



National Council on Measurement in Education

2009 Training Sessions
April 12-13, 2009

2009 Annual Meeting
April 14-16, 2009

San Diego, California

NCME • 2009 Annual Meeting & Training Sessions

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Future Annual Meetings

2010 Annual Meeting

April 29 - May 3

Denver, Colorado

2011 Annual Meeting

April 7 - 11

New Orleans, Louisiana

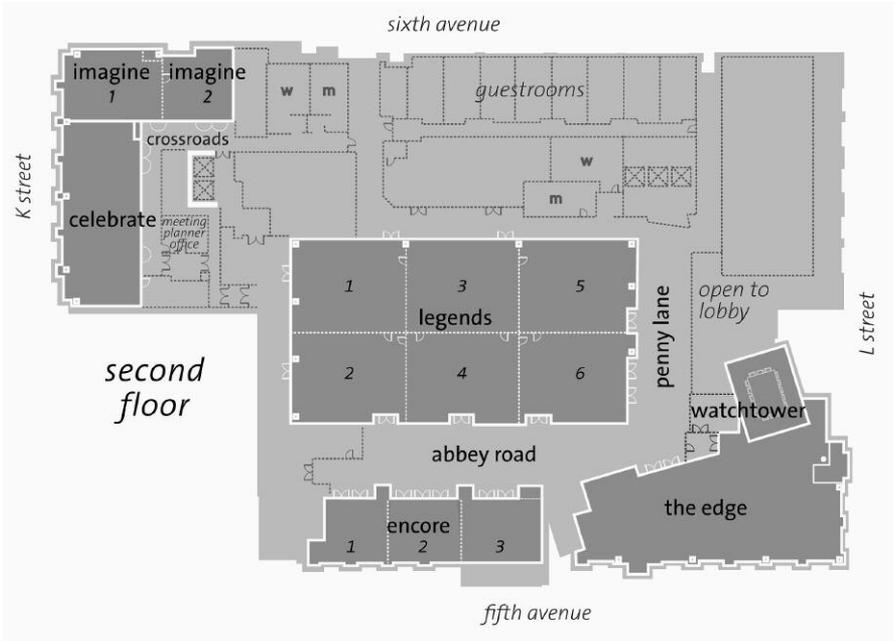
2012 Annual Meeting

April 12 - 16

Vancouver, British Columbia, Canada

San Diego, California

Hard Rock Hotel



PRE-CONFERENCE TRAINING SESSIONS

The 2009 NCME pre-conference training sessions will be held at the Hard Rock Hotel. All full-day sessions will run from 8:00 a.m. to 5:00 p.m. All half-day morning sessions will run from 8:00 a.m. to 12:00 noon. All half-day afternoon sessions will run from 1:00 p.m. to 5:00 p.m.

Sunday, April 12, 2009

Sunday, 8:00 a.m. - 12:00 noon, Legends 2, AA

Using R for Everyday Research

Presenter(s): Brian Habing, University of South Carolina; Jessalyn Smith, University of South Carolina

The free statistics package R has become a favorite of statisticians over the past decade – and it offers a large number of benefits to quantitative researchers in all areas of educational research. With you working along through each step on your own laptop computer, this training course will cover some of the most useful aspects of R for any researcher, including: making fully customized graphs (including color, axes, and labels); manipulating data sets in an intuitive way to quickly get the precise subset of subjects and variables that you want; and performing statistical analyses with a single command. The course will end with basic examples of how R can be used to simulate data sets (with an example perfect for classroom use) and how it can be easily customized to perform functions that aren't built in.

This course is designed for those who have had a two-course sequence in quantitative methods but have no previous experience with R. Participants must bring their own (windows compatible) laptop computer; all required software will be provided.

Sunday, 8:00 a.m. - 12:00 noon, Legends 3, BB

Quality Control in Test Development, Scoring, and Reporting of Test Scores

Presenter(s): Avi Allalouf, National Institute for Testing and Evaluation; Ruth Fortus, National Institute for Testing and Evaluation

Testing in educational and psychological measurement involves a number of important stages, each depending greatly upon the previous one: test development, test scoring, test analysis and score reporting. This training session deals with quality control procedures for these stages.

Quality control procedures are required in order to monitor the testing process and to keep the number of mistakes to a minimum. Mistakes in scoring, for example, can lead to legal action against the testing agency or the educational institution; a high incidence of mistakes in items will have an adverse impact on test reliability and validity.

Professional practitioners should be aware of possible mistakes that can occur during test development, test scoring, test analysis and the reporting of scores.

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They should act in accordance with up-to-date standards and have a broad knowledge of quality control practices, as these are critical in the never-ending fight against errors. This session is intended to increase accuracy in test measurement. In the session, mistakes that might occur at each stage will be presented, followed by examples and quality control procedures for avoiding, detecting or correcting these mistakes. Many of the quality control procedures discussed are also relevant for Internet-Delivered and Internet-Scored testing.

The session will also touch on models that deal with the causes, prediction, and reduction of human error.

The workshop will be potentially useful for people who are involved in:

- Test development
- Test administration
- Scoring tests
- Item and test analysis (including test norming and equating)
- Maintaining test security
- Reporting test results and providing feedback to people who have been tested
- Policy-making and legislation

The workshop will consist of short modules, each accompanied by real-world examples. Participants will be given hands-on practice in detecting various types of errors. The workshop content is based upon experience gained by the presenters from their work at NITE, and upon an ongoing project of developing quality control guidelines for the ITC (International Testing Commission).

Sunday, 8:00 a.m. - 12:00 noon, Legends 1, CC

Linking and Aligning Scores and Scales

Presenter(s): Jinghua Liu, Educational Testing Service; Neil Dorans, Educational Testing Service; Mary Pommerich, Defense Manpower Data Center; Michael Walker, Educational Testing Service

The communication of linking issues to test score users is a critical component to ensuring the validity of a linkage. This training session seeks to facilitate communication about the appropriate use and interpretation of linked scores by emphasizing the different meanings that can be attached to different linkages, and the necessary requirements to achieve solid linkages. A *foundations* portion will present a historical perspective on score linking, provide definitions and distinctions between types of linkages, discuss relevant data collection designs, and give an overview of linking methodology and assumptions. A *linking scenarios* portion will make expanded distinctions between types of linkages and discuss practical issues, using real world examples. Topics will be equating, tests in transition, concordance, vertical scaling, and linking group assessments to individual assessments. A *tools* portion will discuss indices that can be used to choose an appropriate linkage type and methods that can be used to evaluate linkage quality. A *score interpretation* portion will focus on the appropriate usage and interpretation of linked scores, comparing and contrasting across the different linking scenarios.

A book written by the presenter will be distributed to participants.

Sunday, 8:00 a.m. - 5:00 p.m., Legends 4, DD

Developing Noncognitive Assessments

Presenter(s): Patrick Kyllonen, Educational Testing Service; Richard Roberts, Educational Testing Service

Noncognitive qualities are increasingly recognized as important determinants and reflections of success in education from K-12 through graduate and professional school. In this training session we will provide background theory and frameworks for developing noncognitive assessments, and provide hands-on experience in developing and evaluating noncognitive assessments. We will review the major personality models and related noncognitive constructs, discuss methods used to measure noncognitive qualities, demonstrate how to find or to write noncognitive items, present the advantages and disadvantages of different approaches to collecting data, and review strategies for dealing with various validity threats, such as the problem of faking on self assessments. We will demonstrate analysis approaches, including exploratory and confirmatory factor-analysis, and review various uses of noncognitive assessments.

The session will consist of a series of lectures interspersed with examples and empirical findings. Q&A will be encouraged throughout. We will cover the following topics:

- Noncognitive construct frameworks, models, and theories (personality, attitudes, values, beliefs, and other constructs)
- Developing assessments from construct definitions and item pools, including the International Personality Item Pool (IPIP)
- Various methods for assessing noncognitive qualities (self-assessments, others' ratings, situational judgment tests, conditional reasoning, implicit association tests)
- Item writing do's and don'ts
- The problem of faking on self-assessments (preventing, detecting, and correcting for it)
- Delivery platforms (web and paper-and-pencil)
- Exploratory factor analysis and other data structure exploration methods
- Confirmatory factor analysis
- Advanced methods (IRT, latent class models, unfolding models)
- Special topics (rating scale issues [optimal number of points; presence of neutral point, "do not know"], reverse key items)
- Indirect measures (e.g., from school records)
- Example noncognitive assessments (self-help for community college; institutional reporting for K-12; high stakes for graduate school)

Sunday, 8:00 a.m. - 5:00 p.m., Legends 5, EE

Generalizability Theory and Applications

Presenter(s): Robert Brennan, University of Iowa; Xiaohong Gao, ACT, Inc.; Won-Chan Lee, University of Iowa

Generalizability theory liberalizes and extends classical test theory. In particular, generalizability theory enables an investigator to disentangle multiple sources of error through the application of analysis of variance procedures to assess the dependability of measurements.

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The primary goals of this training session are to enable participants to understand the basic principles of generalizability theory, to conduct relatively straightforward generalizability analyses, and to interpret and use the results of such analyses. Mathematical and statistical foundations will be treated only minimally. Major emphasis will be placed upon quickly enabling participants to conduct and interpret relatively straightforward generalizability analyses, then more complicated ones. Examples will include various types of performance assessments.

Prerequisites include knowledge equivalent to one course in educational measurement and familiarity with ANOVA at the level treated in introductory graduate courses in education and psychology. A book written by the director and entitled *Generalizability Theory* will be distributed to participants and used as a principle reference in the training session. Computer programs for performing generalizability analyses will be discussed and illustrated. (Participants need not bring laptops.)

Sunday, 8:00 a.m. - 5:00 p.m., Legends 6, FF

Item Response Theory: Parameter Estimation Techniques

Presenter(s): Seock-Ho Kim, University of Georgia

Theory and methods for the educational and psychological measurement of latent variables using item response theory methodology are discussed. The one-parameter logistic or Rasch, the two-parameter logistic, and the Birnbaum's three-parameter models for dichotomously scored item response data will be reviewed from a theoretical viewpoint with an emphasis on the various estimation techniques of the model parameters. Applications of these models to practical measurement situations will be studied using item response theory computer programs. Topics of the course consist of item calibration, scoring, information, and some applications to instrument construction. Models for polytomously scored items are briefly discussed.

Prerequisites include knowledge equivalent to one graduate course in theoretical educational measurement and familiarity with differential and integral calculus treated in undergraduate mathematics courses. A book coauthored by the director with Frank B. Baker entitled *Item Response Theory: Parameter Estimation Techniques* will be distributed to participants and used as a principle reference in the training session. Computer programs for performing item response theory analyses will be discussed and illustrated. Participants are encouraged to bring their own laptop computers.

The intended audience is principally upper-level graduate students and new measurement professionals who are interested in learning about the various parameter estimation techniques in the context of unidimensional item response theory models.

Sunday, 1:00 p.m. - 5:00 p.m., Legends 2, RR

Managing Simulation Studies with R

Presenter(s): Brian Habing, University of South Carolina; Jessalyn Smith, University of South Carolina

Simulation studies to validate various procedures' effectiveness are a major part of quantitative and psychometric research. The R statistical package can be used to easily run and manage simulation studies, including those that need to call pre-existing programs such as BILOG, MPlus, NOHARM, PARSCALE, POLYEQUATE, and TESTFACT. This course will guide the participants through using R to easily generate and manipulate a wide variety of data sets, create the command and data files required by other software, run the other software, and read in the output for further analysis.

This course assumes that the participants have at least some familiarity with R – programming experience is not assumed. Participants should bring their own (windows compatible) laptop computer and any executables that they need to integrate into their own simulation studies. Copies of R, NOHARM, and POLYEQUATE will be provided.

Sunday, 1:00 p.m. - 5:00 p.m., Legends 3, GG

A Nonlinear Mixed Models Approach to IRT

Presenter(s): Frank Rijmen, Educational Testing Service; Paul De Boeck, KU Leuven, Francis Tuerlinckx, KU Leuven; Mark Wilson, University of California – Berkeley

The central message of the introduction is that it is beneficial to see IRT models as extensions of generalized linear regression models that seek to model facets of the measurement situation. These facets are most typically persons and items, but the set may be extended to incorporate other facets such as raters, and may also be re-labelled to suit particular applications. While the link function and the random component of the regression model remain the same, the most interesting part of the extension concerns the structural part of the model: (1) the kind of predictive function (linear or *nonlinear*, e.g., bilinear); and (2) the effects (weights) of the predictors (fixed effects or *random* effects).

Starting from some well-known IRT models, other and less well-known models will be framed in this approach, based on a volume published by Springer: *Explanatory Item Response Models: A Generalized Linear and Nonlinear Approach* (De Boeck & Wilson, 2004). We will illustrate how the models can be estimated with the SAS procedure NLMIXED.

The workshop will consist of two parts. In the first part, the explanatory item response framework will be presented, and it will be explained how the framework fits within the family of generalized linear and nonlinear mixed models. Specific attention will be devoted to the distinction between descriptive and explanatory item response models, and the distinction between fixed and random effects. It will be shown how well known item response models fit within this framework. In addition, the framework naturally leads to new item response models, such as models with both random item and random person effects.

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In the second part, an in-depth account will be given of multidimensional item response models, and models for polytomous data. Again, both families of models can be conceptualized as generalized linear and nonlinear mixed models, and doing so naturally leads to model extensions that may be of interest to the applied researcher. In this part, some attention will be devoted to model estimation as well. We will also emphasize random item concepts and models.

Throughout, the models are illustrated with datasets on anger and verbal aggression.

Monday, April 13, 2009

Monday, 8:00 a.m. - 12:00 noon, Legends 1, HH

Skills Diagnosis with Latent Variable Models

Presenter(s): Jimmy de la Torre, Rutgers University; Robert Henson, University of North Carolina – Greensboro; Jonathan Templin, University of Georgia

The primary aim of skills diagnosis is to develop and analyze tests in ways that reveal information with more diagnostic value, when compared with traditional approaches. In the methods for skills diagnosis that we consider mastery of particular skills or states of knowledge can be represented by a list of binary latent variables, indicating mastery of each of a finite set of skills under diagnosis. The main objective of skills diagnosis is to classify examinees according to this list of skills. In this training session, several popular modeling and classification approaches will be discussed. Three conjunctive latent class models known as the DINA, NIDA, and Fusion models will be introduced, and software for fitting these models with Mplus will be demonstrated. The training session is meant to provide practical guidelines for implementing skills diagnosis, and considers essential topics such as construction of fixed-length tests, identifying the attributes measured by items, and model-data fit.

The intended audience for this training session includes anyone interested in cognitive or skills diagnosis who has some familiarity with item response theory or classical test theory. No previous knowledge of latent class models or cognitive diagnosis is required. The material will be useful for faculty and students specializing in educational testing, as well as testing professionals working in government or private testing organizations.

The objective of this training session is to provide a short course in some of the most common methods of latent variable modeling that are being applied in cognitive and skills diagnosis. The emphasis is on education as well as training with a particular piece of software. By the end of this session, participants should have a basic understanding of general latent class models, conjunctive latent class models tailored to cognitive diagnosis, methods for constructing exams, and evaluation of goodness of fit. There will also be a discussion of identifying skills on an exam, and construction of exams when diagnosis is the primary objective.

Monday, 8:00 a.m. - 12:00 noon, Legends 2, II

Vertical Scaling Methodologies, Applications, and Research

Presenter(s): Michael Kolen, University of Iowa; Ye Tong, Pearson

The potential need for constructing a vertical scale arises whenever a testing program has multiple grade levels and wishes to have a common scale to compare test scores across these grade levels. Vertical scaling uses statistical process to place test scores that measure similar content domain but at different educational levels onto a common scale. The goals of the session are for attendees to be able to understand the principles of vertical scaling, to conduct vertical scaling and to interpret the results of vertical scaling in reasonable ways. Vertical scaling will be contrasted with related equating and linking processes. Traditional and IRT vertical linking methodologies will be described and practical issues will be discussed.

The focus is on developing a conceptual understanding of vertical scaling through numerical examples and discussion of practical issues. Importance and challenges related to vertical scaling will be included. The text for the session is a chapter in the second edition of Kolen and Brennan's (2004) *Test Equating, Scaling, and Linking: Methods and Practices* (Second Edition). The session is designed for upper level graduate students, new Ph.D.'s, testing professionals with operational or oversight responsibility for vertical scaling, and others with interest in learning about vertical scaling methods and practices. Participants should have at least two graduate courses in measurement and two graduate courses in statistics.

