



IMPS 2020 • Virtual • July 14-17
Conference Program

TUESDAY · JULY 14

8:45 a.m.-9:00 a.m.
US Eastern Time

STAGE 1

Welcome and Opening Remarks
Chair: Daniel Bolt

9:00 a.m.-9:55 a.m.
US Eastern Time

STAGE 1

Keynote Speaker: Michel Wedel
Psychometric Analysis of Eye Movements During Search and Choice
Chair: Irini Moustaki

10:00 a.m.-10:35 a.m. US Eastern Time	STAGE 1 1.1: Process Data: Core Concepts and Practical Applications (Symposium) Chair: Markus Broer	STAGE 2 1.2: Bayesian Inference Chair: Silia Vitoratou	STAGE 3 1.3: Differential Item Functioning Chair: Jing Lu	STAGE 4 1.4: Advances in Cognitive Diagnostic Modeling Chair: Matthew Madison
	Markus Broer PROCESS DATA: CORE CONCEPTS AND PRACTICAL APPLICATIONS	David Kaplan BAYESIAN PROBABILISTIC FORECASTING WITH STATE NAEP DATA	David Chen INVESTIGATING ITEM PARAMETER DRIFT ON DIFFERENT IRT LINKING METHODS	Siqi He IDENTIFICATION AND ESTIMATION OF DIAGNOSTIC MODELS FOR ORDINAL RESPONSES WITH POLYTOMOUS ATTRIBUTES
	Tiago Calico SO YOU THINK YOU CAN PROCESS: ONTOLOGICAL AND METHODOLOGICAL BARRIERS TO INCORPORATING EVENT DATA IN PSYCHOMETRIC MODELS	Sinan Yavuz COMPARISON OF MODEL AVERAGING AND MODEL SELECTION METHODS	Dongmei Li POPULATION INVARIANCE OF EQUATING FOR SUBGROUPS DIFFERING IN ACHIEVEMENT LEVEL	James Balamuta AN EXPLORATORY GENERAL DIAGNOSTIC MODEL USING THE LOGIT LINK FUNCTION
	Fusun Sahin TO PENALIZE OR NOT TO PENALIZE NOT-REACHED ITEMS: EFFECTS ON ITEM AND ABILITY ESTIMATIONS	Maximilian Maier BAYESIAN BENEFITS FOR META-ANALYSIS IN THE PRESENCE OF PUBLICATION BIAS	Weimeng Wang AN ANCHOR-FREE TEST OF DIFFERENTIAL ITEM FUNCTIONING	Jiaying Xiao A COGNITIVE DIAGNOSTIC MODEL FOR HIERARCHICAL ATTRIBUTES AND LEARNING TRAJECTORIES
	Xiaying Zheng USING RESPONSE TIME MODELING TO DETECT SPEEDED EXAMINEES WITH MISSING RESPONSES	Yanling Li FORECASTING ALCOHOL USE WITH MISSING DATA: A BAYESIAN APPROACH	Xiaying Zheng A CAUTIONARY NOTE ON USING THE MANTEL-HAENSZEL METHOD TO DETECT DIFFERENTIAL ITEM FUNCTIONING OF 3PL ITEMS	Yinghan Chen ESTIMATION OF K AND Q MATRIX IN RESTRICTED LATENT CLASS MODELS
10:40 a.m.-11:15 a.m. US Eastern Time	STAGE 1 2.1: Aberrant Response Behavior Chair: Jorge Tendeiro	STAGE 2 2.2: Multilevel Analysis Chair: Holger Brandt	STAGE 3 2.3: Novel Constructs and Formats Chair: Peter Halpin	STAGE 4 2.4: Causal Inference Chair: Jee-Seon Kim
	Xiaouu Li COMPOUND SEQUENTIAL DETECTION OF COMPROMISED ITEMS	Hsiu-Ting Yu EFFECT SIZE MEASURES FOR MULTILEVEL MODELS: CONCEPTUAL AND COMPUTATION ISSUES	Anne Thissen-Roe ESTIMATING APPROXIMATE NUMBER SENSE (ANS) ACUITY	Youmi Suk EVALUATING THE EFFECTS OF EXTENDED TIME ACCOMMODATIONS IN OBSERVATIONAL STUDIES
	Hotaka Maeda MODELING UNIQUE ITEM RESPONSE PATTERNS OF SUSPECTED ABERRANT EXAMINEES	Hok Chio Lai MULTILEVEL BOOTSTRAP CONFIDENCE INTERVALS FOR STANDARDIZED EFFECT SIZE	Lewis Baker DIFFERENCES IN SYMBOLIC AND NON-SYMBOLIC MEASURES OF APPROXIMATE NUMBER SENSE	Soojin Park ESTIMATION AND SENSITIVITY ANALYSIS FOR CAUSAL DECOMPOSITION ANALYSIS IN DISPARITY RESEARCH
	Hongyue Zhu BAYESIAN CHANGE POINT ANALYSIS FOR DETECTING ABERRANT RESPONSE BEHAVIORS	Diego Carrasco STUDENTS RATING THE LEVELS OF DISCUSSION IN THE CLASSROOM AND SHOWING LACK OF CONSENSUS	Hojjatolla Farahani AFTER THEMATIC ANALYSIS: INTRODUCING THE FUZZY THEMATIC NETWORK ANALYSIS IN PSYCHOLOGICAL RESEARCH	Satoshi Usami A POTENTIAL OUTCOME APPROACH TO WITHIN-PERSON CAUSAL EFFECTS OF TIME-VARYING CONTINUOUS TREATMENTS: AN EMPHASIS ON CONTROLLING PERSON'S STABLE TRAIT FACTORS
	Kaiwen Man ASSESSING PRE-KNOWLEDGE CHEATING VIA INNOVATIVE TECHNOLOGY-ENHANCED MEASURES	Sacha Epskamp INTRODUCING PSYCHONETRICS, AN R PACKAGE FOR STRUCTURAL EQUATION MODELLING	E. Manolo Romero Escobar RANK-ORDER RESPONSE ITEM SCORING IN AN ABILITY-BASED BATTERY OF EMOTIONAL INTELLIGENCE	Keith Markus NON-CAUSAL DETERMINATION: IMPLICATIONS FOR CAUSAL EXPLANATION AND CAUSAL MODELING
	Daniella Rebouças RESPONSE TIMES AND CLICK-THROUGH DATA FOR DETECTION OF CARELESS RESPONSES	Jorge Bazan RESIDUAL ANALYSIS IN SINGLE LEVEL AND MULTILEVEL RASCH COUNTS MODELS	Jing Chen PSYCHOMETRIC MODELS FOR NEXT GENERATION SCIENCE STANDARDS ALIGNED SCIENCE ASSESSMENTS	

