30-13:10 **Contributed Session:** “*Applications PCA*”
Chair: Marieke Timmerman
- ❖ *Complex PCA in Customer Satisfaction studies*
Pasquale Sarnacchiaro
 - ❖ *Classify Students’ Testing Performances Using Pattern Recognition Techniques*
Bor-Chen Kuo, Jinn-Min Yang, Chia-Hao Pai, Li-Wie Ko, Wen-Chih Lin, Bih-Yun Huang
 - ❖ *An application of multiple correspondence analysis: quantification of problem solving categories used for a set of items at two occasions*
Cornelis M van Putten
 - ❖ *Evaluation of an Automated Procedure for Scoring Patient Notes as Part of a Clinical Skills Examination*
Kimberly Swygert
 - ❖ *Empirical Scaling of Democracy*
Rien van der Leeden, Marike Polak, Renske Doorenspleet
- 13:10-14:40 LUNCH
- 14:40-15:20 **Invited Lecture:** “*A branch and bound algorithm for computing the best subset regression models*”
Erricos Kontoghiorghes
Chair: Larry Hubert
- 15:20-17:00 **Contributed Session:** “*Multilevel Analysis*”
Chair: Mark Wilson
- ❖ *Application of a Mixture Logistic Regression Model with Random Effects*
Jee-Seon Kim, Daniel Bolt
 - ❖ *Multilevel factor models for ordinal variables*
Leonardo Grilli, Carla Rampichini
 - ❖ *A multilevel analysis of large-scale achievement test data*
Ricardo Aravena, Guido del Pino, Ernesto San Martin, Frank Rijmen
 - ❖ *Multilevel Models for Assessing Growth with Attrition*
Janet K. Holt
- 17:00-17:30 COFFEE BREAK
- 18:40 END OF THE MEETING

Program, Thursday, July 10, 2003

Room 3

- 9:20-11:00 **Invited Session: "Transition and Asymmetry"**
Chair: Akinori Okada
- ❖ *Trend Vector Representation of Multiple Transition Frequency Tables by Regularized Homogeneity Analysis*
Kohei Adachi
 - ❖ *Fitting a vector model to the transition matrices*
Tadashi Imaizumi
 - ❖ *Monotonicity of an asymmetric agglomerative hierarchical clustering algorithm*
Akinobu Takeuchi, Hiroshi Yadohisa, Koichi Inada
- 11:00-11:30 **COFFEE BREAK**
- 11:30-13:10 **Contributed Session: "Model Testing in Item Response Theory"**
Chair: Rob Meijer
- ❖ *A new framework for goodness of fit testing in IRT*
Albert Maydeu-Olivares, Joe Harry
 - ❖ *Testing Linear Models on Ability Parameters*
Irene Hendrawan, Cees A.W. Glas
 - ❖ *Conditional Scores of DETECT*
Ratna Nandakumar, Feng Yu, Yanwei Oliver Zhang
 - ❖ *A facet designed test for scientific literacy*
Claus H. Carstensen
 - ❖ *Detecting heterogeneity in logistic models*
Katalin Balázs, Istvan Hidegkuti, Paul De Boeck
- 13:10-14:40 **LUNCH**
- 15:20-17:00 **Contributed Session: "Longitudinal Data"**
Chair: James O. Ramsay
- ❖ *Types of change in longitudinal data*
Frans J. Oort,
 - ❖ *Periodic Trends, Non-Periodic Trends, and Their Interactions in Longitudinal and Functional Data*
Carlotta Ching Ting Fok, James O. Ramsay
 - ❖ *The historical functional linear model: An approach to develop tests of significance*
Nicole Malfait, James O. Ramsay
 - ❖ *Efficient Design Of Cross-Sectional And Longitudinal Studies*
Martijn P.F. Berger
 - ❖ *A stabilizing algorithm for longitudinal data analysis networks*
Massimo Aria
- 17:20-17:30 **COFFEE BREAK**
- 18:40 **END OF THE MEETING**

Program, Thursday, July 10, 2003

Room 4

9:20-11:00

Invited Session: “*Latent Structure Analysis*”

Chair: Pietro Amenta

- ❖ *Analysis of Two-Way Multiblocks Tables: DO-ACT*
Myrtille Vivien, Robert Sabatier
- ❖ *Multiple Correspondence Analysis with ordinal variables*
Rosaria Lombardo, Luigi D'Ambra
- ❖ *A Method to Estimate Latent Variables in structural models*
Giorgio Vittadini, Giorgio Lovaglio

11:00-11:30

COFFEE BREAK

11:30-13:10

Contributed Session: “*Categorical and exploratory PCA*”

Chair: Henk Kiers

- ❖ *Independent Component Analysis and Exploratory Projection Pursuit: two faces of the same coin?*
Angela Montanari, Cinzia Viroli
- ❖ *Nonparametric inference in categorical principal components analysis (CATPCA)*
Marielle Linting, Patrick J.F. Groenen, Jacqueline J. Meulman
- ❖ *Generalized Canonical Correlation Analysis of Matrices with Different Row Order*
Michel van de Velden, Tammo H.A. Bijmolt
- ❖ *Improved majorization for weighted least-squares decomposition models*
Patrick J.F. Groenen, Patrizia Giaquinto, Henk A.L. Kiers
- ❖ *The Importance Of The Eigenvalues To Define A Configuration Of The Categories Of A Group Of Qualitative Variables*
Efrem Colnago

13:10-14:40

LUNCH

15:20-17:00

Contributed Session: “*Methods for Specific Data Types*”

Chair: Renato Coppi

- ❖ *Two-way Component Models of Fuzzy Data*
Pierpaolo D'Urso, Paolo Giordani, Henk A. L. Kiers
- ❖ *A Replacement Approach for the Analysis of Supposed Fake Data*
Massimiliano Pastore, Luigi Lombardi, Massimo Nucci
- ❖ *Concordant rules: a novel approach for the evaluation of the interest of the associative rules*
Luigi Arpaia
- ❖ *Finding rules in implicit learning with hidden Markov models*
Ingmar Visser, Maartje Raijmakers
- ❖ *A dynamical group decision model*
Maarten Speekenbrink

17:00-17:30

COFFEE BREAK

18:40

END OF THE MEETING

Program, Thursday, July 10, 2003

Room 5

11:30-13:10 **Contributed Session: "Clustering and Networks"**
Chair: Maurizio Vichi

- ❖ *Hierarchical clustering procedures that minimize a hybrid L1/L2 loss function*
Thomas J. Smith
- ❖ *Globally Optimal Nonexhaustive Partitioning by Dynamic Programming*
Bart Jan van Os
- ❖ *Estimating standard errors in feature network models for proximity data*
Laurence E. Frank, Willem J. Heiser
- ❖ *K-centroids Hierarchical Classes Analysis*
Luigi Lombardi, Iven van Mechelen
- ❖ *The Small Worlds of Small Social Networks*
Gary Robins

13:10-14:40 LUNCH

15:20-17:00 **Contributed Session: "Statistics"**
Chair: Wim Krijnen

- ❖ *On a distance between the attitude of two subjects with respect to a third*
Antonio Mango
- ❖ *A Nonparametric Approach for the Long Memory Parameter*
Erin M. Hodges
- ❖ *Core function*
Zdenek Fàbian
- ❖ *A New Method for Testing Univariate and Bivariate Normality Based on Properties of Hermite Orthogonal Polynomials*
Simon Rosenfeld
- ❖ *Incompleteness, Aristotelian reasoning, and null hypothesis significance testing*
Ranald Macdonald

17:00-17:30 COFFEE BREAK

18:40 END OF THE MEETING