Monday, 8:00 a.m. - 12:00 noon, Legends 3, JJ

Development and Use of Innovative Item Types in Computer-Based Testing

Presenter(s): Kathleen Scalise, University of Oregon; Mark Wilson, University of California–Berkeley

One potential limitation for realizing the benefits of computer-based assessment (CBT) in both instructional assessment and large scale testing comes in designing questions and tasks with which computers can effectively interface (i.e., for scoring and score reporting purposes) while still gathering meaningful measurement evidence. This workshop will allow participants to explore introducing some innovative item types into their assessment content. A taxonomy of 28 innovative item types in computer-based assessment will be introduced. These item types have responses that fall somewhere between fully *constrained* responses (i.e., the conventional multiple-choice question), which can be too limiting to tap much of the potential of new information technologies, and fully *constructed* responses (i.e., the traditional essay), which can be a challenge for computers to meaningfully analyze. Participants will bring example items to the workshop or be provided with examples, work hands-on to convert to innovative types through a variety of content approaches, investigate and implement automated scoring options for their selected types, and finish the workshop with modeling practices for collection of high quality assessment evidence, in a CBT interface using IRT.

Monday, 8:00 a.m. - 5:00 p.m., Legends 4, KK

An Introduction to Student Growth Percentiles: Concepts, Estimation and Use

Presenter(s): Damian Betebenner, Center for Assessment; Jinnie Choi, University of California–Berkeley; Hi Shin Shim, Georgia Institute of Technology; Dianne Lefly, Colorado Department of Education; Marie Huchton, University of Colorado–Boulder

The proliferation of annual student testing during the last decade has left states and testing organizations with vast amounts of longitudinal assessment data and few sophisticated means to analyze these multiyear data sets. As a consequence, use of growth analyses to inform discussions about student growth and its relationship to education quality has been limited. In this training session, participants will be introduced to student growth percentiles and shown how to use the open source R software package to calculate student growth percentiles and percentile growth trajectories with large (e.g., state-level) longitudinal datasets. Topics covered will include a conceptual overview of student growth percentiles, data preparation, student growth percentile calculation, percentile growth trajectory calculation and their use with growth standard setting. The session will incorporate real-world examples of how the results of such analyses can be used as part of state and federal accountability systems to inform discussions about educational quality.

Monday, 8:00 a.m. - 5:00 p.m., Legends 5, LL

Applying Hierarchical Models to Causal Inference

Presenter(s): Guanglei Hong, Ontario Institute for Studies in Education of the University of Toronto; Stephen Raudenbush, University of Chicago

In this training session we will introduce recent development of causal inference concepts and methods for evaluating educational policy and program effects in multi-level settings when randomized experiments are infeasible. We teach hierarchical linear and nonlinear models in combination with propensity score-based methods for causal effect estimation. Education examples will be used throughout in lecture, discussion, and hands-on practice. The session is intended for researchers interested in investigating the effectiveness of educational policies, intervention programs, and various educational practices. After presenting the basics of hierarchical models and of causal inference, we use examples to illustrate: (1) how to conceptualize, in terms of potential outcomes, the causal effects of educational interventions carried out in a multi-level school system; (2) how to identify and summarize information of selection bias from multiple sources through analyzing logistic regression models or hierarchical generalized linear models; (3) how to stratify sample data on the basis of the estimated propensity score; (4) how to use hierarchical models to statistically adjust for the selection bias in multi-level data; (5) how to make explicit statistical assumptions; and (6) how to assess the consequences of possible unmeasured confounders. Participants will practice the procedure of causal effect estimation using HLM version 6 along with SPSS 15.0. Participants are expected to bring a laptop computer with SPSS and HLM standard version or trial edition installed. The standard version or the free 15-day trial edition of the HLM 6 software is available at <http://www.ssicentral.com/hlm/downloads.html>

Monday, 8:00 a.m. - 5:00 p.m., Legends 6, MM

Bayesian Networks in Educational Assessment

Presenter(s): Duanli Yan, Educational Testing Service; Russell Almond, Educational Testing Service; Robert Mislevy, University of Maryland; David Williamson, Educational Testing Service

The Bayesian paradigm provides a convenient mathematical system for reasoning about evidence. Bayesian networks provide a graphical language for describing complex systems, and reasoning about evidence in complex models. This allows assessment designers to build scoring that have fidelity to cognitive theories about the domain and yet are mathematically tractable and can be refined with observational data. Topics covered in this tutorial are evidence-centered assessment design, basic Bayesian network representations and computations, available software for manipulating Bayesian networks, refining Bayesian networks using data, and example systems using Bayesian networks. It is recommended that participants bring a laptop to run sample exercises using the student version of Netica (<http://www.norsys.com/>).

Monday, 1:00 p.m. - 5:00 p.m., Celebrate, NN

Building and Documenting a Valid Assessment System for Students with Disabilities

Presenter(s): Karen Barton, CTB/McGraw-Hill; Lara Osleson, CTB/McGraw-Hill
Invited Speaker: Dianne Lefly, Colorado Department of Education

This course is intended for psychometricians, researchers, state Departments of Education personnel, and test development experts who wish to design, build, and document in technical format reliable, valid, defensible assessments, particularly alternate and modified assessments for students with disabilities. Topics range from assessment policy, design, and development to appropriate statistical design and analyses, special studies, and technical documentation. The session will provide the audience with sound psychometric tools and practices to assure alternate (as well as modified and general) assessments can meet high standards of technical adequacy with practical tips and solutions for documenting evidence in a legally defensible manner. In particular, this session will focus on building validity evidence.

Participants will be guided through each step in designing and building a valid and defensible assessment, with approaches to collecting appropriate validity evidence linked to the Standards (AERA, NCME, APA) and Critical Elements). Parallels and distinctions will be made between alternate assessments and both modified and general assessments. Invited speakers will discuss modified and alternate approaches from a state perspective.

Monday, 1:00 p.m. - 5:00 p.m., Legends 1, OO

Cognitive Assessment: An Introduction to the Rule Space and Q-Matrix Method

Presenter(s): Kikumi Tatsuoka, Columbia University; Anabelle Guerrero, University of Costa Rica; Enis Dogan, American Institutes for Research

This book introduces a new methodology that allows for the analysis of test results that is free from ambiguous interpretations and demonstrates an individual's true state of knowledge. Measuring the underlying knowledge and cognitive skills is not an easy task because it is impossible to directly observe them; therefore, they are named "latent variables." However, the latent variables useful in cognitive diagnosis must be in the 100's and not just one variable like a "q" ability variable in Item Response Theory. To achieve these difficult goals, we need a new methodology that will transform many unobservable knowledge and skills variables (defined as "attributes" throughout in the book) into observable and measurable attributes without losing their original meanings.

The purpose of this book is to introduce one such methodology, Rule Space, that has been used since the 1980s and has made it possible to measure these unobservable latent variables and to clearly interpret the results, without losing the original meaning of attributes. The Rule Space Method (RSM) transforms unobservable attributes involved in test items into observable attribute mastery probabilities that are defined as the probability of using each attribute correctly to get the correct answer for given problems. In other words, RSM converts students' item response patterns into the attribute mastery probabilities. The Rule Space Method (RSM), which can determine an individual's strengths and weakness, has been applied to PSAT to generate scoring reports, which inform schools, teachers and parents exactly what the total score of 500 means. Since RSM belongs to an approach of statistical pattern recognition and classification problems popular in engineering areas, this book will be useful to graduate students in a variety of disciplines. This book has ten chapters but in this training session, emphases are given to the Q-matrix Theory, Rule Space classifications, the attribute reliability and validity theory. Inquiries about this session should be sent to kumitats@yahoo.com.

Monday, 1:00 p.m. - 5:00 p.m., Legends 2, PP

Technical Aspects of School Accountability

Presenter(s): Huynh Huynh, University of South Carolina; Robert Kennedy, University of Arkansas for Medical Sciences; Charity Smith, Arkansas Department of Education

The purpose of this training session is to introduce recent technical development regarding school accountability. Technical issues concerned with creating school index based on test data, assessing reliability and conditional standard error for the index, setting via school-descriptor and bookmark processes, and assessing reliability and validity of school classifications. Using the Arkansas Act 35 school accountability system as a case study, participants will be guided through the development and operation of the index for school performance (status) and the index of school growth or improvement gain. Handouts given include two technical documents, one for school performance and the other for school growth.

NCME • 2009 Annual Meeting & Training Sessions

Participants are expected to be familiar with basic knowledge of applied statistics and technical aspects of assessment, and a level of awareness of operational and legal issues relating to school accountability.

Monday, 1:00 p.m. - 5:00 p.m., Legends 3, QQ

Tips for Graduate Students: Advice for Finishing School, Obtaining a Job, and Starting a Career

Presenter(s): Deborah Harris, ACT, Inc.; Julio Sanclemente, CTB/McGraw-Hill; Andrew Ho, University of Iowa

This training session has three main components: (1) Finishing up the Ph.D., including finding a dissertation topic, what employers are looking for, how to maximize job possibilities at the conference, and how to maximize experiences while still a student (classes, internships, work experiences, networking, professional associations); (2) Obtaining a job, including how to decide what kind of job you want, how to locate where jobs are available (universities, testing companies, school districts, state departments, professional/licensing organizations, etc.), how to apply for jobs (including targeting cover letters, references, and resumes) and the interview process (questions to ask and questions to be prepared to answer, giving a job talk, following up after the interview); and (3) Beginning a career, including negotiating an offer, job politics, adjusting to the environment, career path, publishing, professional service, being a mentor/finding a mentor, balancing work and life, and what to do if you end up hating your job. Attendees are provided with a rich packet of resource materials covering the above areas, and are actively encouraged to ask questions and provide comments throughout the session. The presenters provide subsequent information after the session via email to attendees on issues/questions that require follow-up (in the past this has included items like job possibilities in a particular geographic region or more information on specific grant possibilities for grad students).

San Diego, California

Monday, 4:00 p.m. - 7:00 p.m., Watchtower

NCME Board of Directors Meeting

Members of NCME are invited to attend as observers.

Tuesday, 8:15 a.m. - 10:15 a.m., Legends 3, A1

Issues in the Use of Automated Essay Scoring in High Stakes Assessments – Invited Symposium

Organizer/Moderator

Brent Bridgeman, Educational Testing Service

Presenters

David Williamson, Educational Testing Service
A Framework for Evaluating and Implementing Automated Scoring

Tim Davey, Educational Testing Service
Principles for Building and Evaluating E-Rater Scores

Brent Bridgeman, Educational Testing Service, Catherine Trapani, Educational Testing Service
Considering Fairness and Validity in Evaluating Automated Scoring

Karen Lochbaum, Pearson, John De Jong, Pearson
Evaluating Automated Scoring for Operational Use in Consequential Language Assessment: The Pearson Experience

Yigal Attali, Educational Testing Service
Evaluating Types of Automated Scoring Models for Operational Use in High-Stakes Assessments: The ETS Experience

Discussants

Mark Shermis, University of Florida
Brian Clauser, National Board of Medical Examiners

Tuesday, 8:15 a.m. - 10:15 a.m., Legends 2, A2

**Measuring and Evaluating Changes in Student Achievement:
A Conversation about Technical and Conceptual Issues –
Invited Symposium**

Organizer/Moderator

Derek Briggs, University of Colorado–Boulder

Presenters

Dale Ballou, Vanderbilt University
Test Scaling and Value-Added Measurement

Louis T. Mariano, RAND Corporation, Daniel F. McCaffrey, RAND Corporation,
J.R. Lockwood, RAND Corporation
*Estimating Teacher Effects from Longitudinal Data without Assuming Vertical
Scaling*

Damian Betebenner, Center for Assessment, Derek Briggs, University of
Colorado – Boulder
Are Student Achievement and Growth Scale Dependent?

Mark Wilson, University of California – Berkeley
*Growth in Student Achievement: Can We Have Both Meaning and Technical
Rigor?*

Discussants

Michael Kolen, University of Iowa
Richard Patz, CTB/McGraw-Hill
Frank Rijmen, Educational Testing Service

Tuesday, 8:15 a.m. - 10:15 a.m., Legends 4, A3

Technical Issues in Standard Setting – Paper Session

Moderator

Gregory Cizek, University of North Carolina – Chapel Hill

Presenters

Robert Henson, University of North Carolina – Greensboro, Jonathan Templin, University of Georgia

Using Diagnostic Model Criteria as Proficiency Standards: Combining Psychometrics and Statistics to Produce Accurate Examinee Classification

Susan Davis, Alpine Testing Solutions, Chad Buckendahl, Alpine Testing Solutions

Evaluating Panelists' Bookmark Standard Setting Judgments: The Impact of Random Item Ordering

Michael Rodriguez, University of Minnesota, Otto Rego, USAID – Guatemala, Fernando Rubio, USAID – Guatemala

Examining Variation in Independent Replications of the Bookmark Standard Setting Method on Two Tests

Christina Schneider, CTB/McGraw-Hill, Karla Egan, CTB/McGraw-Hill, Teri Siskind, South Carolina Department of Education, Amelia Brailsford, South Carolina Department of Education, Elizabeth Jones, South Carolina Department of Education

Concurrence of Target Student Descriptors and Mapped Item Demands in Achievement Levels Across Time

Kooghyang Um, Pearson, Denny Way, Pearson, Steven Fitzpatrick, Pearson, Cindi Kreiman, Pearson

The Effects of Response Probability Criteria on the Scale Location Estimation and Impact Data in Standard Setting

Discussant

Mary Pitoniak, Educational Testing Service

San Diego, California

Tuesday, 8:15 a.m. - 10:15 a.m., Legends 5, A4

Issues in IRT Modeling – Paper Session

Moderator

Terry Ackerman, University of North Carolina – Greensboro

Presenters

Longjuan Liang, Educational Testing Service
A Semi-Parametric Approach to Estimating Item Response Functions

Lixiong Gu, Educational Testing Service, Venessa Lall, Educational Testing Service, James Carlson, Educational Testing Service
Effects of Collapsing Low Frequency Score Categories on Constructed Response Items Calibrated with the Generalized Partial Credit Model

Peter van Rijn, CITO, Huub Verstralen, CITO, Anton Béguin, CITO
Classification Accuracy of Multiple-Test Based Decisions Using Item Response Theory

Na Yang, University of South Carolina, Brian Habing, University of South Carolina
Distinguishing Monotone and Unfolding Items When Both are Present

Discussant

Hua-Hua Chang, University of Illinois

Tuesday, 8:15 a.m. - 10:15 a.m., Legends 6, A5

IRT-Based Test Equating – Paper Session

Moderator

Michael Walker, Educational Testing Service

Presenters

Tae-hoon Kang, CRESST/UCLA, Nancy Petersen, ACT, Inc.
Linking Item Parameters to a Base Scale

Shelley Ragland, James Madison University, Peter Pashley, Law School Admission Council, Ronald Armstrong, Rutgers University
Deriving IRT Scale Transformation Constants: A Predicted Score Distribution Approach

Yasuko Nogami, The Japan Institute for Educational Measurement, Inc., Natsuko Kataoka, The Japan Institute for Educational Measurement, Inc., Shin-ichi Mayekawa, Tokyo Institute of Technology
A Practical Method for Switching IRT Models from 3PL to 2PL Applied to an Item Bank in Actual Use.