TUESDAY · JULY 14

11:20 a.m.-11:55 a.m. US Eastern Time	STAGE 1 3.1: Regression Modeling and Prediction <i>Chair: Kenneth Wilcox</i>	STAGE 2 3.2: Reliability <i>Chair: Jorge González</i>	STAGE 3 3.3: Testlets and Hierarchical Factor Structure <i>Chair: Ken Fujimoto</i>	STAGE 4 3.4: Response Times and Diagnostic Modeling <i>Chair: Xiaou Li</i>
	Eduardo Alarcón-Bustamante NEW INSIGHTS ON MARGINAL EFFECTS	Debby ten Hove SELECTING THE APPROPRIATE ICC TO ESTIMATE INTERRATER RELIABILITY	Chen Tian ROTATION CRITERION THAT ENCOURAGES A HIERARCHICAL FACTOR STRUCTURE	Xin Qiao NONLINEAR LATENT EFFECTS IN COGNITIVE DIAGNOSTIC MODELING INCORPORATING RESPONSE TIMES
	Jorge Tendeiro ROBUSTNESS OF BAYESIAN NULL HYPOTHESIS TESTING UNDER OPTIONAL STOPPING	Pedro Henrique Ribeiro Santiago A NEW APPROACH FOR BAYESIAN OMEGA ESTIMATION	Xin Xu LATENT VARIABLE SELECTION FOR TESTLET-BASED TESTS	Ummugul Bezirhan JOINT CONDITIONAL COGNITIVE DIAGNOSTIC MODEL FOR RESPONSE TIME AND ACCURACY
	Sierra Bainter SSVS FOR PSYCH: AN ONLINE TOOL FOR PERFORMING STOCHASTIC SEARCH VARIABLE SELECTION	Nadja Bodner A COMPARISON OF INTERRATER AGREEMENT MEASURES FOR BINARY TIME SERIES	Evan Olson A MULTILEVEL TESTLET MODEL FOR RESPONSES AND RESPONSE TIMES	Yi Yang MODELING NONIGNORABLE MISSING DATA DUE TO TIME LIMITS USING RESPONSE TIMES IN DIAGNOSTIC CLASSIFICATION MODELS
	Joshua Chiroma Gandhi PARSIMONY-PARAMETER MODEL FOR EVIDENTIAL ACCURACY AND PRECISION	Zhenqiu Lu A STRUCTURAL EQUATION MODELING APPROACH TO MULTILEVEL RELIABILITY ANALYSIS	Nana Kim APPLICATION OF NONCOMPENSATORY MIRT TO PASSAGE-BASED TESTS	Hong Jiao JOINT MODELING OF RESPONSES, RESPONSE TIME, AND ANSWER CHANGE BEHAVIORS FOR COGNITIVE DIAGNOSIS
12:00 p.m.-12:55 p.m. US Eastern Time	STAGE 1 Invited Talk: Zhiyong Johnny Zhang <i>Psychometric Models for Social Network Data Analysis</i> <i>Chair: Sophia Rabe-Hesketh</i>		STAGE 2 Invited Talk: Anna-Lena Schubert <i>Neurocognitive Psychometric Approaches to the Measurement of Individual Differences in Cognitive Processes</i> <i>Chair: Matthias von Davier</i>	

WEDNESDAY · JULY 15

9:00 a.m.-9:25 a.m. US Eastern Time	STAGE 1 Spotlight Talk: Amanda Luby <i>Psychometrics for Forensic Decision-Making</i> <i>Chair: David Kaplan</i>		STAGE 2 Spotlight Talk: Holger Brandt <i>Detecting Mediator Variables when Important Confounders are Omitted</i> <i>Chair: Eric Loken</i>	
9:30 a.m.-9:55 a.m. US Eastern Time	STAGE 1 Spotlight Talk: Susu Zhang <i>Uncovering Cross-Situational Consistency with Canonical Correlation Analysis of Process Data</i> <i>Chair: Qiwei He</i>	STAGE 2 Spotlight Talk: JoonHo Lee <i>Bayesian Deconvolution for Measuring Treatment Effect Heterogeneity in Multisite Trials</i> <i>Chair: Marie Wiberg</i>	STAGE 3 Spotlight Talk: Kenneth Wilcox <i>Combining Topic Modeling and Regression: Supervised Topic Modeling with Covariates</i> <i>Chair: Matt Johnson</i>	
10:00 a.m.-10:35 a.m. US Eastern Time	STAGE 1 4.1: Poster Session 1 <i>Chair: Oscar Gonzalez</i>	STAGE 2 4.2: Poster Session 2 <i>Chair: Ya-Hui Su</i>	STAGE 3 4.3: Poster Session 3 <i>Chair: Nadja Bodner</i>	STAGE 4 4.4: Poster Session 4 <i>Chair: Anne Thissen-Roe</i>
	Yu Liu MODEL FIT IN ORDINAL SEM WITH MISSINGNESS: D2 VS MI2S	Qi (Helen) Huang THE POTENTIAL FOR INTERPRETATIONAL CONFOUNDING IN DISCRETE SKILLS MODELS	John Denbleyker REVIVING LORD-MCNEMAR'S TRUE GAIN SCORE IN THE MODERN WORLD	Onur Demirkaya DETECTING ITEM PREKNOWLEDGE WITH SPEED, ACCURACY AND REVISITS
	Allison Cooperman A COMPREHENSIVE REVIEW OF HEYWOOD CASES IN EXPLORATORY FACTOR ANALYSIS	Gamze Kartal EXPLORING A NEW CTT METHOD FOR CLASSROOM CDM	Kazuki Hori LATENT CURVE MODEL APPROACH TO THE TREND IN TIME-VARYING PREDICTOR	Jiawei Xiong AN EMPIRICAL STUDY OF DEVELOPING AUTOMATED SCORING ENGINE USING SUPERVISED LATENT DIRICHLET ALLOCATION
	Ting Sun VALIDATING A WRITING SELF-EFFICACY MEASURE USING CFA AND IRT ANALYSES	Yoshito Tan BAYESIAN PENALIZATION FOR VARIABLE SELECTION IN EXPLANATORY COGNITIVE DIAGNOSTIC MODELS	Kahyun Lee VALIDITY OF THE SINGLE-ITEM MEASUREMENT OF STATE EMOTION AND STATE SELF-ESTEEM IN THE EXPERIENCE SAMPLING METHOD	Merve Sarac A SCORE DIFFERENCING METHOD FOR ITEM PREKNOWLEDGE DETECTION IN REAL-TIME

WEDNESDAY · JULY 15

	STAGE 1	STAGE 2	STAGE 3	STAGE 4
10:00 a.m.-10:35 a.m. US Eastern Time <i>Continued</i>	4.1: Poster Session 1 <i>Continued</i>	4.2: Poster Session 2 <i>Continued</i>	4.3: Poster Session 3 <i>Continued</i>	4.4: Poster Session 4 <i>Continued</i>
	Kentaro Hayashi ON THE RELATIONSHIP BETWEEN FACTORS AND PRINCIPAL COMPONENTS VIA COEFFICIENT ALPHA IN HIGH-DIMENSIONS	Athul Sudheesh EXPLORING TEMPORAL FUNCTIONAL DEPENDENCIES BETWEEN LATENT SKILLS IN SUMMATIVE ASSESSMENTS	Stefany Mena TESTING CHANGES IN MULTILEVEL MODELS WITH NON-NORMAL DATA USING PERMUTATION	Shuangshuang Xu UTILIZING ITEM RESPONSE TIME IN ITEM SELECTION IN VARIABLE-LENGTH CAT
	Chris Strauss EVALUATING THE USE OF FACTOR SCORES IN LATENT MEDIATION MODELS	Mingying Zheng COMPUTERIZED ADAPTIVE TESTING ITEM SELECTION FOR BAYESIAN DIAGNOSTIC CLASSIFICATION MODELS	Hanna Kim CHALLENGES AND STRATEGIES FOR INVESTIGATING INTERDEPENDENCE WITH DYADIC DATA	Xiaoguang Yang A SHADOW TEST APPROACH FOR CONSTRAINED CAT WITH EQUAL MEASUREMENT PRECISION
	Selim Havan MODEL SIZE EFFECT ON SEM MODEL FIT INDICES WITH NON-NORMAL DATA	Jake Cho A STATISTICAL PROCEDURE FOR Q-MATRIX SPECIFICATION IN DIAGNOSTIC CLASSIFICATION MODELS	Amanda Ferster EVALUATION OF AN EDUCATOR PROFESSIONAL DEVELOPMENT SERIES VIA LATENT GROWTH MODELING	Sooyong Lee ITEM SELECTION AND TRAIT ESTIMATION METHODS IN CAT WITH ITEM LEAKAGE
	Ellen Fitzsimmons MARGINAL AND CONDITIONAL POSTERIOR PREDICTIVE P-VALUES FOR BAYESIAN SEM	J.Rachael Ahn DIAGNOSTIC CLASSIFICATION USING A POLYTOMOUS MEASURE OF KOREAN ORGANIZATIONAL COMMITMENT	Jung Yeon Park GENERALIZED ADDITIVE MODELING FOR LEARNING TRAJECTORIES IN E-LEARNING ENVIRONMENTS	Kylie Gorney A BAYESIAN ANALYSIS OF ITEM FORMAT AND TEST SECURITY
	Raul Corrêa Ferraz SHOULD WE COMPUTE OBSERVED POWER IN STRUCTURAL EQUATION MODELING APPLICATIONS?			
	Zachary Goodman MODELING BRAIN SIGNAL VARIABILITY AS NEURAL NETWORK LATENT VARIABLES			
10:40 a.m.-11:15 a.m. US Eastern Time	STAGE 1 5.1: Poster Session 5 <i>Chair: Irina Grabovsky</i>	STAGE 2 5.2: Poster Session 6 <i>Chair: Richard Feinberg</i>	STAGE 3 5.3: Poster Session 7 <i>Chair: Leah Feuerstahler</i>	
	Taj Rollins A RASCH ANALYSIS AND CROSS-CULTURAL DIF ANALYSIS OF THE PURPOSE SCALE	Brooke Houck USING PAIRWISE PREFERENCE CHOICE MODELING FOR EXAM DEVELOPMENT	Ki Cole IRT ANALYSIS OF DIMENSIONAL STRUCTURE AND ITEM WORDING EFFECTS	
	Marcelo Henklain MULTIGROUP CONFIRMATORY FACTOR ANALYSIS WITH THE TEACHER BEHAVIOR CHECKLIST	Ching Yi Chiang APPLYING DATA MINING IN THE CHINESE OPTIMISM-PESSIMISM TRAITS SCALE	Timothy Holcomb ASSESSING RELIABILITY OF DISCRIMINATION AND DIFFICULTY PARAMETER WEIGHTED SCORING MODELS	
	Sam Cacace INVARIANCE ANALYSIS OF THE CMNI-46: DIFFERENCES IN SUB SCALES BETWEEN MEN AND WOMEN	Mengting Lee PSYCHOMETRIC EXAMINATIONS OF AUTHENTIC HAPPINESS INVENTORY AMONG AUSTRALIANS	Matthew Naveiras A DYNAMIC TREE-BASED ITEM RESPONSE MODEL	
	Tuba Gezer DIFFERENTIAL ITEM ANALYSIS OF A COMMON STATISTICS EXAM	Biao Zeng THE INFLUENCE OF WORDING DIRECTION ON UNDERGRADUATE LEARNING BURNOUT SCALE	Tongtong Zou ITEM-LEVEL MEASUREMENT OF RESPONSE STYLE	
	Ritesh Malaiya SIMULATION STUDIES OF ITEM BIAS ESTIMATION ACCURACY	Tung Min Liang THE ESTABLISHMENT OF EVALUATION INDICATORS FOR THE PERFORMANCE ARTS CURRICULUM	Nnamdi Ezike EVALUATION OF SAS IRT AND MCMC PROCEDURES FOR THE GPCM	
	Heather Gunn COMPARISON OF IRT AND CFA PROCEDURES FOR TESTING DIF	Wenqian Lin MEASURING ONLINE SOCIAL LONELINESS	Xiangyi Liao ITEM COMPLEXITY AND THE MEASUREMENT OF GROWTH IN A VERTICAL SCALING CONTEXT	
	Chichen Chen IMPROVING PERFORMANCE OF DIF ASSESSMENT BY USING LATENT CLASS INFORMATION	Diego Luna Bazaldua A GENERALIZABILITY STUDY OF TEACH, A GLOBAL CLASSROOM OBSERVATION TOOL	Mingjia Ma MIRT ITEM PARAMETER RECOVERY UNDER THREE-DIMENSIONAL COMPLEX STRUCTURE	
		Magdalen Beiting-Parrish CHOOSE ALL THAT APPLY: A PROBLEMATIC ITEM TYPE?	Sayaka Arai EVALUATION OF CLASSICAL ICC USING NUMERICAL SIMULATION BASED ON IRT	
			Trent Combs ITEM RESPONSE THEORY (IRT) RESPONSE-TIME MODEL: MIXED-EFFECTS SPLINE WITH VARYING KNOTS	