Huijuan Meng, Pearson, Brad Ching-Chao Wu, Pearson,
The Effects of Linking Design on Pretest Calibration Results

Yunmei Xu, Education Quality and Accountability Office
Measuring Trends in Achievement: Scaling Issues in Current International Assessments

Discussant

Robert Smith, Educational Testing Service

San Diego, California

Tuesday, 10:35 a.m. - 12:05 p.m., Legends 2, B1

Evidence-Centered Assessment Design in Practice – Coordinated Session

Organizers

Kristen Huff, College Board

Barbara Plake, University of Nebraska

Moderator

Wayne Camara, College Board

Participants

Kristen Huff, College Board, Linda Steinberg, College Board, Thomas Matts, College Board

The Promise and Challenge of Implementing ECD in Large Scale Assessment

Maureen Ewing, College Board, Sheryl Packman, College Board, Cynthia Hamen, College Board, Allison Clark, College Board

Representing Targets of Measurement Using ECD

Barbara Plake, University of Nebraska, Kristen Huff, College Board, Rosemary Reshetar, College Board

ECD as a Foundation for Achievement Level Descriptions and Standard Setting

Amy Hendrickson, College Board, Kristen Huff, College Board, Richard M. Luecht, University of North Carolina – Greensboro

Claims, Evidence and Achievement Level Descriptions as a Foundation for Item Design and Test Specifications

Discussant

Isaac I. Bejar, Educational Testing Service

Tuesday, 10:35 a.m. - 12:05 p.m., Legends 3, B2

Comparing the Incommensurable – Methods and Experiences in Trying to Compare Student Achievement Across States, Districts, and Schools – Coordinated Session

Organizer/Moderator

Thanos Patelis, College Board

Participants

David Conley, University of Oregon

Methodological Issues in Comparing Across Multiple Standards Systems: Using 12th Grade NAEP as a Measure of College and Employment Preparedness

Paul Gazzo, School Evaluation Services, Standard & Poor's

Identifying Top-Performing High Schools across States Using Multi-Tiered Method and Multiple Performance Indicators

Henry Braun, Boston College

To Compare is Human, to Make Sense of it All, Divine

Andrew Ho, University of Iowa

Graphical Methods for Comparing Trends, Gaps, and Gap Trends across Tests

San Diego, California

Tuesday, 10:35 a.m. - 12:05 p.m., Legends 4, B3

DIF Applications – Paper Session

Moderator

Anne Harvey, American Board of Emergency Medicine

Presenters

Ou Lydia Liu, Educational Testing Service

Does Content Knowledge Affect TOEFL® iBT Reading Performance?

A Confirmatory Approach to Differential Item Functioning

Catherine Taylor, University of Washington, Yoonsun Lee, Seoul Women's University

Using DIF Analysis to Evaluate the Reading and Mathematics Dimensions of Science Achievement Tests

Yi-Hsin Chen, University of South Florida

A Unified Approach that Combines Differential Item Functioning with the Rule-Space Method for Validating Cognitive Attributes for the TIMSS Mathematics Items

Robert Fay, University of South Florida, Yi-Hsin Chen, University of South Florida, Yuh-Chyn Leu, National Taipei University of Education

Substantive and Cognitive Interpretations of Gender DIF on a Fraction Concept Test

Discussant

Lisa Keller, University of Massachusetts – Amherst

Tuesday, 10:35 a.m. - 12:05 p.m., Legends 5, B4

Standard Errors of Equating – Paper Session

Moderator

Brad Ching-Chao Wu, Pearson

Presenters

Yuming Liu, Educational Testing Service, Yanming Jiang, Educational Testing Service, Lei Yu, Pacific Metrics

Standard Error Estimation of IRT True Score Equating with Anchored Constructed Responses

Yi He, University of Iowa, Deborah Harris, ACT, Inc.

An Empirical Comparison of the Magnitude of Standard Errors of Equating across Equating Methods, Degrees of Smoothing, Score Scales, and Test Lengths

Tim Moses, Educational Testing Service, Wenmin Zhang, Educational Testing Service

Standard Errors of Equating Differences

Chunxin Wang, University of Iowa, Su Zhang, Ontario Educational Quality and Accountability Office

Bootstrapping to Estimate Standard Errors of Equating: Parametric or Nonparametric?

Discussant

Chingwei David Shin, Pearson

Tuesday, 10:35 a.m. - 12:05 p.m., Legends 6, B5

Innovations in Item Types and Test Design – Paper Session

Moderator

Michael Kane, National Conference of Bar Examiners

Presenters

Kimberly Swygert, National Board of Medical Examiners, Colette Scott, National Board of Medical Examiners, Dave Swanson, National Board of Medical Examiners, Danette McKinley, ECFMG, John Boulet, ECFMG
An Assessment of Encounter Timing in A High-Stakes Standardized-Patient Based Examination

Kathleen Scalise, University of Oregon
Innovative Item Types: New Results on Intermediate Constraint Questions and Tasks for Computer-Based Testing

Richard Luecht, University of North Carolina – Greensboro, Matthew Burke, University of North Carolina – Greensboro, Richard Devore, American Institute of Certified Public Accountants
Task Modeling of Complex Computer-Based Performance Exercises

Lei Wan, Pearson, George Henly, Minnesota Department of Education
Measurement Properties of Innovative Item Formats in a Computer-Based Science Test

Discussant

James Olsen, Alpine Testing Solutions

Tuesday, 12:25 p.m. - 1:55 p.m., Legends 3, C1

Current Practices in Licensure and Certification Testing – Coordinated Session

Organizer/Moderator

Chad Buckendahl, Alpine Testing Solutions

Participants

Ardeshir Geranpayeh, University of Cambridge ESOL Examinations
Use of Language Testing as a Companion for a Credentialing Examination Program

Susan Davis, Alpine Testing Solutions
Integration of Cognitive Demand into Credentialing Exam Development

Renee Launey-Rodolf, Oklahoma Commission for Teacher Preparation
Hooked on Phonics: Responding to Legislative Demands While Ensuring Psychometric Integrity

Chad Buckendahl, Alpine Testing Solutions
Evaluating Rater Agreement for Credentialing Exams with Performance Items: Integrating Policy and Practice

Discussant

Denny Way, Pearson

Tuesday, 12:25 p.m. - 1:55 p.m., Legends 4, C2

Technical Issues in CAT – Paper Session

Moderator

Kimberly Swygert, National Board of Medical Examiners

Presenters

Kyoko Ito, Human Resources Research Organization, Mary Pommerich, Defense Manpower Data Center, Dan O. Segall, Defense Manpower Data Center

A Comparison of Three Procedures for Computing Information Functions for Scores from Computerized Adaptive Tests

Chingwei David Shin, Pearson, Tsung-Han Ho, University of Texas – Austin, Yueh-Mei Chien, Pearson, Hui Deng, College Board

A Comparison of Person-Fit Statistics in Computerized Adaptive Test Using Empirical Data

Fumiko Samejima, University of Tennessee

A Wise Use of Noise Parameter(s) in CAT for Accurate Latent Trait Estimation

Hui Deng, College Board, Gerald Melican, College Board

An Investigation of Item Parameter Drift in Computer Adaptive Test

Discussant

G. Gage Kingsbury, Northwest Evaluation Association

Tuesday, 12:25 p.m. - 1:55 p.m., Legends 5, C3

Design Issues in Vertical Scaling – Paper Session

Moderator

Valerie Link, Educational Testing Service

Presenters

Xuan Wang, ACT, Inc., Deborah Harris, ACT, Inc.

Maintaining Vertical Scales Under Common-Item Nonequivalent Groups Design

Jungnam Kim, CTB/McGraw-Hill, Won-Chan Lee, University of Iowa,

Dong-In Kim, CTB/McGraw-Hill, Kristina Kelly, CTB/McGraw-Hill

Investigation of Vertical Scaling Using the Rasch Model

Feifei Li, University of Maryland – College Park, Frank Rijmen, Educational Testing Service

A Vertical Linking Design for Periodic Assessments and Tests that Consist of Situated Tasks

Ahmet Turhan, Pearson, Troy Courville, Pearson, Leslie Keng, Pearson

The Effects of Anchor Item Position on a Vertical Scale Design

Discussant

Peter van Rijn, CITO

Tuesday, 12:25 p.m. - 1:55 p.m., Legends 2, C4

Modifications of Traditional Methods of Setting Standards – Paper Session

Moderator

Paul Nichols, Pearson

Presenters

Dorry Kenyon, Center for Applied Linguistics, Carolyn Fidelman, Center for Applied Linguistics

Standard Setting with the Modified Body of Work Method

Alvaro Arce-Ferrer, Pearson

An Investigation of Traditional and Alternative Approaches to Vertically Scale Modified Angoff Cut Scores

Richard Tannenbaum, Educational Testing Service, Irvin Katz, Educational Testing Service

Setting Standards On A Computer-Based, Automatically Scored Performance Assessment

Adam Wyse, Michigan State University, Mark Reckase, Michigan State University

A Synthesis and Investigation of Angoff Derivative Methods for Setting Cut Scores

Russell Smith, Alpine Testing Solutions, Susan Davis, Alpine Testing Solutions
Combining the Best of Both Worlds: The Ordered Item Booklet Angoff

Discussant

Scott Elliot, SEG Assessment / SEG Research

Tuesday, 12:25 p.m. - 1:55 p.m., Legends 6, C5

Test Accommodations – Paper Session

Moderator

Su Baldwin, National Board of Medical Examiners

Presenters

Huafang Zhao, Montgomery County Public Schools, Maryland, Clare Von Secker, Montgomery County Public Schools, Maryland
Does Read-Aloud Accommodation on a Reading Test Impact Test Validity for English Language Learners?

Claudia Flowers, University of North Carolina – Charlotte, Do-Hong Kim, University of North Carolina – Charlotte, Preston Lewis, University of Kentucky, Violeta Davis, University of Kentucky
Score Comparability of Computer and Adult Read-Aloud Accommodation

Lisa Harris, Winthrop University, Huynh Huynh, University of South Carolina
Using Technology to Deliver Accommodations: A DIF Analysis of the Read-Aloud Administration Delivered by Oral Script and CDROM

Carole Gallagher, WestEd, Edynn Sato, WestEd, Stanley Rabinowitz, WestEd
Methodological Considerations When Studying Test Accommodation Impact

Discussant

Scott Marion, National Center for the Improvement of Educational Assessment, Inc.

San Diego, California

Tuesday, 2:15 p.m. - 3:45 p.m., Legends 3, D1

How Fair Are Large Scale English Language Arts Assessments for Students Who are Deaf and Hard of Hearing? – Coordinated Session

Organizer

Linda Cook, Educational Testing Service

Moderator

Maria Martiniello, Educational Testing Service

Participants

Jonathan Steinberg, Educational Testing Service, Guangming Ling, Educational Testing Service

Using Factor Analysis to Examine Measurement Invariance for an English-language Arts Assessment Given to Students Who Are Deaf and Hard of Hearing

Frederick Cline, Educational Testing Service

Examining the Scores of Students Who are Deaf and Hard of Hearing on a State Standards Based English Language Arts Test: A Differential Item Functioning Analysis

Elizabeth Stone, Educational Testing Service

Examining the Fairness of an English-language Arts Assessment for Students Who Are Deaf and Hard of Hearing Using Differential Distractor Functioning Analysis

Linda Cook, Educational Testing Service

A Comparison of the Internal Structure of an English-language Arts Assessment for Students with Disabilities and English-language Learners

Discussant

Karen Barton, CTB/McGraw-Hill

Tuesday, 2:15 p.m. - 3:45 p.m., Legends 4, D2

Test Design and Automated Test Assembly – Paper Session

Moderator

John Kalohn, FINRA

Presenters

Chun Wang, University of Illinois, Hua-Hua Chang, University of Illinois – Urbana-Champaign

Determining Appropriate Test Length for Linear Test: Stratified Forward Selection Method

Ken Cor, University of Alberta, Cecilia Alves, University of Alberta, Mark Gierl, University of Alberta

Three Applications of Automated Test Assembly within a User-Friendly Modeling Environment

Kirk Becker, Pearson

Automated Test Assembly Heuristics–Algorithms for the Rest of Us

Ronald Hambleton, University of Massachusetts – Amherst, Wendy Lam, University of Massachusetts – Amherst

Redesign of State Achievement Tests Based on a Consideration of Information Functions

Discussant

Kristen Huff, College Board

Tuesday, 2:15 p.m. - 3:45 p.m., Legends 5, D3

IRT Model Fit – Paper Session

Moderator

Youngsuk Suh, University of Wisconsin – Madison

Presenters

Xiaowen Zhu, University of Pittsburgh, Clement Stone, University of Pittsburgh
Assessing the Fit of Unidimensional GRM using PPMC Method

Huynh Huynh, University of South Carolina
Use of Robust z in Detecting Unstable Items in 2PL and 3PL Models

Kyong Hee Chon, University of Iowa, Stephen Dunbar, University of Iowa,
Won-Chan Lee, University of Iowa
An Investigation of Item Fit Statistics for Mixed IRT Models

Bradley Crossman, University of Iowa, Timothy Ansley, University of Iowa
An Empirical Investigation of the Sampling Distribution of the Chi-Square G/D Statistic

Discussant

Alan Mead, Illinois Institute of Technology

Tuesday, 2:15 p.m. - 3:45 p.m., Legends 2, D4

Cognitive Diagnosis – Paper Session

Moderator

Mark Gierl, University of Alberta – CRAME

Presenters

Jiawen Zhou, University of Alberta – CRAME, Mark Gierl, University of Alberta – CRAME, Ying Cui, University of Alberta – CRAME
Attribute Reliability in Cognitive Diagnostic Assessment

Leanne Ketterlin-Geller, University of Oregon, Paul Yovanoff, University of Oregon
Model Comparisons: Fitting Cognitive Diagnostic Models to Data

Ting Zhang, University of Maryland – EDMS, André A. Rupp, University of Maryland – EDMS
Assessing the Model Fit of Cognitive Diagnosis Models through Bayesian Methods: A Simulation Study

Matthew Burke, University of North Carolina – Greensboro, Joshua Goodman, University of North Carolina – Greensboro, Robert Henson, University of North Carolina – Greensboro
Assessing the Degree Misfit for Cognitive Diagnosis Models Applied to Tests Developed Under an IRT Framework

Discussant

Susan Embretson, Georgia Institute of Technology

Tuesday, 2:15 p.m. - 3:45 p.m., Legends 6, D5

Issues in Vertical Scaling – Paper Session

Moderator

Amy Hendrickson, College Board

Presenters

Ye Tong, Pearson, Michael Kolen, The University of Iowa
A Further Look into Maintenance of Vertical Scales

Shudong Wang, Educational Testing Service, Hong Jiao, University of Maryland,
Yanming Jiang, Educational Testing Service
*Exploring Relationship between Static and Dynamic Vertical Scaling from
Cross-Section and Longitudinal Design Perspective*

Ahmet Turhan, Pearson, Chow-Hong Lin, Pearson, Kimberly O'Malley, Pearson,
Michael Kolen, University of Iowa
Vertical Scaling for Paper and Online Assessments

Jonathan Beard, University of Iowa
*An Investigation of Vertical Scaling with Item Response Theory using
A Multistage Testing Framework*

Discussant

Alina von Davier, Educational Testing Service

Tuesday, 4:05 p.m. - 6:05 p.m., Legends 3, E1

Accurate Assessment of Student Achievement: Today's Challenges and Solutions (Graduate Student Issues Committee) – Invited Symposium

Organizer

Dubravka Svetina, Arizona State University

Moderator

Kimberly A. Swygert, National Board of Medical Examiners

Presenters

Jamal Abedi, University of California – Davis, Chad Buckendahl, Alpine Testing Solutions, Christy Hovanetz-Lassila, MGT of America, Inc., Robert Lissitz, University of Maryland, John Tanner, Council of Chief State School Officers

San Diego, California

Tuesday, 4:05 p.m. - 6:05 p.m., Legends 2, E2

Making Test Score Scales and Reports More Understandable and Useful – Invited Symposium

Organizer

Ronald K. Hambleton, University of Massachusetts–Amherst

Presenters

John Hattie, University of Auckland

Visibly Learning from Reports: The Validity of Score Reports

Sandip Sinharay, Educational Testing Service, Shelby Haberman, Educational Testing Service, Gautam Puhan, Educational Testing Service

Reporting Diagnostic Scores: Temptations, Pitfalls, and Some Solutions

Thanos Patelis, College Board, Haifa Matos, College Board

Efforts to Produce Relevant Score Reports to Schools, Districts, and State Officials on National Tests

Krista Breithaupt, American Institute of Certified Public Accountants, David Chuah, American Institute of Certified Public Accountants

Performance Reporting for a Licensing Exam: What Can, and Should, We Tell Test Takers?

April Zenisky, University of Massachusetts, Stephen Sireci, University of Massachusetts

Performing At or Above Proficient: The Reporting of NAEP Results in the Internet Age

Discussant

Joseph M. Ryan, Arizona State University

Tuesday, 4:05 p.m. - 6:05 p.m., Legends 4, E3

Research Directions in Equating – Coordinated Session

Organizers

Tim Moses, Educational Testing Service
Alina von Davier, Educational Testing Service

Moderator

Lilly (Yuli) Zhang, Educational Testing Service

Participants

Alina von Davier, Educational Testing Service
IRT-Observed Score and Local Equating under the Observed-Score Equating Framework

Jaime Cid, James Madison University, Alina von Davier, Educational Testing Service
Examining Potential Boundary Bias Effects in Kernel Smoothing on Equating

Safir Yousfi, Federal German Employment Agency, Alina von Davier, Educational Testing Service
Lord's Equity Equating Requirement Revisited: Attainability and Practical Usefulness

Tim Moses, Educational Testing Service, Weiling Deng, Educational Testing Service, Lilly (Yuli) Zhang, Educational Testing Service
The Use of Two Anchors in NEAT Equating

Henry Chen, Educational Testing Service, Paul Holland, Educational Testing Service
Nonlinear Levine Observed Score Equating. Or Is It?

Discussants

Wim J. van der Linden, CTB/McGraw-Hill
James E. Carlson, Educational Testing Service

Tuesday, 4:05 p.m. - 6:05 p.m., Legends 5, E4

New IRT Models and Methodology – Paper Session

Moderator

Robert Henson, University of North Carolina – Greensboro

Presenters

Chi-Ming Su, National Chung Cheng University, Wen-Chung Wang, Hong Kong Institute of Education

Item Response Models for Local Dependence Between Repeated Ratings

James Roberts, Georgia Institute of Technology, HeaWon Jun, Georgia Institute of Technology, Vanessa Thompson, Georgia Institute of Technology, Hi Shin Shim, Georgia Institute of Technology

A Distance-Based Multidimensional Extension of the Generalized Graded Unfolding Model

Lawrence DeCarlo, Teachers College – Columbia University, YoungKoung Kim, Teachers College – Columbia University

On Scoring Constructed Response Items and Multiple Choice Items: Incorporating Signal Detection and Item Response Models into a Hierarchical Rater Model

Hye-Jeong Choi, University of Georgia, Jonathan Templin, University of Georgia, Robert Henson, University of North Carolina – Greensboro, Allan Cohen, University of Georgia

A Diagnostic Classification Mixture Rasch Model (DCMixRM) for Mediating Attributes and Ability

Hi Shin Shim, Georgia Institute of Technology, James Roberts, Georgia Institute of Technology

An IRT Model to Estimate Differential Latent Change Trajectories in a Multi-Stage, Longitudinal Assessment

Discussant

Frank Rijmen, Educational Testing Service

Tuesday, 4:05 p.m. - 6:05 p.m., Legends 6, E5

New Directions in Test Security and Cheating Detection Research – Invited Symposium

Organizer/Moderator

Alan D. Mead, Illinois Institute of Technology

Participants

David Chuah, American Institute of Certified Public Accountants, Ben-Roy Do, Roosevelt University, Bradley Brummel, University of Tulsa
Conspiracy Theory: An Empirical Study of Item Theft in a Continuous Testing Environment

Ben-Roy Do, Roosevelt University, Fritz Drasgow, University of Illinois
Test Coaching Through the Use of Item Preknowledge

John Mattar, American Institute of Certified Public Accountants, Aster Tessema, American Institute of Certified Public Accountants
Examinee Performance on Re-Administered Constructed-Response Items

Dennis Maynes, Caveon
Combining Statistical Evidence for Increased Power in Detecting Cheating

Alan D. Mead, Illinois Institute of Technology
Tracking Stolen Items Using Steganographic Watermarking

Gunnar Schrah, CorVirtus, LLC, Leanne Buehler, CorVirtus, LLC, Bobby Baker, CorVirtus, LLC
Deterrence-Based Prevention of Cheating on Unproctored Internet Tests in High-Stakes Situations: Examining the Impact of a Retest Threat

Discussants

Gerald Melican, College Board
Anthony R. Zara, Pearson

San Diego, California

Tuesday, 6:15 p.m. - 7:30 p.m., San Diego Convention Center,
Ballroom 20D

NCME and AERA Division D Joint Welcome Reception for Current and New Members

Members of NCME and AERA Division D are invited to attend the NCME and AERA Division D Joint Welcome Reception for Current and New Members. Please note that this reception is a new event for the 2009 meeting.

This event replaces the NCME No-Host Welcome Reception and the Division D Reception and Business Meeting. Free drink tickets for graduate students and new members of AERA Division D and NCME will be available at the desk near the entrance to the room. New members will wear ribbons on their conference badges. Please extend a welcome to them.

The reception is sponsored by:

ACT, Inc.

Buros – University of Nebraska-Lincoln

The College Board

CTB/McGraw-Hill

Educational Testing Service

GED Testing Service/American Council on Education

Graduate Management Admission Council

Law School Admission Council

National Board of Medical Examiners (NBME)

NCME • 2009 Annual Meeting & Training Sessions

Wednesday, 8:00 a.m. - 10:15 a.m., San Diego Convention
Center, Ballroom 20D

NCME Breakfast, Business Meeting and Presidential Address

What I Think I Know

Presenter

Mark Reckase, Michigan State University

San Diego, California

Wednesday, 10:35 a.m. - 12:05 p.m., Legends 2, F1

Career Award Address: Scores and Scales for Educational Tests – Invited Symposium

Moderator

David A. Frisbie, University of Iowa

Presenter

Michael J. Kolen, University of Iowa
Scores and Scales for Educational Tests

Discussant

Michael T. Kane, National Conference of Bar Examiners

Wednesday, 10:35 a.m. - 12:05 p.m., Legends 3, F2

**Large-Scale Assessment and Accommodating Students with Disabilities:
Past, Present, and Future (Diversity Issues in Testing Committee) –
Invited Symposium**

Organizer/Moderator

Sara Bolt, Michigan State University

Presenters

Martha Thurlow, University of Minnesota
Historical Perspective on Accommodating Students with Disabilities

Barbara Plake, University of Nebraska
A Review of AERA/APA/NCME Test Standards Revisions and Students with Disabilities

Cara Cahalan Laitusis, Educational Testing Service
Investigating Accommodation Validity: Current Approaches

Sami Kitmitto, American Institutes for Research, Victor Bandeira de Mello,
American Institutes for Research
Measuring the Status and Change of NAEP State Inclusion Rates for Students with Disabilities

Gerald Tindal, University of Oregon
Expanding the Boundaries of Large-Scale Assessments for Students with Disabilities: Increasing Access through Technological Supports in Training

San Diego, California

Wednesday, 10:35 a.m. - 12:05 p.m., Legends 4, F3

Test Equity – Paper Session

Moderator

John Poggio, University of Kansas

Presenters

Xuejun (Ina) Shen, Stanford University, Edward Haertel, Stanford University, Richard Shavelson, Stanford University, Aki Murata, Stanford University
Do Unintended Effects of High-Stakes Testing Hit Disadvantaged Schools Harder?

Usama Ali, University of Illinois – Urbana-Champaign, Hua-Hua Chang, University of Illinois – Urbana-Champaign
The Equi-percentile Matching-Grouping Method for Mantel-Haenszel-based DIF Detection in CAT Setting

Soo Eun Chae, University of Maryland – College Park, Doyoung Kim, American Institutes for Research, Stephan Ahadi, American Institutes for Research
Measurement Equivalence of Reading and Math Achievement Test: A Comparison between Multigroup CFA and Mantel-Haenszel Techniques

Jeffrey Patton, University of Massachusetts – Amherst, Craig Wells, University of Massachusetts – Amherst
The Standardization Method of DIF Detection: A Two-Stage Approach

Discussant

Claudia Flowers, University of North Carolina – Charlotte

Wednesday, 10:35 a.m. - 12:05 p.m., Legends 5, F4

Multidimensionality – Paper Session

Moderator

Duanli Yan, Educational Testing Service

Presenters

Jason Meyers, Pearson, Ahmet Turhan, Pearson, Steven Fitzpatrick, Pearson
Interaction of Calibration Procedure and Ability Estimation Method for Writing Assessments under Conditions of Multidimensionality

Susan Embretson, Georgia Institute of Technology, XiangDong Yang, East China Normal University
Issues in Applying the Multicomponent Latent Trait Model for Diagnosis to Complex Achievement Tests

Nilufer Kahraman, National Board of Medical Examiners, Tony Thompson, Pearson
Relating Unidimensional IRT Parameters to a Multidimensional Response Space: A Comparison of Two Alternative Dimensionality Reduction Approaches

Shu Jing Yen, CTB/McGraw-Hill, Litong Zhang, CTB/McGraw-Hill, Joanna Tomkowicz, CTB/McGraw-Hill
Examining Dimensionality of Vertical Scales

Discussant

Brian Habing, Statistics Department, University of South Carolina

Wednesday, 10:35 a.m. - 12:05 p.m., Legends 6, F5

Test Security Issues – Paper Session

Moderator

Luz Bay, Measured Progress

Presenters

Michael Finger, American Institute of Certified Public Accountants, David Chuah, American Institute of Certified Public Accountants
Response Time Model Estimation via Confirmatory Factor Analysis

Dmitry Belov, Law School Admission Council, Ronald Armstrong, Rutgers University
Automatic Detection of Answer Copying via Kullback-Leibler Divergence and K-Index

David Chuah, American Institute of Certified Public Accountants, Michael Finger, American Institute of Certified Public Accountants
Detecting Aberrant Candidates With Response Time Data: A Simulation Study of Appropriate Flagging Criteria

Jinming Zhang, University of Illinois – Urbana-Champaign, Ting Lu, Educational Testing Service
A Sequential Procedure for Detecting Compromised Items in Item Pool

Discussant

Russell Smith, Alpine Testing Solutions

Wednesday, 12:25 p.m. - 1:55 p.m., Legends 2, G1

New Challenge to Computerized Adaptive Testing: Combining Assessment and Diagnosis to Improve Student Learning – Coordinated Session

Organizers

Hua-Hua Chang, University of Illinois
Katherine Ryan, University of Illinois

Moderator

Katherine Ryan, University of Illinois

Participants

Hua-Hua Chang, University of Illinois, Katherine Ryan, University of Illinois,
Usama Ali, University of Illinois, Chun Wang, University of Illinois
Building Effective CATs Based on Existing State Assessment Infrastructure

Ying Cheng, University of Notre Dame
Plug-and-Play Constraint Management in Computerized Adaptive Testing

Fanning Guo, GMAC
Quantifying Impact of Compromised Items in CAT

Hong-Yuen Liu, Beijing Normal University, Shuliang Ding, Jianxi Normal
University, Hua-Hua Chang, University of Illinois
*Developing Cognitive Diagnostic CAT for Chinese K-12 Education: An Innovative
Assessment for Improving Students*

J. Charles Zhao, Educational Testing Service
*Optimal Scope of the Item Inventory Refreshment for a State Computerized
Assessment Program*

Chingwei David Shin, Pearson, Yueh-Mei Chien, Pearson, Denny Way, Pearson
*The Weighted Penalty Model and Conditional Randomesque Method for Item
Selection in Computerized Adaptive Tests*

Discussant

Bo Wang, ACT, Inc.

Wednesday, 12:25 p.m. - 1:55 p.m., Legends 3, G2

IRT Estimation – Paper Session

Moderator

G. Anthony Benners, Fordham University

Presenters

XiangDong Yang, East China Normal University, Huiqin (Ann) Hu, Data Recognition Corporation

Understanding the Paradox of Item Parameter Invariance

Michael Toland, University of Nebraska, R.J. De Ayala, University of Nebraska

The Accuracy of BILOG Item Parameter Standard Error of Estimates

Brett Foley, Buros Center for Testing

Improving IRT Item Parameter Estimates with Small Sample Sizes: Evaluating the Efficacy of a New Data Augmentation Technique

Yanyan Sheng, Southern Illinois University – Carbondale

A Weakly Informative Prior Distribution for Item Variance Hyperparameters in Hierarchical 3PNO IRT Models

Discussant

Seock-Ho Kim, University of Georgia

Wednesday, 12:25 p.m. - 1:55 p.m., Legends 4, G3

Causes and Consequences of DIF – Paper Session

Moderator

Todd Rogers, University of Alberta

Presenters

Yi-Hsuan Lee, Educational Testing Service, Jinming Zhang, Educational Testing Service

Impact of Differential Item Functioning on Ability Estimation and Reliability

Kathleen Banks, University of Iowa

How to Use DDF As a Post Hoc Analysis to Understand the Sources of DIF

Daeryong Seo, Pearson, Seon-Hi Shin, California State University, Long Beach, Husein Taherbhai, Pearson, Yu Sun, Pearson

Exploring and Explaining Gender Format Differences in English as a Second Language Writing Assessment Using Logistic Mixed Models

Yuan Hong, Rutgers University, Jimmy de la Torre, Rutgers University

Examining the Impact of Item Format on Proficiency Estimation and Subgroups Using Higher-Order IRT Modeling

Discussant

Ruth Childs, Ontario Institute for Studies in Education of the University of Toronto

Wednesday, 12:25 p.m. - 1:55 p.m., Legends 5, G4

Issues in Certification and Licensure Tests – Paper Session

Moderator

Mark Albanese, University of Wisconsin–Madison

Presenters

Brian Bontempo, Mountain Measurement, Inc., Geoffrey Borthwick, Mountain Measurement, Inc.

Repeat Test Taker Performance

Chien-Lin Yang, American Dental Association, Gene Kramer, American Dental Association, Barry Grau, American Dental Association

Using Exploratory and Confirmatory Factor Analyses to Validate the Restructured National Board Dental Part I Examination

Elaine Rodeck, American Institute of Certified Public Accountants, Yanwei Zhang, American Institute of Certified Public Accountants, Barbara Plake, University of Nebraska, Karin Zeller, American Institute of Certified Public Accountants

Summarizing Importance and Frequency Scales for a High-Stakes Credentialing Examination

Xin Li, Pearson, Mark Reckase, Michigan State University

Multidimensionality and Item Parameter Drift: An Investigation of Linking Items in a Large-Scale Certification Test

Discussant

Chad Buckendahl, Alpine Testing Solutions

Wednesday, 12:25 p.m. - 1:55 p.m., Legends 6, G5

Effects of Various Features of Anchor Items and Anchor Tests on Equating Results – Paper Session

Moderator

Patrick Meyer, University of Virginia

Presenters

Hyun Sook Yi, Konkuk University

Evaluating the Performance of Non-Equivalent Groups Anchor Test Equating Under Various Conditions of Anchor Test Construction

Yeonjeong Kim, Yonsei University, Guemin Lee, Yonsei University

An Investigation of the Anchor Test Length Effect on Equating Results for NEAT Design Using Simulation Techniques

Jiyun Zu, University of Notre Dame, Jinghua Liu, Educational Testing Service

Comparison of Discrete Anchor Items and Passage-Based Anchor Items on Observed Score Equating Results

Lisa Keller, University of Massachusetts – Amherst, Craig Wells, University of Massachusetts – Amherst

The Effect of Differentially Functioning Anchor Items on the Classification of Examinees

Discussant

Yoonsun Lee, Seoul Women's University

Wednesday, 2:15 p.m. - 3:45 p.m., Legends 2, H1

Designing and Evaluating Modified Items for Students with Disabilities: Research Results – Coordinated Session

Organizer/Moderator

Stephen N. Elliott, Vanderbilt University

Participants

Stephen N. Elliott, Vanderbilt University, Elizabeth Compton, Boise State University, Ryan J. Kettler, Vanderbilt University

Alternate Assessments of Modified Achievement Standards: Research on More Accessible and Less Difficult Grade-Level Items for Students with Disabilities

Andrew T. Roach, Georgia State University

Students' Perspectives on Item Modifications: Using Cognitive Labs and Questionnaires

Ryan J. Kettler, Vanderbilt University, Stephen N. Elliott, Vanderbilt University, Peter A. Beddow, Vanderbilt University, Alexander Kruz, Vanderbilt University
Access to a Better Assessment: How a Theoretical and Data-Based Modification Process Can Help Students Eligible for an AA-MAS

Michael C. Rodriguez, University of Minnesota

The Role of Item Response Attractors in the Modification of Test Items

Wednesday, 2:15 p.m. - 3:45 p.m., Legends 3, H2

Methodological Issues Related to NAEP – Paper Session

Moderator

Jennifer Dunn, Measured Progress

Presenters

Jaime Cid, James Madison University, Dorota Staniewska, Educational Testing Service

Interrater Reliability Statistics for Trend Scoring in NAEP

Liru Zhang, Delaware Department of Education, Shudong Wang, Educational Testing Service

An Investigation of Using Postsmoothing Method to Improve Results of Linking a State Assessment to the 2003 NAEP Mathematics

Deping Li, Educational Testing Service, Andreas Oranje, Educational Testing Service, Mei-Jang Lin, Educational Testing Service

Analysis of NAEP Data Using a Hierarchical Latent Regression Model

Andreas Oranje, Educational Testing Service, Dorota Staniewska, Educational Testing Service

An Exploration of Model Reduction Approaches for Educational Survey Population Models

Discussant

Matthew Johnson, Teachers College–Columbia University

Wednesday, 2:15 p.m. - 3:45 p.m., Legends 4, H3

Issues in the Assessment of Dimensionality/Local Dependence – Paper Session

Moderator

Michael Finger, American Institute of Certified Public Accountants

Presenters

Roy Levy, Arizona State University, Dubravka Svetina, Arizona State University
*A New Statistic and Posterior Predictive Model Checking Procedure for
Dimensionality Assessment in Multidimensional Item Response Theory*

Minhee Seo, University of North Carolina – Greensboro, Louis Roussos,
Measured Progress
Evaluation of DIMTEST Effect-Size Measure and Its Application

Doyoung Kim, American Institutes For Research, R.J. De Ayala, University of
Nebraska, Ming-Chuan Hsieh, American Institutes For Research
*Using Residual Correlations for Detecting Local Item Dependence (LID) in the
Rasch Model*

Joshua Goodman, James Madison University, Richard Luecht, University of
North Carolina – Greensboro
*An Examination of the Residual Covariance Structures of Complex Performance
Assessments Under Various Scaling and Scoring Methods*

Discussant

Holmes Finch, Ball State University

Wednesday, 2:15 p.m. - 3:45 p.m., Legends 5, H4

New Directions in Test Scoring – Paper Session

Moderator

Feifei Li, The University of Maryland

Presenters

Todd Rogers, University of Alberta

A Comparison of Four Scoring Procedures for High-Stakes and Low-Stakes Examinations with Mixed Item Formats

Jimmy de la Torre, Rutgers University, Hao Song, American Board of Internal Medicine

A Comparison of Four Methods of IRT Subscoring

Bruce Williams, ACT, Inc., Lisa Gawlick, ACT, Inc., Jie Li, ACT, Inc.