<p>10:40 a.m.-11:15 a.m. US Eastern Time <i>Continued</i></p>	<p>STAGE 1</p> <p><i>5.1: Poster Session 5</i> <i>Continued</i></p>			
	<p>Chunling Niu A SIMULATION STUDY: COMPARING THE DIF DETECTION CAPACITIES OF THE RASCH TREES MODEL TESTS TO TWO COMMON DIF APPROACHES FOR PARTIAL CREDIT MODELS</p>			
	<p>Eric Schuler PARENT-CHILD MEASUREMENT INVARIANCE OF CIGARETTE AND E-CIGARETTE EXPECTANCIES USING DYADIC CONFIRMATORY FACTOR ANALYSIS</p>			
	<p>Winnie Wing-Yee Tse MEASUREMENT INVARIANCE FOR ORDERED CATEGORICAL VARIABLES: THE NECESSITY OF STRICT INVARIANCE FOR VALID GROUP COMPARISONS</p>			
	<p>Sohee Kim ITEM PARAMETER DRIFT UNDER THE BIFACTOR MODEL</p>			
<p>11:20 a.m.-11:55 a.m. US Eastern Time</p>	<p>STAGE 1</p> <p><i>6.1: Poster Session 8</i> <i>Chair: Satoshi Usami</i></p>	<p>STAGE 2</p> <p><i>6.2: Poster Session 9</i> <i>Chair: Jay Verkuilen</i></p>	<p>STAGE 3</p> <p><i>6.3: Poster Session 10</i> <i>Chair: Sierra Bainter</i></p>	
	<p>Chaochao Jia WHO PERFORMS BETTER? A COMPARISON OF ONLY-CHILD AND NON-ONLY-CHILD IN SCHOOL USING PROPENSITY SCORE</p>	<p>Ji Li SELECTING FACTORIAL INVARIANCE MODELS WITH VARIANCE HETEROGENEITY</p>	<p>Mingya Huang A BAYESIAN SOLUTION TO NON-CONVERGENCE OF CROSSED RANDOM EFFECTS MODELS</p>	
	<p>Xiaoxiao Liu EFFECTS OF CLASSROOM TEACHING ON STUDENTS' ACADEMIC PERFORMANCE</p>	<p>Yifang Zeng ASSESSING THE EMOTIONAL REGULATION QUESTIONNAIRE IN CHINESE AND AMERICAN ADOLESCENT SAMPLES</p>	<p>Xinyang Li PROPENSITY SCORE MATCHING IN CROSS-CLASSIFIED MULTILEVEL MODELS</p>	
	<p>Qiantong Chen AN EMPIRICAL STUDY OF THE RELATIONSHIP BETWEEN SCHOOL SIZE AND TEACHERS' WORK ENVIRONMENT SATISFACTION IN RURAL CHINA: EVIDENCE FROM PISA 2015 SURVEY</p>	<p>Yichi Zhang A BAYESIAN REGION OF MEASUREMENT EQUIVALENCE (ROME) APPROACH FOR ESTABLISHING MEASUREMENT INVARIANCE</p>	<p>Gulsah Gurkan ACCOUNTING FOR MEASUREMENT ERROR AND CLUSTERING IN CROSS-CULTURAL ASSESSMENT DATA</p>	
	<p>Shiyi Zhang EXPLORING FACTORS AND EFFECTS OF SOCIAL MEDIA FATIGUE</p>	<p>Irina Uglanova SOURCES OF LOCAL DEPENDENCE BETWEEN INDICATORS WITHIN SCENARIO-BASED ASSESSMENT</p>	<p>Yan Liu APPLYING GENERALIZABILITY THEORY IN INTERNATIONAL LARGE-SCALE ASSESSMENTS</p>	
	<p>Yi Fang Zhai A STUDY ON INFLUENCING FACTORS OF DISADVANTAGED STUDENTS' READING LITERACY</p>	<p>Hugo Blasdel DATA RECOVERY AT 0.99 CORRELATION WITH 31% ERROR IN MULTI-MEASURE MDS DECOMPOSITION</p>	<p>Ronald Flores IMPROVING LOSS FUNCTIONS WITH INACCURATE PROBABILITIES</p>	
	<p>Xiaoyue Xiong WHAT ARE CENTRAL FACTORS RELATING TO MIDDLE SCHOOL STUDENTS' SCIENCE ACHIEVEMENTS: EVIDENCE FROM PSYCHOLOGICAL NETWORK ANALYSIS</p>	<p>Xiaotong Yang THE NUMBER OF ITERATIONS IN PARALLEL ANALYSIS FOR DETECTING DIMENSIONALITY</p>	<p>Nayeon Yoo UTILIZING MACHINE LEARNING TO PREDICT STUDENT PROFICIENCY: PISA PROCESS DATA</p>	
			<p>Jianshen Chen EVALUATING ITEM ORDER EFFECT ACROSS VARIOUS TEST-TAKER POPULATIONS</p>	
			<p>Wei Xu ABERRANT RESPONSE DETECTION: A JOINT TESTLET MODEL APPROACH</p>	

WEDNESDAY · JULY 15

	STAGE 1	STAGE 2	STAGE 3
11:20 a.m.-11:55 a.m. US Eastern Time <i>Continued</i>	6.1: Poster Session 8 <i>Continued</i>	6.2: Poster Session 9 <i>Continued</i>	6.3: Poster Session 10 <i>Continued</i>
	Song Yajie RELATIONSHIP BETWEEN PARENTAL EMOTIONAL SUPPORT AND STUDENT FAILURE FEARS: THE INTERMEDIARY ROLE OF PSYCHOLOGICAL RESILIENCE—EVIDENCE FROM PISA2018	Ya Zhang CLASSIFICATION OF MATH SELF-EFFICACY ON LARGE-SCALE ASSESSMENT	Simran Johal COMPARING ESTIMATION METHODS FOR PSYCHOMETRIC NETWORKS WITH ORDINAL DATA
	Wei Chen THE IMPACT OF TEACHER TRAINING ON STUDENTS' SCIENCE ACHIEVEMENTS	Wei Wang PSYCHOMETRIC NETWORK ANALYSIS OF JOB ATTITUDES AND BEHAVIORS	Dakota Cintron NONPARAMETRIC ESTIMATION OF LATENT CLASS MODELS WITHIN A HILBERT SPACE

	STAGE 1
12:00 p.m.-12:55 p.m. US Eastern Time	Keynote Speaker: Bin Yu <i>Veridical Data Science: The Practice of Responsible Data Analysis and Decision Making</i> Chair: Francis Tuerlinckx

THURSDAY · JULY 16

	STAGE 1	STAGE 2
9:00 a.m.-9:25 a.m. US Eastern Time	Spotlight Talk: Jay Verkuilen <i>Fisher-Information Based Local Fit via the Correlation Curve</i> Chair: Chun Wang	Spotlight Talk: Zachary Roman <i>Bayesian Spatial and Network Auto-Regressive Structural Equation Modeling: A Novel Approach</i> Chair: Carolyn Anderson

	STAGE 2
9:30 a.m.-9:55 a.m. US Eastern Time	Spotlight Talk: Andries VanderArk <i>New Advances in Mokken Scale Analysis</i> Chair: Ying Cheng