Comparison of Indices of Classification Based on Adaptive Tests

Lai Kwan Pei, Purdue University, Won-suk Kim, Measured Progress, Louis Roussos, Measured Progress

Comparison of Raw Score and Diagnostic Model-based Methods for Profile Analysis

Discussant

Dan Eignor, Educational Testing Service

Wednesday, 2:15 p.m. - 3:45 p.m., Legends 6, H5

Item Exposure Control in CAT – Paper Session

Moderator

Barbara Dodd, University of Texas-Austin

Presenters

Juan Ramon Barrada, Universidad Autonoma de Barcelona, Julio Olea, Universidad Autonoma de Madrid, Vicente Ponsoda, Universidad Autonoma de Madrid, Francisco Jose Abad, Universidad Autonoma de Madrid
Item Bank Disclosure in Computerized Adaptive Testing: What Makes an Item Selection Rule Safer?

Qi Diao, Michigan State University, Wim van der Linden, CTB/McGraw-Hill, Shu Jing Yen, CTB/McGraw-Hill
Exposure Control Using Item-ineligibility Probabilities in Multidimensional Computerized Adaptive Testing with Shadow Test

Matthew Grady, University of Texas – Austin, Barbara Dodd, University of Texas – Austin
Item Exposure Control Procedures for Mixed-Format Adaptive Testing with the Generalized Partial Credit Model

Qing Yi, Pearson
The Impact of Ability Distribution Differences between Beneficiaries and Non-Beneficiaries on Test Security Control in CAT

Discussant

Brian Bontempo, Mountain Measurement, Inc.

Wednesday, 4:05 p.m. - 6:05 p.m., Legends 2, I1

**NCLB at Year 8 in the Assessment of English Language Learners:
Taking Stock of the Assessment and Accountability Systems
(National Association of Test Directors) – Invited Symposium**

Organizer/Moderator

Phil Morse, Los Angeles Unified School District

Panelists

Jamal Abedi, University of California – Davis

David Francis, University of Houston

Rebecca Kopriva, University of Wisconsin – Madison

Discussants

Gregory Cizek, University of North Carolina – Chapel Hill

Robert Linqanti, WestEd

Wednesday, 4:05 p.m. - 6:05 p.m., Legends 3, 12

Standard Setting in an Accountability Growth Context: A Process or One-Time Event? – Invited Symposium

Organizer

Isaac I. Bejar, Educational Testing Service

Presenters

Michael Kane, National Conference of Bar Examiners

Developing Tests and Standards That Promote Accountability and Growth

Damian Betebenner, Center for Assessment

Using Student Growth to Examine Across Grade Performance Level Expectations

Steve Ferrara, American Institutes for Research, Dubravka Svetina, Arizona State University, Anne Davidson, Nevada Department of Education

Knowledge and Skill Demands of Items that Indicate Grade-to-Grade Growth for Setting Performance Standards

Jim Pellegrino, University of Illinois – Chicago

Implications of the Learning Sciences for Assessment Design and Standard Setting

David Abrams, New York State Education Department

Standard Setting: A Policy Maker's Perspective

Discussants

Robert Linn, University of Colorado – Boulder

Ronald K. Hambleton, University of Massachusetts

Wednesday, 4:05 p.m. - 6:05 p.m., Legends 4, 13

**Obtaining Diagnostic Information from Existing Large Scale Tests –
Coordinated Session**

Organizers

Jonathan Templin, University of Georgia

Robert Henson, University of North Carolina – Greensboro

Participants

Neal Kingston, University of Kansas

*What Have We Learned about the Structure of Learning from 30 Years of
Research on Integrated Cognitive-Psychometric Models? Not Much*

Allan Cohen, University of Georgia, Jonathan Templin, University of Georgia,
Laine Bradshaw, University of Georgia

Beyond Unidimensionality: Measuring All of Achievement

John Willse, University of North Carolina – Greensboro

*Retrofitting Cognitive Diagnostic Models to Large Scale Tests: Problems with
Dimensionality*

Terry Ackerman, University of North Carolina – Greensboro

*Using Confirmatory MIRT Modeling to Provide Diagnostic Information in Large
Scale Assessment*

Robert Henson, University of North Carolina – Greensboro, Jonathan Templin,
University of Georgia, Patrick Irwin, University of Kansas

*Ancillary Random Effects: A Way to Obtain Diagnostic Information from Existing
Large Scale Tests*

Jonathan Templin, University of Georgia, Robert Henson, University of North
Carolina – Greensboro

*Practical Issues in Using Diagnostic Estimates: Measuring the Reliability and
Validity of Diagnostic Estimates*

Discussants

Jeffrey Douglas, University of Illinois – Urbana-Champaign

John Poggio, University of Kansas

San Diego, California

Wednesday, 4:05 p.m. - 6:05 p.m., Legends 5, I4

Alternate Assessment Based on Alternate Achievement Standards: Improving Technical Rigor – Invited Symposium

Organizer

Claudia Flowers, University of North Carolina – Charlotte

Moderator

Martha Thurlow, University of Minnesota

Presenters

Diane Browder, University of North Carolina – Charlotte
*Providing Meaningful Access to Grade Level Content Standards for Students
with Significant Cognitive Disabilities*

Scott Marion, National Center for the Improvement of Educational Assessment,
Inc., Jim Pellegrino, University of Illinois – Chicago
*Validity Framework for Evaluating the Technical Quality of Alternate
Assessments Based on Alternate Achievement Standards*

Linda Cook, Educational Testing Service
*Issues Involved in Scaling Alternate Assessments Based on Alternate
Achievement Standards*

Marianne Perie, National Center for the Improvement of Educational
Assessment, Inc.
Standard Setting and Performance Level Descriptors for Alternate Assessments

Stanley Rabinowitz, WestEd
*States' Challenges and Successes in Developing and Implementing Alternate
Assessments Based on Alternate Achievement Standards*

Discussants

Michael Kolen, University of Iowa
Suzanne Lane, University of Pittsburgh

Wednesday, 4:05 p.m. - 6:05 p.m., Legends 6, 15

Small Sample Test Equating – Paper Session

Moderator

Nancy Bené, American Nurses Credentialing Center

Presenters

Sooyeon Kim, Educational Testing Service, Samuel Livingston, Educational Testing Service, Charles Lewis, Educational Testing Service
Effectiveness of Collateral Information for Improving Equating in Small Samples

Mark Darby, University of North Carolina – Greensboro, Kinge Mbella, University of North Carolina – Greensboro
A Validation of the Circle-Arc Equating Method for Small Samples

Sarah Hagge, University of Iowa, Jaehoon Seol, University of Iowa, Chunyan Liu, University of Iowa, Robert Brennan, University of Iowa
Group Invariance: Examining the Adequacy of Linear Linking Methods for Small Samples

Devdass Sunnasse, University of North Carolina – Greensboro, Zhan Shu, University of North Carolina – Greensboro
Equating Accuracy Using Small Samples in the Single Group Design: A Comparison of Circle-Arc Equating with Traditional Observed Score Equating Methods

Discussant

Charles Mayenga, Assessment Strategies, Inc.

Wednesday, 4:05 p.m. - 6:05 p.m., The Edge, I6

Graduate Student Poster Session

(Sponsored by the Graduate Student Issues Committee)

Organizers

*Dubravka Svetina, Arizona State University
Hi Shin Shim, Georgia Institute of Technology
Sarah Hagge, University of Iowa
Wendy Lam, University of Massachusetts
Mary Roberts, University of Alberta*

Presenters

Cigdem Alagoz, University of Georgia
An Investigation of the Model Fit for DINA with Fully Bayesian Estimation

Stephanie Barclay McKeown, University of British Columbia, Nand Kishor,
University of British Columbia
*Investigating Statistical Limitations with BC Secondary School Rankings:
A Multilevel Analysis*

Mustafa Kuzey Bilir, Florida State University, Akihito Kamata, Florida State
University
*Simultaneous Estimation of Differential Item Functioning for Manifest Groups
and Latent Classes*

Daniel H. Breidenbach, Washington State University; Brian F. French,
Washington State University
In Search of a Factor Model for the Brigance CIBS-II

Pui Chi Chiu, University of Kansas, John C. Poggio, University of Kansas
*The Effect of English Proficiency on Mathematics Performance: A Comparison of
Item Response Theory-based Area and Mantel-Haenszel Methods*

Youn-jeng Choi, University of Georgia, Allan S. Cohen, University of Georgia
A Mixture Model Analysis of DIF on TIMSS2003

Kyong Hee Chon, University of Iowa
*Sparseness in Item Fit Table and Sampling Distribution of S-X2 and S-G2
Statistics*

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Hyewon Chung, University of Texas – Austin, Tasha Beretvas, University of Texas – Austin

The Performance of Fit Indices for Multi-group Confirmatory Factor Analysis with Non-normal Data: A Simulation Study

Catherine N. Close, University of Minnesota, Robert Semmes, University of Minnesota, Mark L. Davison, University of Minnesota

Measuring Average Speed of Numerical Reasoning

Jenna M. Copella, University of Massachusetts – Amherst, Stephen Sireci, University of Massachusetts – Amherst

Interpreting Non-Uniform DIF

Drew Dallas, University of North Carolina – Greensboro, Fang Chen, University of North Carolina – Greensboro

Evaluation of Self-Efficacy Using Manifest and Latent Variable Approaches

Emily Fall, University of Kansas, Jonathan Templin, University of Georgia

Probabilistic Q-matrix Specification in an Uncertain World: An Examination of Cognitive Diagnosis Models with Reading Comprehension Tests

Katherine Furgol, University of Iowa; Andrew Ho, University of Iowa

A Hierarchical Framework for Large-Scale Trend Analyses under NCLB

Matthew Gaertner, University of Colorado – Boulder, Alexander Subert, University of Colorado – Boulder

Measuring Academic Disadvantage in the Undergraduate Admissions Process

Ariela C. Greenberg, University of Miami, Randall D. Penfield, University of Miami, Daryl B. Greenfield, University of Miami

Fighting Bias with Statistics: Applying DIF and DDF to Detect Gender Differences in Responses to Items on a Preschool Science Assessment

Krystal Hachey, University of Ottawa, Michel Rousseau, Université du Québec à Rimouski, Marielle Simon, University of Ottawa, Richard Bertrand, Université Laval

Missing Data: How is it Handled?

Leslie Hendrix, University of South Carolina, Brian Habing, University of South Carolina

MCMC Estimation of the 3PL Model using Tsutakawa's Prior Parameterization

Tao Hong, Purdue University, Ningying Wu, Purdue University, Susan J. Maller, Purdue University, Yi Li, Purdue University

Assessing DIF in Polytomous Items Using the MIMIC Modeling Approach

San Diego, California

Chueh-An Hsieh, Michigan State University, Alexander Von Eye, Michigan State University

The Best of Both Worlds: A Joint Modeling Approach for the Assessment of Change across Repeated Measurements

Yan Huo, University of Illinois – Urbana-Champaign, Hua-Hua Chang, University of Illinois – Urbana-Champaign

An index to compare variable-length CAT with fixed-length CAT

Minjeong Jeon, University of California – Berkeley, Guemin Lee, Yonsei University
A Comparison of Generalizability Theory and Multilevel Models for Estimating Conditional Standard Errors of Measurement for Testlet-based Tests

Jung Jiyoung, Yonsei University, Guemin Lee, Yonsei University

Effects of Correlation Coefficients between Total Test Score and Anchor Test Score on Equating

Ja Young Kim, University of Iowa, Jaekyung Lee, State University of New York – Buffalo

The Racial Academic Achievement Gap and English Language Learning (ELL) Factors: An Analysis of National Assessment of Educational Progress (NAEP) in Math and Reading

Ji-Yoon Kim, Sung Kyun Kwan University, Kyung T. Han, Graduate Management Admission Council

New Approaches to Test Equating: When Construct Response Items Are Used as Linking Items

Yeonjeong Kim, Yonsei University, Sun-Young Kim, Yonsei University, Guemin Lee, Yonsei University

An Investigation of Rater Effects in Oral Examination Using Generalizability Theory Approaches

Nidhi Kohli, University of Maryland – College Park, Jennifer Koran, University of Maryland – College Park, André A. Rupp, University of Maryland – College Park

An Alternative Comparison of Item and Person Statistics Based on Item Response Theory versus Classical Test Theory

Sunbok Lee, University of Georgia, Jongmin Ra, University of Georgia, Youn-Jeng Choi, University of Georgia

Entropic Prior Specification for Bayesian Methods in IRT

Yi-Hung Lin, University of California – Berkeley, Wen-Chung Wang, Hong Kong Institute of Education

A Testlet Response Theory Model for Ability-Based Guessing

Pey-Yan Liou, University of Minnesota, Xin Liu, Pearson Clinical Assessment

Evaluating Cross-Lingual Equating in Performance Assessments with an Application of DIAL-4

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George MacDonald, University of South Florida, Yi-Hsin Chen, University of South Florida, Yuh-Chyn Leu, National Taipei University of Education
Exploring Cognitive Sources of Item Difficulty of Mathematic Fraction Items

Yu Meng, University of Massachusetts – Amherst, Craig S. Wells, University of Massachusetts – Amherst, Ronald K. Hambleton, University of Massachusetts – Amherst
A Comparison of Methods for Handling Missing Data in Large-scale Assessment and the Impact on Assessing Dimensionality

Amy Myers, Baylor University, Trena Wilkerson, Baylor University, Rachelle Meyer, Baylor University
Students, Teachers, and Mathematics Achievement in Fourth Grade Internationally

Sungwon Ngudgratoke, Michigan State University
Exploring the Feasibility of Using Subscores to Improve Quality of Equating

Maria Elena Oliveri, University of British Columbia, Brent D. Olson, University of British Columbia, Kadriye Ercikan, University of British Columbia, Bruno D. Gumbo, University of British Columbia
Methodologies for Investigating Construct Comparability in International Large-scale Assessments

SeoHong Pak, Yonsei University, Keonseob Kim, Yonsei University, Guemin Lee, Yonsei University
An Investigation of Smoothing Effects on Linking Test Scores from Tests of Different Lengths

Yoon Soo Park, Columbia University, Gee H. Kim, Columbia University, Minsun Cho, Columbia University, Young-Sun Lee, Columbia University
An Application of Mixed Rasch Model in Assessing K-3 Mathematics Cognitive Diagnostic Interview Measures

Sonya Powers, University of Iowa, Kris Waltman, University of Iowa
Creating State Norms to Describe “Typical” Change in Student Achievement

Anja Romhild, University of Nebraska – Lincoln, James A. Bovaird, University of Nebraska – Lincoln
The Effect of Guessing in Item Factor Analysis of Multiple-choice Data

Dallie Sandilands, University of British Columbia, Maria Elena Oliveri, University of British Columbia
Validity and Score Comparability in Large-Scale Educational Assessments

San Diego, California

Minhee Seo, University of Illinois – Urbana-Champaign, Yiming Jin, University of Illinois – Urbana-Champaign, Hua Hua Chang, University of Illinois – Urbana-Champaign

Impacts of DIF on Item and Ability Estimate Calibration

Dorota Staniewska, Rutgers University

Examinee Ability Estimation under the Conditions of Speededness

Chunxin Wang, University of Iowa

An Investigation of IRT Models in Estimating Conditional Standard Errors of Measurement and Reliability

Ting Xu, University of Pittsburgh, Kevin H. Kim, University of Pittsburgh, Feifei Ye, University of Pittsburgh

Item Parameters Recovery for a Multilevel 2PL Item Response Model

Na Yang, University of South Carolina, Jessalyn Smith

Initial Estimates for the “Mixed Exam” Items

Hanwook Yoo, University of Massachusetts – Amherst, Ronald K. Hambleton, University of Massachusetts – Amherst

Detection of Exposed Test Items in Computer-Based Testing Environments

Ji Zeng, University of Michigan, Joseph A. Martineau, Michigan Department of Education

Objective Extension and Evaluation of a Vector-Based Approach to Dimensionality Assessment

Xiuyuan Zhang, University of Pennsylvania, Paul A. McDermott, University of Pennsylvania

Performance of Full-Information Factor Analysis and Parallel Analysis with Unidimensional Binary Data

Xiaowen Zhu, University of Pittsburgh, Clement A. Stone, University of Pittsburgh

Detecting Local Dependence of Performance-based Items using Bayesian Analysis

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Thursday, 5:45 a.m. - 7:30 a.m., Hard Rock Hotel Lobby

NCME Fitness Run/Walk

Organizers

Brian F. French, Purdue University

Jill van den Heuvel, CTB/McGraw-Hill

Run a 5K or walk a 2.5K course along the waterfront. Meet in the lobby at 5:45 a.m. Pre-registration is required.

The event is made possible through the sponsorship of:

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Educational Testing Service

GED Testing Service/American Council on Education

Graduate Management Admission Council

Law School Admission Council

National Board of Medical Examiners (NBME)

Thursday, 8:15 a.m. - 10:15 a.m., Legends 2, J1

Individual Score Validity: How Unexpected Interaction Between a Test and a Test Taker Influences the Usefulness of a Test Score – Coordinated Session

Organizer/Moderator

G. Gage Kingsbury, Northwest Evaluation Association

Participants

Steven L. Wise, Northwest Evaluation Association, G. Gage Kingsbury, Northwest Evaluation Association, Carl Hauser, Northwest Evaluation Association

A Generalized Framework for Identifying Individual Score Validity (ISV) in a Variety of Testing Settings

Carl Hauser, Northwest Evaluation Association, G. Gage Kingsbury, Northwest Evaluation Association

ISV in a Modest-Stakes Adaptive Educational Testing Setting

Lisa F. Smith, University of Otago, Steven L. Wise, Northwest Evaluation Association, Christine E. DeMars, James Madison University

ISV and Student Effort in Higher Education Assessment

G. Gage Kingsbury, Northwest Evaluation Association, Kathleen A. Gialluca, Pearson

ISV in a High-Stakes Licensure Testing Setting

Stephen Slater, Oregon Department of Education

ISV in an NCLB Testing Setting

Discussant

Anthony R. Zara, Pearson

Thursday, 8:15 a.m. - 10:15 a.m., Legends 3, J2

Item Bias and Measurement Invariance – Paper Session

Moderator

Stanley Rabinowitz, WestEd

Presenters

Anita Rawls, University of South Carolina
Measurement Invariance at the Construct and Item Levels

Randall Penfield, University of Miami
A Comparison of Legal and Professional Standards of Fairness in High-Stakes Testing: Where do they intersect?

Jodi Casabianca, Fordham University, Charles Lewis, Fordham University
Equivalent Item Functioning Detection with Empirical Bayes Estimates

Akihito Kamata, Florida State University, Rae-Seon Kim, Florida State University, Mustafa Kuzey Bilir, Florida State University
Investigation of the Utility of the Bayesian Mixture-Item DIF Detection Model

Bihua Xiang, Educational Testing Service, Xuan Tan, Educational Testing Service, Neil J. Dorans, Educational Testing Service, Yanxuan Qu, Educational Testing Service
The Value of the Studied Item in the Matching Criterion in DIF Analysis

Rachael Jin Bee Tan, Schroeder Measurement Technologies, Inc.
A Mixed-Methods Approach to Test Fairness

Discussant

Neal Kingston, University of Kansas

Thursday, 8:15 a.m. - 10:15 a.m., Legends 4, J3

Mixture IRT Models – Paper Session

Moderator

Joshua Goodman, James Madison University

Presenters

Hong Jiao, University of Maryland, Shudong Wang, Educational Testing Service,
Ru Lu, University of Maryland

Mixture Rasch Model for Dichotomously Scored Testlet Based Assessments

Christine Shea, University of Massachusetts

Using a Mixture IRT Model to Understand Second Language Learner

Performance on Large-scale Assessments

Daniël Van Nijlen, KU Leuven, Rianne Janssen, KU Leuven

Explaining Guessing Behavior by Means of Explanatory Mixture Models

Dipendra Subedi, American Institutes for Research, Mark Reckase, Michigan
State University

Modeling an “Unscalable Class” using Item Response Theory Mixture Models

Ru Lu, University of Maryland, Hong Jiao, University of Maryland

Detecting DIF using Mixture Rasch Model

Discussant

Daniel Bolt, University of Wisconsin – Madison

Thursday, 8:15 a.m. - 10:15 a.m., Legends 5, J4

Comparisons of Linking and Equating Designs – Paper Session

Moderator

Joanna Tomkowicz, CTB/McGraw-Hill

Presenters

Gautam Puhan, Educational Testing Service

Chained Versus Post Stratification Equating: An Evaluation using Empirical Data

Rianne Janssen, KU Leuven, David Magis, KU Leuven, Ernesto San Martin, Pontificia Universidad Catholica de Chile, Guido Del Pino, Pontificia Universidad Catholica de Chile

Local Equating Methods in the NEAT Design

Mayuko Simon, University of Minnesota, Mark Davison, University of Minnesota

Comparison of Concurrent and Separate Multidimensional IRT Linking of Item Parameters

Pauline Parker, University of Massachusetts, Lisa Keller, University of Massachusetts, Robert Keller, Measured Progress, Alina von Davier, Educational Testing Service

The Examination of Four Equating Methods: The Effects of Reclassifying Students into Performance Categories and the Population Sensitivity Assumption

Yingchen Wang, University of North Carolina – Greensboro, Minh Duong, Michigan State University

Sensitivity of Linking Functions to the Secondary Trait Introduced by the Test

Discussant

Jonathan Beard, University of Iowa

Thursday, 8:15 a.m. - 10:15 a.m., Legends 6, J5

Test Use in Special Populations – Paper Session

Moderator

Kadriye Ercikan, University of British Columbia

Presenters

Xia Mao, Pearson, Steven Fitzpatrick, Pearson
An Investigation of the Linking of Mathematics Tests with and without Linguistic Simplification

Scott Elliot, SEG Assessment | SEG Research
A Model for Validating Assessments that Accompany Commercially Published Textbooks and Instructional Programs

Jennifer Dunn, Measured Progress, Melissa Fincher, Georgia Department of Education
A Framework for Identifying and Evaluating Item Alterations Designed for Persistently Low Performing Students

Ming Xu, New York State Education Department, Zhen (Jane) Wang, Pearson, Sz-Shyan Wu, New York State Education Department
A Predictive Validity Study of an English Language Proficiency Test

Eric Hansen, Educational Testing Service, Diego Zapata-Rivera, Educational Testing Service, Mingyu Feng, Worcester Polytechnic Institute
Beyond Accessibility: Evidence Centered Design for Improving the Efficiency of Learning and Assessment

Eunju Jung, University of Oregon, Paul Yovanoff, University of Oregon
Calibrating a Mathematics Alternate Assessment Designed for Students with Disabilities Using General Education Student Data

Discussant

Pat Almond, University of Oregon

Thursday, 10:35 a.m. - 12:05 p.m., Legends 2, K1

Bradley Hanson: The Man behind the Award and His Legacy as a Psychometrician – Invited Symposium

Organizer/Moderator

Jimmy de la Torre, Rutgers University

Presenters

Deborah Harris, ACT, Inc.

The Bradley Hanson Award, and the Man It Honors

Gary Skaggs, Virginia Polytechnic Institute and State University

Facilitating Psychometric Software Exchange

Won-Chan Lee, University of Iowa

Current Development and Issues in Estimating Classification Consistency and Accuracy

Jianbin Fu, Educational Testing Service

A General Program for Item Response Theory Models in R

Xiaohong Gao, ACT, Inc., Deborah Harris, ACT, Inc.

Domain Scores: The Continued Influence of Brad on a Line of Research

Anton Béguin, CITO, Institute of Educational Measurement

Robustness of IRT Equating

Discussant

Richard Patz, CTB/McGraw-Hill

San Diego, California

Thursday, 10:35 a.m. - 12:05 p.m., Legends 3, K2

Validating Educational Assessments for Special Populations Using Cognitive Methods: Students with Disabilities, English Language Learners, and American-Indian Students – Coordinated Session

Organizer/Moderator

Maria Martiniello, Educational Testing Service

Participants

Christopher Johnstone, National Center for Educational Outcomes, Kristi Liu, National Center for Educational Outcomes, Jason Altman, National Center for Educational Outcomes, Martha Thurlow, National Center for Educational Outcomes

Student Think Aloud Reflections on Comprehensible and Readable Assessment Items: Perspectives on What Does and Does Not Make an Item Readable for Students with Disabilities

Teresa King, Educational Testing Service, Cara Cahalan Laitusis, Educational Testing Service

Methodology, Protocol, and Issues to Consider in Cognitive Interviews with Students with Disabilities

Claire Melican, Educational Testing Service, Benjamin Orchard, Educational Testing Service

Using Cognitive Laboratory Methods to Develop Background Questions for the National Indian Education Study

Maria Martiniello, Educational Testing Service

Determining Construct-Irrelevant Variance in Mathematics Assessments of English Language Learners Through the Use of Think-Aloud Protocols

Therese Carr, Center for Applied Linguistics, Cathy Cameron, Center for Applied Linguistics, Jim Bauman, Center for Applied Linguistics, Rebecca Kopriva, University of Wisconsin – Madison

Thinking Out Loud: Using Cognitive Labs to Investigate English Learners' Interactions with Dynamic Computer-Based Science Items

Discussant

Kristen Huff, College Board

Thursday, 10:35 a.m. - 12:05 p.m., Legends 4, K3

Test Speededness and Consequences – Paper Session

Moderator

Jonathan Templin, University of Georgia

Presenters

Sun-Joo Cho, University of California – Berkeley, Paul De Boeck, KU Leuven,
Mark Wilson, University of California – Berkeley

*Secondary Dimension Modeling of DIF: A Mixture Approach for Test
Speededness*

Aijun Wang, University of Georgia, Allan Cohen, University of Georgia
A Mixture Nominal Response Model for Test Speededness

Hua Wei, Pearson

*The Effect of Test Speededness on Item and Ability Parameter Estimates in
Multidimensional IRT Models*

Changjiang Wang, Pearson, Hua Wei, Pearson, Lingyun Gao, Pearson
Investigating the Effects of Speededness on Test Dimensionality

Discussant

André Rupp, University of Maryland

Thursday, 10:35 a.m. - 12:05 p.m., Legends 5, K4

Anchor-Test Design Issues in Equating – Paper Session

Moderator

Alvaro Arce-Ferrer, Pearson

Presenters

Tian Song, Michigan State University, Alvaro Arce-Ferrer, Pearson
Comparing IPD Detection Approaches in Common-item Nonequivalent Group Equating Design

Hanwei Chen, ACT, Inc., Cui Zhongmin, ACT, Inc., Gao Xiaohong, ACT, Inc.,
Zhu Rongchun, ACT, Inc.
Evaluating the Impact of Varying Group Abilities on Different Equating Methods Under the Common-Item Nonequivalent Groups Design

Michael Mekhael, Educational Testing Service, Wenmin Zhang, Educational Testing Service, Jing Miao, Educational Testing Service
The Robustness of Tucker and Levine Observe Equating Methods in the Nonequivalent Group Anchor-Test Design

Patrick Meyer, University of Virginia, Karen Barton, CTB/McGraw-Hill
An Examination of the Influence of Common Item Sampling on the Standard Error of Equating

Discussant

Liru Zhang, Delaware Department of Education

Thursday, 10:35 a.m. - 12:05 p.m., Legends 6, K5

CAT Strategies – Paper Session

Moderator

Frederick McHale, Educational Testing Service

Presenters

Alan Huebner, ACT, Inc., Jeff Douglas, University of Illinois – Urbana-Champaign
Multidimensional a-Stratified Computerized Adaptive Testing

Yueh-Mei Chien, Pearson, Chingwei David Shin, Pearson, Denny Way, Pearson
Weighted Penalty Model for Content Balancing in CAT

Leslie Keng, Pearson, Barbara Dodd, University of Texas – Austin
A Comparison of the Performance of Testlet-Based Computer Adaptive Tests and Multistage Tests

Tsung-Han Ho, University of Texas – Austin, Barbara Dodd, University of Texas – Austin
A Comparison of Item Selection Procedures Using Different Ability Estimation Methods in CAT Based on the Generalized Partial Credit Model

Discussant

Krista Breithaupt, American Institute of Certified Public Accountants

San Diego, California

Thursday, 12:25 p.m. - 1:55 p.m., Legends 2, L1

Inconsistency of Scaling Function: Scale Drift or Sound Equating? – Coordinated Session

Organizers/Moderators

Jinghua Liu, Educational Testing Service

Shelby Haberman, Educational Testing Service

Participants

Shelby Haberman, Educational Testing Service, Neil Dorans, Educational Testing Service

Scale Consistency, Drift, Stability: Definitions, Distinctions and Principles

Shelby Haberman, Educational Testing Service, Yi-Hsuan Lee, Educational Testing Service, Jiahe Qian, Educational Testing Service, Frederic Robin, Educational Testing Service

Re-sampling and Evaluation of Equating Errors

Hongwen Guo, Educational Testing Service, Jinghua Liu, Educational Testing Service, Shelby Haberman, Educational Testing Service, Neil Dorans, Educational Testing Service

Consistency of SAT[®] Reasoning Score Conversions

Deping Li, Educational Testing Service, Shuhong Li, Educational Testing Service

Time Series Assessment on Scale Consistency

Jinghua Liu, Educational Testing Service, Edward Curley, Educational Testing Service, Albert Low, National Board of Medical Examiners

A Scale Drift Study

Discussants

Mary Pommerich, Defense Manpower Data Center

Nancy Peterson, ACT, Inc.

Thursday, 12:25 p.m. - 1:55 p.m., Legends 3, L2

Performance Assessment and Related Methodology – Paper Session

Moderator

Jill van den Heuvel, CTB/McGraw-Hill

Presenters

Fang Chen, University of North Carolina – Greensboro
HLM Cross-Classification Models in the Application of Rater-Task Study

Carina McCormick, University of Nebraska, Kurt Geisinger,
University of Nebraska
*The Potential for Interrater Reliability Inflation with Tertium Quid Rater
Adjudication: A Simulation*

Jongmin Ra, University of Georgia, Sunbok Lee, University of Georgia
Hierarchical Bayesian Approach for Rater Effects on Speaking Performance

Luz Bay, Measured Progress, Kelly Ickes, Measured Progress, Kevin Haley,
Measured Progress
*Level of Complexity: A Study on Composite Scores in a Portfolio Type Alternate
Assessment*

Discussant

Jill van den Heuvel, CTB/McGraw-Hill

San Diego, California

Thursday, 12:25 p.m. - 1:55 p.m., Legends 4, L3

DIF Detection using Logistic Regression – Paper Session

Moderator

Catherine Taylor, University of Washington

Presenters

Brian French, Washington State University, Holmes Finch, Ball State University
Hierarchical Logistic Regression: Accounting for Multilevel Data in DIF Detection

Seung Choi, Northwestern University, Laura Gibbons, University of Washington – Seattle, Paul Crane, University of Washington – Seattle
Development of Freeware for an Iterative Hybrid Ordinal Logistic Regression/IRT DIF

Lai Kwan Pei, Purdue University, Jun Li, University of California – Riverside
Effects of Unequal Variance in Ability Distribution on the Performance of SIBTEST, Mantel-Haenszel, IRT Likelihood Ratio and Logistic Regression for DIF Detection

Ya-Hui Su, University of California – Berkeley, Wen-Chung Wang, Hong Kong Institute of Education
A New Application of Logistic Regression Procedure on Differential Item Functioning Detection

Discussant

Randall Penfield, University of Miami

Thursday, 12:25 p.m. - 1:55 p.m., Legends 5, L4

Score Reporting – Paper Session

Moderator

Thanos Patelis, College Board

Presenters

Lihua Yao, Defense Manpower Data Center
Reporting Valid and Reliable Overall Score and Domain Score

Ying Lu, Educational Testing Service, Robert Smith, Educational Testing Service
An Alternative Method to Estimate Cluster Performance of Proficient Students on a Large Scale State Assessment

Guangming Ling, Educational Testing Service
Report Subscores or Not? Evaluating Subscore Reliability and Internal Test Structure

Gavin Brown, Hong Kong Institute of Education, John Hattie, University of Auckland
Understanding Teachers' Thinking About Assessment: Insights for Developing Better Educational Assessments.