	STAGE 1	STAGE 2	STAGE 3	STAGE 4
10:00 a.m.-10:35 a.m. US Eastern Time	7.1: Effects of Measurement Bias on Conclusions Made in Applied Research (Symposium) Chair: Alexis Georgeson	7.2: Applications of Machine Learning Methods Chair: Xueying Tang	7.3: Longitudinal Data Analysis Chair: Hsiu-Ting Yu	7.4: Cognitive Diagnostic Models Chair: Susu Zhang
	Alexis Georgeson TREATING ORDINAL ITEMS AS CONTINUOUS IN MULTIPLE-GROUP CFA	Guoguo Zheng USING LATENT DIRICHLET ALLOCATION TO ANALYZE MATHEMATICS CONSTRUCTED-RESPONSE DATA	Kong ju Suh APPLICATION OF A LONGITUDINAL POLYTOMOUS ITEM RESPONSE THEORY MIXTURE MODEL FOR LATENT CLASSES WITH DIFFERENT GROWTH TRAJECTORIES	Richard Golden NEW SCALABLE MISSPECIFICATION TESTS FOR G-DINA MODELS WITH MANY PARAMETERS
	Oscar Gonzalez MEASUREMENT BIAS AND CONSISTENCY IN CLASSIFICATION FOR SCREENING MEASURES	Sunmee Kim PREDICTION-ORIENTED MODEL SELECTION METRICS FOR EXTENDED REDUNDANCY ANALYSIS	Fen Fan ITEM AND SCORE ESTIMATION FOR A LONGITUDINAL ASSESSMENT	Ya-Hui Su INCREASING MEASUREMENT EFFICIENCY IN COGNITIVE DIAGNOSIS MODELS FOR TEST CONSTRUCTION
	Rachel Gross ROBUSTNESS OF LATENT GROWTH CURVE MODELS TO LONGITUDINAL MEASUREMENT NON-INVARIANCE	Danielle Rodgers MISSING DATA IN MACHINE LEARNING: IMPLEMENTING MULTIPLE IMPUTATION IN CART	Silvia Bianconcini COMPARISON BETWEEN DIFFERENT ESTIMATION METHODS OF FACTOR MODELS FOR LONGITUDINAL ORDINAL DATA	Chenchen Ma LEARNING LATENT STRUCTURES IN HIERARCHICAL COGNITIVE DIAGNOSIS MODELS
	Peter Halpin WHEN DOES DIF AFFECT GROUP-MEAN COMPARISONS ON THE SCALE SCORE?	Yanyan Fu USE LANGUAGE MODELS TO SOLVE SENTENCE-CORRECTION MULTIPLE-CHOICE QUESTIONS	Yasuo Miyazak HOW WELL COULD TWO-WAVE MODEL RECOVER THREE-WAVE GROWTH PARAMETERS?	Manqian Liao INVESTIGATING THE MEASUREMENT INVARIANCE IN THE MULTIPLE-STRATEGY LONGITUDINAL DIAGNOSTIC MODEL
	David Thissen DISCUSSION OF MEASUREMENT BIAS IN APPLIED SETTINGS			

THURSDAY · JULY 16

	STAGE 1	STAGE 2	STAGE 3	STAGE 4
10:40 a.m.-11:15 a.m. US Eastern Time	8.1: Missing Data <i>Chair: Andries van der Ark</i>	8.2: Process Data <i>Chair: Steve Culpepper</i>	8.3: Classification <i>Chair: Stephen France</i>	8.4: Equating <i>Chair: Ya Zhang</i>
	Egamaria Alacam NOVEL BAYESIAN MODEL-BASED IMPUTATION METHOD FOR MISSING ITEMS IN QUESTIONNAIRES	Yuting Han ANALYZING SUCCESS ON A CPS TASK USING RESPONSE PROCESSES	Richard Feinberg PRACTICAL APPROACHES FOR ESTIMATING CLASSIFICATION DECISIONS ON INTERRUPTED HIGH STAKES TESTS	Marie Wiberg KERNEL EQUATING WITH MIXED ITEM FORMAT
	Brenna Gomer SUBTYPES OF THE MISSING NOT AT RANDOM (MNAR) MECHANISM	Jitong Qi DIF DETECTION AND REMOVAL BY PROCESS FEATURES AND TRANSFER LEARNING	Jessie Hyland USING LATENT PROFILE ANALYSIS (LPA) TO EXAMINE SECTION SCORE PROFILES ON THE MCAT EXAM	Gabriel Wallin EQUATING NON-EQUIVALENT GROUPS USING PROPENSITY SCORES – MODEL MISSPECIFICATION AND SENSITIVITY ANALYSIS
	Feng Ji DIAGNOSING AND HANDLING COMMON VIOLATIONS OF MISSING AT RANDOM (MAR)	Kun Su ANALYZING STUDENTS PHYSICS PROBLEM SOLVING STRATEGIES USING PROCESS DATA	Chang Nie FACTORS AFFECTING THE CLASSIFICATION ACCURACY IN COGNITIVE DIAGNOSIS BASED ON BP NEURAL NETWORK	Jorge González NEW RESULTS ON THE QUANTILE-BASED CALCULATION OF THE STANDARD ERROR OF EQUATING
	Yawei Shen USING MATRIX COMPLETION ALGORITHM TO CALIBRATE ITEMS WITH MISSING RESPONSES	Xueying Tang A HIDDEN MARKOV MODEL FOR IDENTIFYING PROBLEM-SOLVING STRATEGIES IN PROCESS DATA	Jeffrey Durieux DETECTING DISEASE SUBTYPES BY MEANS OF CLUSTERWISE INDEPENDENT COMPONENT ANALYSIS	Claudia Ovalle EQUATING METHODS IN R
	Cathy (Xijuan) Zhang HOW TO COMPUTE SEM FIT INDICES IN THE PRESENCE OF MISSING DATA	Qiwei He CLUSTERING GENERAL BEHAVIOR PATTERNS ACROSS MULTIPLE TASKS WITH SEQUENCE MINING	Chunyan Liu COMPARISON OF OUTLIER DETECTION STATISTICS IN NEAT DESIGN	