Discussant

Marc Julian, CTB/McGraw-Hill

Thursday, 12:25 p.m. - 1:55 p.m., Legends 6, L5

Test Equating with Constructed-Response Items and Mixed-Format Tests – Paper Session

Moderator

Amy Schmidt, Educational Testing Service

Presenters

Ningying Wu, Purdue University, Chi-Yu Huang, ACT, Inc., NooRee Huh, ACT, Inc., Deborah Harris, ACT, Inc.

Robustness in Using Multiple-Choice Items as External Anchor for Constructed-Response Test Equating

Xuan Tan, Educational Testing Service, Sooyeon Kim, Educational Testing Service, Insu Paek, Educational Testing Service

An Alternative to the Trend Scoring Method for Adjusting Scoring Shifts in Mixed-Format Tests

Yi Cao, ACT, Inc., Robert Lissitz, University of Maryland

Mixed-Format Test Equating: Effects of Test Dimensionality and Common-Item Sets

Michael Walker, Educational Testing Service, Sooyeon Kim, Educational Testing Service

Linking Mixed-Format Tests Using Multiple Choice Anchors

Discussant

Ye Tong, Pearson

Thursday, 2:15 p.m. - 3:45 p.m., Legends 2, M1

Flight or Fancy: Innovations in Comparability, Computer-Interactive, and Other Things Testing – Coordinated Session

Organizer

Rebecca Kopriva, University of Wisconsin–Madison

Moderator

Therese G. Carr, Center for Applied Linguistics

Participants

Rebecca Kopriva, University of Wisconsin-Madison, James Bauman, Center for Applied Linguistics, David Gabel, Center for Applied Linguistics
What Happens when Large-scale Items Actually Use the Computer's Capabilities? Exploring Issues and Redefining Challenges

Edys S. Quellmalz, WestEd
Simulations for Quality Formative and Summative Assessment

Phoebe C. Winter, Consultant
Comparing “Apples to Apples”: Challenges and Approaches to Establishing the Comparability of Alternate Test Forms

Therese G. Carr, Center for Applied Linguistics, Rebecca Kopriva, University of Wisconsin – Madison
It's About Time: Matching English Learners and the Ways they take Tests by Using an Online Tool to Properly Address Individual Needs

Discussants

James W. Pellegrino, University of Illinois – Chicago
Sue Rigney, U.S. Department of Education

Thursday, 2:15 p.m. - 3:45 p.m., Legends 3, M2

How to Build a Cognitive Model for Educational Assessments – Coordinated Session

Organizer

Joanna Gorin, Arizona State University

Moderator

Roy Levy, Arizona State University

Participants

Jacqueline Leighton, University of Alberta

Exploratory and Confirmatory Methods for Cognitive Model Development

Mark Gierl, University of Alberta, Cecelia Alves, University of Alberta, Andrea
Gotzmann, University of Alberta, Mary Roberts, University of Alberta

*Using Judgments from Content Specialists to Develop Cognitive Models for
Diagnostic Assessments*

Joanna Gorin, Arizona State University, Dubravka Svetina, Arizona State
University

Using Digital Eye-Tracking to Develop Cognitive Models of Assessment Items

Derek Briggs, University of Colorado, Alicia Alonzo, University of Iowa

*Building Learning Progressions as a Cognitive Model for Ordered-Multiple
Choice Items*

Discussants

David Lohman, University of Iowa

Kristen Huff, College Board

Thursday, 2:15 p.m. - 3:45 p.m., Legends 4, M3

Estimation Issues in Multidimensional IRT – Paper Session

Moderator

Lihua Yao, Defense Manpower Data Center

Presenters

Sung-Hyuck Lee, ACT, Inc., Joseph Rodgers, University of Oklahoma,
Robert Terry, University of Oklahoma
Multidimensional Item Calibration in SAS

Priya Kannan, University of Pittsburgh, Kevin H. Kim, University of Pittsburgh
*Item Parameter Recovery for a Within-item Multidimensional Graded Response
Model: A SEM-CFA perspective*

Yu Fang, ACT, Inc., Mark Reckase, Michigan State University
*Using a Projection Method to Estimate Subscores from Tests with
Multidimensional Structures*

Qiong Wu, Pennsylvania State University, Pui-Wa Lei, Pennsylvania State
University
*Using Multi-group Confirmatory Factor Analysis to Detect DIF when Tests are
Multidimensional*

Discussant

James Roberts, Georgia Institute of Technology

Thursday, 2:15 p.m. - 3:45 p.m., Legends 5, M4

Reliability, Consistency, and Generalizability – Paper Session

Moderator

Michael Rodriguez, University of Minnesota

Presenters

Sonya Powers, University of Iowa, Robert Brennan, University of Iowa
Multivariate Generalizability Analyses of Mixed-Format Exams

Ernest Davenport, University of Minnesota, Pey-Yan Liou, University of Minnesota
Internal Consistency: A Concept Whose Time Has Come

Tawnya Knupp, University of Iowa, Won-Chan Lee, University of Iowa,
Timothy Ansley, University of Iowa
A Method for Estimating Decision Consistency Using Composite Scores In an IRT Framework

Jinnie Choi, University of California – Berkeley, Derek Briggs, University of Colorado – Boulder, Mark Wilson, University of California – Berkeley
Multidimensional Extension of the Generalizability in Item Response Modeling (GIRM)

Discussant

Mark Albanese, University of Wisconsin-Madison

Thursday, 2:15 p.m. - 3:45 p.m., Legends 6, M5

Equating with Testlets – Paper Session

Moderator

Kathleen A. Gialluca, Pearson

Presenters

Guemin Lee, Yonsei University, In-Yong Park, Yonsei University
Testlet Response Model for IRT True Score Equating

Steffen Brandt, Universität Kiel
Modeling Item Order Effects Using the Rasch Testlet Model

Dongyang Li, University of Maryland
Developing a Common Scale for Testlet Model Parameters Using a Test Characteristic Curve Scaling Method

Wei He, Michigan State University, Rui Gao, Educational Testing Service
Does Pre-equating Work? An Investigation into Pre-equated Testlet-Based CLEP Exam Using Post Administration Data

Discussant

Deborah Harris, ACT, Inc.

Thursday, 4:05 p.m. - 6:05 p.m., Legends 3, N1

Comparability of Paper-and-Pencil and Computer-Based Exams – Paper Session

Moderator

Robert Dolan, Pearson

Presenters

Do-Hong Kim, University of North Carolina – Charlotte, Huynh Huynh, University of South Carolina

Using Multi-Level Structural Models to Explore Comparability between Paper-and-Pencil and Computer-Based Testing Modes for a Literacy Test

Adisack Nhouyvanisvong, Data Recognition Corporation, Djibril Liassou, Data Recognition Corporation, Takeshi Terada, Data Recognition Corporation
Developing a Cognitive Framework to Investigate the Comparability of Computer-based and Paper-and-Pencil Reading and Mathematics Items

Douglas Glasnapp, University of Kansas, John Poggio, University of Kansas, Jorge Carvajal, University of Kansas, Andrew Poggio, Computerized Assessments and Learning

More Evidence: Computer vs. Paper and Pencil Delivered Test Comparability

Hui-Mei Fan, University of Iowa, Walter Vispoel, University of Iowa

A Meta-Analysis of Comparability of Scores Yielded by Computerized and Paper-and-Pencil Reading Tests

Katie McClarty, Pearson, Chow-Hong Lin, Pearson, Jadie Kong, Pearson

How Many Students Do You Really Need? The Effect of Sample Size on the Matched Samples Comparability Analysis

Discussant

Gary Schaeffer, CTB/McGraw-Hill

Thursday, 4:05 p.m. - 6:05 p.m., Legends 5, N2

Measurement of Growth – Paper Session

Moderator

Tasha Beretvas, University of Texas– Austin

Presenters

Vanessa Thompson, Georgia Institute of Technology, Ou Lydia Liu, Educational Testing Service, John Young, Educational Testing Service
Measuring Value-Added in Higher Education Using MAPP: A Multi-level Approach

Jennifer Koran, University of Maryland
An Integrated Item Response Model for Evaluating Individual Students' Growth in Educational Achievement

Mark Albanese, University of Wisconsin School of Medicine and Public Health
Effects of Confounding on Correlations, Factor Analysis and Reliability Estimates

HeeKyoung Kim, Korea Institute for Curriculum and Evaluation, Seonghoon Kim, Keimyung University
Effect of Psychometric Methods on Group-Level Assessment of Year-to-Year Change

Feifei Ye, University of Pittsburgh, Wenyi You, Pearson, Ting Xu, University of Pittsburgh
Multilevel Item Response Model for Longitudinal Data

G. Anthony Benners, Fordham University, Howard Everson, Fordham University
School Effects on Gender Differences in Learning Mathematics During High School: A Multiple Group Multilevel Latent Growth Analysis of PSAT/NMSQT to SAT Performance in Mathematical Reasoning

Discussant

Jee-Seon Kim, University of Wisconsin– Madison

Thursday, 4:05 p.m. - 6:05 p.m., Legends 4, N3

Novel Applications of Response-Time Modeling in Educational Measurement – Coordinated Session

Organizer/Moderator

Wim J. van der Linden, CTB/McGraw-Hill

Participants

James A. Wollack, University of Wisconsin – Madison, Vincent Woo, University of Wisconsin – Madison

Using Response Times to Improve Parameter Estimation for Speeded Test Items

Richard D. Schwarz, CTB/McGraw-Hill

Examining Time-to-Score as a Rater Characteristic and as a Property of Constructed Response Items

Rinke H. Klein Entink, University of Twente, Joerg-Tobias Kuhn, Muenster University, Lutz F. Hornke, Aachen University, Jean-Paul Fox, University of Twente

Joint Modeling of Responses and Response Times to Evaluate Cognitive Theory about Item Solving Behavior

Steven L. Wise, Northwest Evaluation Association, G. Gage Kingsbury, Northwest Evaluation Association

Response Time and Examinee Test-Taking Effort: Measurement and Modeling Issues

Wim J. van der Linden, CTB/McGraw-Hill

Response-Time-Based Detection of Collusion between Test Takers

Discussant

Jeffrey A. Douglas, University of Illinois – Urbana-Champaign

Thursday, 4:05 p.m. - 6:05 p.m., Legends 2, N4

The State of the State Assessments: Where We Are and Where We Are Heading – Coordinated Session

Organizer

Lei Yu, Pacific Metrics

Moderator

Sharon Slater, Educational Testing Service

Participants

Anita Rawls, University of South Carolina, Lei Yu, Educational Testing Service, Yuming Liu, Educational Testing Service

An Overview of Computer-Based Testing in State Assessments

Adrienne Sgammato, University of North Carolina–Chapel Hill, Sharon Slater, Educational Testing Service

Standard Setting within the Context of No Child Left Behind

Sultan Turkan, University of Arizona, Ying Lu, Educational Testing Service

Testing English Language Learners under NCLB

Lei Yu, Educational Testing Service, Yue Zhao, Educational Testing Service

Validation for State Assessments

Sharon Slater, Educational Testing Service, Carolyn Wentzel, Educational Testing Service, Linda Chard, Educational Testing Service

Applications of Longitudinal Data to Monitor Student Growth within the Framework of the No Child Left Behind Act

Discussants

Gregory Cizek, University of North Carolina–Chapel Hill

Ronald Hambleton, University of Massachusetts

Thursday, 4:05 p.m. - 6:05 p.m., Legends 6, N5

Large-Scale Assessment: Issues and Applications – Paper Session

Moderator

Furong Gao, CTB/McGraw-Hill

Presenters

Katrin Böhme, IQB – Humboldt University, Alexander Robitzsch, IQB – Humboldt University

Rater-Effects and Rater Inconsistency in Large-Scale Assessment of Writing Ability

Jiahe Qian, Educational Testing Service, Scott Davis, Educational Testing Service

An Investigation of the Position Effects in Large-scale Writing Assessments

Xueli Xu, Educational Testing Service, Yue Jia, Educational Testing Service

On Regression with Skewed Noise

Barbara Donahue, National Foundation for Educational Research, Louise Maycock, National Foundation for Educational Research, Alison Wood, National Assessment Agency, Tom Benton, National Foundation for Educational Research

Factors Influencing the Pretest Effect

Tony Thompson, Pearson

Scale Construction and Conditional Standard Errors of Measurement

Discussant

Mark Shermis, University of Florida

NCME • 2009 Annual Meeting & Training Sessions

Thursday, 4:00 p.m. - 7:00 p.m., Watchtower

NCME Board of Directors Meeting

Members of NCME are invited to attend as observers.

San Diego, California

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Guo, Fanming	G1	Janssen, Rianne	J3, J4
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Haberman, Shelby	E2, L1	Jia, Yue	N5
Habing, Brian	AA, RR, A4, F4	Jiang, Yanming	B4, D5
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Hachey, Krystal	I6	Jin, Yiming	I6
Haertel, Edward	F3	Jiyoung, Jung	I6
Hagge, Sarah	I5	Johnson, Matthew	H2
Haley, Kevin	L2	Johnstone, Christopher	K2
Hambleton, Ronald K.	D2, E2, I2, I6,	Jones, Elizabeth	A3
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Hamen, Cynthia	B1	Jun, HeaWon	E4
Han, Kyung	I6	Jung, Eunju	J5
Hansen, Eric	J5	Kahraman, Nilufer	F4
Harris, Deborah J.	QQ, B4, C3,	Kalohn, John	D2
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Harris, Lisa	C5	Kane, Michael T.	B5, F1, I2
Harvey, Anne	B3	Kang, Taehoon	A5
Hattie, John	E2, L4	Kannan, Priya	M3
Hauser, Carl	J1	Kataoka, Natsuko	A5
He, Wei	M5	Katz, Irvin	C4
He, Yi	B4	Keller, Lisa	B3, G5, J4
Hendrickson, Amy	B1, D5	Keller, Robert	J4
Hendrix, Leslie	I6	Kelly, Kristina	C3
Henly, George	B5	Keng, Leslie	C3, K5
Henson, Robert	HH, A3, D4,	Kennedy, Robert	PP
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Ho, Andrew	QQ, B2, I6	Ketterlin-Geller, Leanne	D4
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Holland, Paul	E3	Kim, Do-Hong	C5, N1
Hong, Guanglei	LL	Kim, Dong-In	C3
Hong, Tao	I6	Kim, Doyoung	F3, H3
Hong, Yuan	G3	Kim, Gee H.	I6
Hornke, Lutz F.	N3	Kim, HeeKyoung	N2
Hou, Jianlin	I6	Kim, Ja Young	I6
Hovanetz-Lassila, Christy	E1	Kim, Jee-Seon	N2
Hsieh, Chueh-An	I6	Kim, Ji-yoon	I6
Hsieh, Ming-chuan	H3	Kim, Jungnam	C3
Hu, Huiqin (Ann)	G2	Kim, Keonseob	I6
Huang, Chi-Yu	L5	Kim, Kevin H.	I6, M3
Huchton, Marie	KK	Kim, Rae-Seon	J2
Huebner, Alan	K5	Kim, Seock-Ho	FF, G2
Huff, Kristen	B1, D2, K2, M2	Kim, Seonghoon	N2
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Kolen, Michael J.	II, A2, D5, F1, I4	Liou, Pey-Yan	I6, M4
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Addresses of First Authors, Discussants, and Moderators