	STAGE 1	STAGE 2	STAGE 3	STAGE 4
11:20 a.m.-11:55 a.m. US Eastern Time	9.1: Computerized Testing <i>Chair: Yasuo Miyazaki</i>	9.2: Structural Equation Modeling <i>Chair: Wen Qu</i>	9.3: Mixture Models <i>Chair: Eric Schuler</i>	9.4: Item Response Theory <i>Chair: Ya-Hui Su</i>
	Shuqin Tao ON-THE-FLY MULTISTAGE TESTING WITH ADAPTIVE BLUEPRINTS	Hao Wu A CONFIDENCE INTERVAL OF NONCENTRALITY COMPATIBLE WITH TEST OF A POINT NULL	Francis Tuerlinckx THE INFLUENCE OF NOISE VARIABLES ON THE SELECTION OF THE NUMBER OF CLUSTERS IN NORMAL MIXTURES USING THE BIC	Pablo Torres Iribarra STUDENTS AS INFORMANTS: A MIXED PCM TO COMPARE SCHOOL ENVIRONMENTS
	Giada Spaccapanico Proietti A PROPOSAL OF AUTOMATED TEST ASSEMBLY VIA STOCHASTIC PROGRAMMING	Han Du DISTRIBUTIONALLY-WEIGHTED LEAST SQUARES IN STRUCTURAL EQUATION MODELING	Seohyun Kim BAYESIAN GROWTH MIXTURE MODELING USING CONDITIONAL MEDIANS	Yi Chen EXTENDING LATENT REGRESSION IRT WITH RESPONSE TIME
	Kuo-Feng Chang BEST DESIGN FOR COMPUTERIZED CLASSIFICATION TESTING UTILIZING RESPONSE TIME	Huan Kuang DETECTING HETEROGENEITY IN AN EXPERIMENTAL STUDY OF A PERSONALIZED LEARNING ALGORITHM WITH STRUCTURAL EQUATION MODEL FORESTS	Rik Lamm IMPLEMENTING COVARIATES INTO PIECEWISE GROWTH MIXTURE MODEL DETECTION	Lucia Guastadisegni ASSESSING IRT MODEL MISSPECIFICATION THROUGH DIFFERENT LAGRANGE MULTIPLIER TESTS
		Eric Wright A TABU SEARCH ALGORITHM FOR PATH AND STRUCTURAL MODEL SPECIFICATION	Jing Lu A MIXTURE RESPONSE TIME PROCESS MODEL TO DETECT ABERRANT BEHAVIOR AND TO EXPLAIN ITEM NONRESPONSE	Ahmed Haddadi COMPARING DELTA SCORING METHOD AND RASCH MODEL
		Albert Man A MODEL JUMPING ALGORITHM FOR BAYESIAN EXPLORATORY FACTOR ANALYSIS	Leslie Rutkowski A SURVIVAL MIXTURE MODEL FOR UNDERSTANDING QUITTING BEHAVIOR	Edward Ip PARTIALLY ORDERED RESPONSE IRT: A NEW CLASS OF ITEM RESPONSE MODEL AND APPLICATION TO LONGITUDINAL DATA

12:00 p.m.-12:55 p.m. US Eastern Time	STAGE 1 Keynote Speaker: Alina von Davier <i>Miss Marple's Search for Truth in Big Data: On Design, Causal Inference and Computational Psychometrics</i> <i>Chair: David Thissen</i>			
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FRIDAY · JULY 17

9:00 a.m.-9:55 a.m.
US Eastern Time

STAGE 1

Dissertation Prize: Maarten Kampert
Improved Strategies for Clustering Objects on Subsets of Attributes
Chair: Jeffrey Douglas

	STAGE 1	STAGE 2	STAGE 3	STAGE 4
	10.1: Psychometric Issues in Multistage Testing (Symposium) Chair: Peter van Rijn	10.2: Response Style Modeling Chair: Keith Markus	10.3: Modeling Student Cognition Chair: Dmitry Abbakumov	10.4: Bayesian Applications Chair: Han Du
10:00 a.m.-10:35 a.m. US Eastern Time	Peter van Rijn DESIGN ISSUES RELATED TO ESTIMATION AND CONDITIONAL INDEPENDENCE IN MULTISTAGE ADAPTIVE TESTING	Allison Boykin RESPONSE STYLE STABILITY ACROSS SCALES AND ITEM FORMATS	Maxwell Hong A JOINT MODELING FRAMEWORK FOR ITEM RESPONSE AND TOPIC MODELS	Yu-Wei Chang BAYESIAN ESTIMATION FOR AN ITEM RESPONSE THEORY TREE MODEL
	Hyo Jeong Shin INCREASING MEASUREMENT EFFICIENCY AND ACCURACY OF PISA THROUGH A MULTISTAGE ADAPTIVE TESTING	Francisca Calderon ACCOUNTING FOR RESPONSE STYLE IN SCORING OF NON-COGNITIVE LATENT TRAITS	Hye-Jeong Choi PROBABILISTIC TOPIC MODELING FOR IDENTIFYING STUDENTS' MISCONCEPTIONS OR ALTERNATIVE CONCEPTS IN MATHEMATICS	Seock-Ho Kim PRIORS IN BAYESIAN ESTIMATION FOR THE TWO- AND THREE-PARAMETER LOGISTIC MODELS
	Timo Bechger BAYESIAN INFERENCE IN LARGE-SCALE MULTISTAGE TESTING	Weicong Lyu A PSYCHOMETRIC MODEL FOR ANCHORING ON SELF-REPORTING RATING SCALE INSTRUMENTS	Chia-Wen Chen COMBINING ITEM RESPONSES AND CERTAINTY RESPONSES TO PREDICT MISCONCEPTIONS	Wenya Chen A BAYESIAN SOLUTION TO BIFACTOR IRT MODELING OF RATING DATA
	Hyung Jin Kim EVALUATING APPROACHES TO HANDLING LOCAL ITEM DEPENDENCY IN TESTLET-BASED MST	Joshua Starr RELATIVE PERFORMANCE OF LIMITED-INFORMATION TEST STATISTICS WITH RESPONSE STYLE MODELS	Jordan Wheeler A SIMULATION GUIDE FOR TOPIC MODELS OF CONSTRUCTED-RESPONSE ITEMS	Ken Fujimoto THE GENERAL BAYESIAN THREE-TIER ITEM RESPONSE THEORY MODEL
		Aaron Myers A NON-COMPENSATORY AND COMPENSATORY MIRT MODEL FOR MODELING RESPONSE STYLES		Lijin Zhang BLCFA: AN R PACKAGE FOR BAYESIAN MODEL MODIFICATION IN CONFIRMATORY FACTOR ANALYSIS

	STAGE 1	STAGE 2	STAGE 3	
	11.1: Causal Inference Chair: Gabriel Wallin	11.2: Online Learning Chair: Sacha Epskamp	11.3: International Assessment Chair: Leslie Rutkowski	
10:40 a.m.-11:15 a.m. US Eastern Time	Xiao Liu CAUSAL INFERENCE WITH PARTIALLY NESTED DESIGNS: A PROPENSITY-SCORE-BASED APPROACH	Yuning Xu USING SIMULATIONS TO SUPPORT PRODUCT DEVELOPMENT FOR ONLINE LEARNING ENVIRONMENTS	Justin Wild CROSS-CULTURAL COMPARABILITY OF DIVERSITY CONSTRUCTS IN INTERNATIONAL LARGE-SCALE ASSESSMENTS	
	Jee-Seon Kim CLASSIFICATION AND ESTIMATION OF HETEROGENEOUS TREATMENT EFFECTS	Hulya Duygu Yigit EXTENDING EXPLORATORY DIAGNOSTIC CLASSIFICATION MODELS: INFERRING THE EFFECT OF COVARIATES	Laura Raffaella Zieger CONDITIONING: HOW BACKGROUND VARIABLES CAN INFLUENCE PISA SCORES	
	Ge Jiang PROPENSITY SCORE ANALYSIS WITH LATENT VARIABLES: ALTERNATIVES TO LOGISTIC REGRESSION	Suhwa Han SEQUENTIAL MONITORING OF EXAMINEE ABERRATION BASED ON RESPONSE TIMES	Pan Tang FACTORS AFFECTING COLLABORATIVE PROBLEM-SOLVING: AN EMPIRICAL STUDY BASED ON PISA	
	Kubra Atalay Kabasakal CONSTRUCTION AND USE OF A CAUSAL MODEL TO IDENTIFY THE POSSIBLE CAUSES OF DIF	Dmitry Abbakumov COMBINING EXPLANATORY IRT AND PSYCHOLOGICAL NETWORKS FOR UNDERSTANDING AND MODELING ONLINE LEARNERS' DIFFICULTIES	Edwin Cuellar WHAT CAN WE LEARN FROM DIF ANALYSIS IN LARGE-SCALE ASSESSMENTS?	
		Maxim Skryabin PARAMETERS ESTIMATION FOR DYNAMIC IRT MODELS WITH FEEDBACK	Burhanettin Ozdemir COMPARING THE PERFORMANCE OF DIFFERENT GROUPS ACROSS TESTING METHODS: MULTI-GROUP MIMIC APPROACH	

FRIDAY · JULY 17

	STAGE 1	STAGE 2	STAGE 3
11:20 a.m.-11:55 a.m. US Eastern Time	12.1: Factor Analysis <i>Chair: Silvia Bianconcini</i>	12.2: Response Times <i>Chair: Hyeon-Ah Kang</i>	12.3: Differential Item Functioning <i>Chair: Eduardo Alarcón-Bustamante</i>
	Lauren Trichtinger TESTING P-TECHNIQUE FACTOR ANALYSIS WITH NON-NORMAL TIME SERIES	Eric Loken THE COVARIANCE STRUCTURE OF RESPONSE TIME AND ACCURACY DURING A TEST	Marco Siyuan Chen BAYESIAN REGULARIZATION METHODS IN MEASUREMENT INVARIANCE EVALUATION
	Haoran Zhang A NOTE ON EXPLORATORY ITEM FACTOR ANALYSIS BY SINGULAR VALUE DECOMPOSITION	Jinxin Guo MODELLING NOT-REACHED ITEMS WITH RESPONSE TIME CENSORING APPROACH	Ruoyi Zhu REGULARIZATION METHODS FOR DIF DETECTION IN MULTIDIMENSIONAL IRT MODELS
	Yiu-Fai Yung AN EFFICIENT SCHEDULING ALGORITHM FOR PARALLEL PLANAR ROTATIONS OF FACTORS	Irina Grabovsky MULTIPLE GROUP HIERARCHICAL SPEED ACCURACY REVISIT MODEL	Guanyu Chen EXPLANATORY ITEM RESPONSE THEORY: AN EXPLANATORY APPROACH FOR INVESTIGATING DIFFERENTIAL ITEM FUNCTIONING IN PISA TESTS DUE TO THE TEST MODE EFFECT
	Wen Qu EVALUATING THE EFFECT OF MULTIVARIATE NON-NORMALITY ON CONFIRMATORY FACTOR ANALYSIS	Susan Embretson RESPONSE TIME RELATIONSHIPS WITHIN EXAMINEES: IMPLICATIONS FOR ITEM RESPONSE TIME MODELS	Lanrong Li USING META-ANALYSIS TO ASSESS DIFFERENTIAL BUNDLE FUNCTIONING
	Patrick Manapat UNDERSTANDING SOURCES OF VARIABILITY IN FACTOR ANALYTIC RESULTS	Denis Federiakin RASCH MODEL WITH TIME PARAMETERS FOR TESTS WITH SPEEDINESS-ITEMS AND ACHIEVEMENT-ITEMS	
	Yang Liu SEMI-PARAMETRIC FACTOR ANALYSIS FOR CONTINUOUS DATA		
12:00 p.m.-12:55 p.m. US Eastern Time	STAGE 1 <i>Meeting of the Members</i> <i>Chair: Carolyn Anderson</i>		