Abedi, Jamal, University of California – Davis, One Shields Ave, School of Education, Davis, CA, 95616, jabedi@ucdavis.edu

Abrams, David, New York State Educational Dept, 120 Salisbury Rd, Delmar, NY, 12054, dabrams@mail.nysed.gov

Ackerman, Terry, University of North Carolina – Greensboro, 212 Curry Bldg, ERM, PO Box 26171, Greensboro, NC, 27402-6171, taackerm@uncg.edu

Alagoz, Cigdem, University of Georgia, 310 Rogers Rd S. 106, Athens, GA, 30605, cigdem@uga.edu

Albanese, Mark, University of Wisconsin – Madison, Population Health Sciences, 610 Walnut, 1007C WARF, Madison, WI, 53726-2397, maalbane@wisc.edu

Ali, Usama, University of Illinois – Urbana-Champaign, 1823 Orchard Pl. #B, Urbana, IL, 61801-5710, usahmed2@uiuc.edu

Allalouf, Avi, National Institute for Testing and Evaluation (NITE), PO Box 26015, Jerusalem 91260, Israel, avi@nite.org.il

Almond, Patricia, University of Oregon, PO Box 899, 14582 S Buckner Creek Rd, Mulino, OR, 97042, razberi@teleport.com

Arce-Ferrer, Alvaro, Pearson, 19500 Bulverde Road, San Antonio, TX, 78259-3701, alvaro_arce-ferrer@pearson.com

Attali, Yigal, Educational Testing Service, Rosedale Rd, MS 10-R, Princeton, NJ, 08541, yattali@ets.org

Baldwin, Su, National Board of Medical Examiners, 3750 Market St, Philadelphia, PA, 19104, sbaldwin@nbme.org

Ballou, Dale, Vanderbilt University, 414 GPC, 230 Appleton Place, Nashville, TN, 37203, dale.ballou@vanderbilt.edu

Banks, Kathleen, University of Iowa, 352 Lindquist Center North, Iowa City, IA, 52242, kathleen-banks@uiowa.edu

Barclay McKeown, Stephanie, University of British Columbia, 677 Drummond Court, Kelowna, BC, V1W 4N8, Canada, smckeown@interchange.ubc.ca

Barrada, Juan Ramon, Universidad Autonoma de Barcelona, Facultad de Psicologia, Edificio B, Bellaterra, 08193, Spain, juanramon.barrada@uab.es

Barton, Karen, CTB/McGraw-Hill, 5712 Stuarts Ridge Rd, Wake Forest, NC, 27587, karen_barton@ctb.com

Bay, Luz, Measured Progress, Inc, PO Box 1217, 100 Education Way, Dover, NH, 03820, lbay@measuredprogress.org

Beard, Jonathan, University of Iowa, 313 1/2 S Dodge St, Iowa City, IA, 52240, jonathan-beard@uiowa.edu

Becker, Kirk, Pearson, 1 N Dearborn St, Ste 1600, Chicago, IL, 60602, kirk.becker@pearson.com

San Diego, California

Béguin, Anton, CITO, PO Box 1034, Arnhem, NL-6801-MG, Netherlands,
anton.beguिन@citogroep.nl

Bejar, Isaac I, Educational Testing Service, Rosedale Rd, MS 13-R, Princeton, NJ,
08541, ibejar@ets.org

Belov, Dmitry, Law School Admission Council, PO Box 40, 662 Penn St, Newtown,
PA, 18940-0040, dbelov@lsac.org

Bené, Nancy, American Nurses Credentialing Center, 11748 Bright Passage Way,
Columbia, MD, 21044-4346, nancy.bene@ana.org

Benners, G. Anthony, Fordham University, 888 Main St., PH 43, New York, NY,
10044, gbenners@gmail.com

Beretvas, S. Natasha, University of Texas – Austin, Education/Psychology Department-
Quantitative Methods, 1 University Station, D 5800, Austin, TX, 78712-0383,
tasha.beretvas@mail.utexas.edu

Betebenner, Damian, Center for Assessment, PO Box 351, Dover, MA, 03821,
dbetebenner@nciea.org

Bilir, Kuzey, Florida State University, 307 Stone Building, Tallahassee, FL,
32306-4453, mkb04h@fsu.edu

Böehme, Katrin, IQB, HU – Berlin, Unter den Linden 6, Berlin, 10099, Germany,
katrin.boehme@iqb.hu-berlin.de

Bolt, Sara, Michigan State University, 434 Erickson Hall, East Lansing, MI, 48824,
sbolt@msu.edu

Bolt, Daniel, University of Wisconsin – Madison, Dept of Educational Psychology,
1025 W Johnson St, Rm 859, Madison, WI, 53706, dmbolt@wisc.edu

Bontempo, Brian, Mountain Measurement, Inc., 4707 N Congress Ave, Portland, OR,
97217-2626, mountainmeasurement@msn.com

Brandt, Steffen, Universität of Kiel, Eberescheweg 28, Altenholz, 24161, Germany,
steffen_brandt@web.de

Braun, Henry, Boston College, Campion Hall, Rm 321, 140 Commonwealth Ave,
Chestnut Hill, MA, 02467-3813, braunh@bc.edu

Breidenbach, Daniel, Washington State University, 9506 Redbud Ln, Lenexa, KS,
66220, dbreiden@wsu.edu

Breithaupt, Krista, American Institute of Certified Public Accountants, 1562 Bud Ln,
Yardley, PA, 19067-5749, kbreithaupt@aicpa.org

Brennan, Robert, University of Iowa, 210D Lindquist, Iowa City, IA 52242,
robert-brennan@uiowa.edu

Bridgeman, Brent, Educational Testing Service, Rosedale Rd, MS 09-R, Princeton,
NJ, 08541, bbridgeman@ets.org

Briggs, Derek, University of Colorado, School of Education, 249 UCB, Boulder, CO,
80309, derek.briggs@colorado.edu

Brossman, Bradley, University of Iowa, 231 Hawkeye Ct, Iowa City, IA, 52246-2818,
brad_brossman@yahoo.com

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Browder, Diane, University of North Carolina – Charlotte, 9201 University City Blvd., Charlotte, NC, 28223, dbrowder@uncg.edu

Brown, Gavin, Hong Kong Institute of Education, General Office D1-1/F-22, 10 Lo Ping Road, Tai Po, Hong Kong, gtlbrown@ied.edu.hk

Buckendahl, Chad, Alpine Testing Solutions, 1224 Chaparral Dr, Mesquite, NV, 89027, drcbuck@gmail.com

Burke, Matthew, University of North Carolina – Greensboro, 4209 D Edith Lane, Greensboro, NC, 27409, mjburke@uncg.edu

Camara, Wayne, College Board, 45 Columbus Ave, New York, NY, 10023-6992, wcamara@collegeboard.org

Cao, Yi, ACT, Inc, 402 6th Street, Apt D1, Coralville, Iowa, 52241, yicao@umd.edu

Carlson, James, Educational Testing Service, 6212 E 113 Ave, Temple Terrace, FL, 33617-3145, jcarlson@ets.org

Carr, Therese, Center for Applied Linguistics, 4646 40th Street NW, Washington, DC, 20016, tcarr@cal.org

Casabianca, Jodi, Fordham University, Dept of Psych, Dealy Hall, Rm 226, 441 E Fordham Rd, Bronx, NY, 10458, casabianca@fordham.edu

Chae, Soo Eun, University of Maryland – College Park, Jinro Daerim, Apt #505, Joonggyedong Nowongu, Seoul, 849-220, South Korea, schae@umd.edu

Chang, Hua-Hua, University of Illinois – Urbana-Champaign, 2109 Vale St, Champaign, IL, 61822, hhchang@uiuc.edu

Chen, Fang, University of North Carolina – Greensboro, 1819 D Sherwood Street, Greensboro, NC, 27403, fennycf@yahoo.com

Chen, Hanwei, ACT, Inc., PO Box 4072, Iowa City, IA, 52243, chenh@act.org

Chen, Henry, Educational Testing Service, Rosedale Rd, MS 02-T, Princeton, NJ, 08541, hchen@ets.org

Chen, Yi-Hsin, University of South Florida, 20664 Longleaf Pine Ave, Tampa, FL, 33647, ychen@coedu.usf.edu

Cheng, Ying, University of Notre Dame, Department of Psychology, 118 Haggard Hall, Notre Dame, IN, 46556, ycheng4@nd.edu

Chien, Yueh-Mei, Pearson, 1543 McKinley Pl, Iowa City, IA, 52246, yuehmei.chien@pearson.com

Childs, Ruth, OISE/University of Toronto, 252 Bloor St W 9th Fl, Toronto, ON, M5S 1V6, Canada, rchilds@oise.utoronto.ca

Chiu, Pui Chi, The University of Kansas, 1603 W 15th Street 203B, Lawrence, KS, 66044-3158, lorraine_chiu@msn.com

Cho, Sun-Joo, University of California – Berkeley, BEAR Center, Graduate School of Education, Berkeley, CA, 94720, sjcho0306@gmail.com

Choi, Hye-Jeong, University of Georgia, 122 Benedict Ct., Athens, GA, 30605, coolchoi@uga.edu

San Diego, California

Choi, Jinnie, University of California – Berkeley, BEAR Center, Graduate School of Education, Berkeley, CA, 94720, jinnie@berkeley.edu

Choi, Seung, Northwestern University, Center on Outcomes, Research & Education, 1001 University Place #100, Evanston, IL, 60201, s-choi@northwestern.edu

Choi, Youn-jeng, University of Georgia, 106 College Station Rd. #G107, Athens, GA, 30605, neatstar@gmail.com

Chon, Kyong Hee, University of Iowa, 2508 Rushmore Dr, Iowa City, IA, 52246, kyonghee-choon@uiowa.edu

Chuah, David, American Institute of Certified Public Accountants, 1230 Parkway Ave, Ste 311, Ewing, NJ, 08628-3018, dchuah@aicpa.org

Chung, Hyewon, The University of Texas – Austin, 2501 Lake Austin Blvd #C202, Austin, TX, 78703, hw2004@mail.utexas.edu

Cid, Jaime, James Madison University, MSC 6806 Anthony-Seeger Hall, Harrisonburg, VA, 22807, cidja@jmu.edu

Cizek, Gregory, University of North Carolina – Chapel Hill, 111 Middlebrook Ct, Chapel Hill, NC, 27514, cizek@unc.edu

Clauser, Brian, National Board of Medical Examiners, 3750 Market St, Philadelphia, PA, 19104, bclauser@nbme.org

Cline, Frederick, Educational Testing Service, 8433 Town Court North, Lawrenceville, NJ, 08648, fcline@ets.org

Close, Catherine, University of Minnesota, 250 Education Sciences Building, 56 East River Road, Minneapolis, MN, 55455, wanju001@umn.edu

Cohen, Allan, University of Georgia, 1111 Grey Dr, Bogart, GA, 30622, acohen@uga.edu

Conley, David, University of Oregon, 5267 University of Oregon, Eugene, OR, 97403, conley@uoregon.edu

Cook, Linda, Educational Testing Service, Analysis and Research, Rosedale Rd, MS 07-R, Princeton, NJ, 08541, lcook@ets.org

Copella, Jenna, University of Massachusetts – Amherst, Hill South, 151 Infirmary Way, Amherst, MA, 01003, jcopella@educ.umass.edu

Cor, Mathew Kenneth, Stanford University, 58 Dudley Lane, Apt 101, Stanford, CA, 94305, kcor@stanford.edu

Dallas, Andrew, University of North Carolina – Greensboro, 1400 Spring Garden Street, Greensboro, NC, 27412, a_dallas@uncg.edu

Darby, Mark, University of North Carolina – Greensboro, Curry Building, Room 206, UNCG, Greensboro, NC 27402-617, mjdarby@uncg.edu

Davenport, Ernest, University of Minnesota, 172 Education Sciences Building, 56 East River Rd, Minneapolis, MN, 55455, LQR6576@umn.edu

Davey, Tim, Educational Testing Service, Rosedale Rd, MS 03-T, Princeton, NJ, 08541, tdavey@ets.org

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Davis, Susan, Alpine Testing Solutions, 4615 Kirkwood Dr, Lincoln, NE, 68516, susanlynn@davis@alpinetesting.com

de la Torre, Jimmy, Rutgers University, Dept of Educ Psych, 10 Seminary Pl, New Brunswick, NJ, 08901, j.delatorre@rutgers.edu

DeCarlo, Lawrence, Teachers College – Columbia University, Dept of Human Development, Box 118, 525 W 120th St, New York, NY, 10027, decarlo@tc.edu

Deng, Hui, College Board, 45 Columbus Avenue, New York, NY, 10023, hdeng@collegeboard.org

Deng, Weiling, Educational Testing Service, Research and Development Division, Rosedale Rd, MS 13-P, Princeton, NJ, 08541, wdeng@ets.org

Diao, Qi, Michigan State University, 3012 Trappers Cove Trail, Apt 3A, Lansing, MI, 48910, diaoqi@msu.edu

Do, Ben-Roy, Roosevelt University, 1400 N. Roosevelt Blvd, Schaumburg, IL, 60173, bdo@roosevelt.edu

Dodd, Barbara, University of Texas – Austin, Dept of Educational Psych, 1 University Station D5800, Austin, TX, 78712, bg.dodd@mail.utexas.edu

Dolan, Robert, Pearson, 184 N Leverett Rd, Leverett, MA, 01054, bob.dolan@pearson.com

Donahue, Barbara, National Foundation for Educational Research, The Mere, Upton Park, Slough, Berkshire, SL1 2DQ, United Kingdom, b.donahue@nfer.ac.uk

Douglas, Aaron, Mathematical Policy Research, Inc., 20400 Honey Crisp Ln, Apt D, Germantown, MD, 20876, ard141@hotmail.com

Douglas, Jeff, University of Illinois, 101 Illini Hall, 725 S Wright, Champaign, IL, 61820, jeffdoug@uiuc.edu

Dunn, Jennifer, Measured Progress, 100 Education Way, PO Box 1217, Dover, NH, 03820, dunn.jennifer@measuredprogress.org

Eignor, Daniel, Educational Testing Service, Rosedale Rd, MS 03-T, Princeton, NJ, 08541, deignor@ets.org

Elliot, Scott, SEG Assessment | SEG Research, 31 Pheasant Run, New Hope, PA, 18938, selliot@scottelliot.com

Elliott, Stephen, Vanderbilt University, 1735 Richbourg Park Dr, Brentwood, TN, 37027, steve.elliott@vanderbilt.edu

Embretson, Susan, Georgia Institute of Technology, School of Psychology, 654 Cherry St, Atlanta, GA, 30332, susan.embretson@psych.gatech.edu

Ercikan, Kadriye, University of British Columbia, 2125 Main Mall, Vancouver, BC, V6T 1Z4, Canada, kadriye.ercikan@ubc.ca

Ewing, Maureen, College Board, 45 Columbus Ave, New York, NY, 10023-6992, mewing@collegeboard.org

Fall, Emily, University of Kansas, Department of Psychology, 1415 Jayhawk Blvd, Room 10, Lawrence, KS, 66045, eledford@ku.edu

Fan, Hui-Mei, University of Iowa, N259 Lindquist Center, Iowa City, IA 52242-1529, hui-mei-fan@uiowa.edu

San Diego, California

Fang, Yu, ACT, Inc., 500 ACT Drive, Davidsen Bldg., Iowa City, IA, 52243,
fangyu@msu.edu

Fay, Robert, University of South Florida, 4000 24th St N, Lot # 1108, St Petersburg,
FL, 33714, fay@coedu.usf.edu

Ferrara, Steve, CTB/McGraw-Hill, 1200 G St, NW, Washington, DC, 20005,
steve_ferrara@ctb.com

Fidelman, Carolyn, Center for Applied Linguistics, 2800 Wisconsin Ave #807,
Washington, DC, 20007, cfidelman@cal.org

Finch, Holmes, Ball State University, Dept of Educational Psychology, Muncie, IN,
47304, whfinch@bsu.edu

Finger, Michael, American Institute of Certified Public Accountants, 1230 Parkway
Ave, Suite 311, Ewing, NJ, 08628, mfinger@aicpa.org

Flowers, Claudia, University of North Carolina – Charlotte, 9201 University City Blvd,
Charlotte, NC, 28223, cpflower@uncc.edu

Foley, Brett, University of Nebraska, 2721 NW Columbine Dr, Lincoln, NE, 68524,
brettfoley@gmail.com

Francis, David, University of Houston, Psychology Department, 126 Heyne, Houston,
TX, 77204-5022, dfrancis@uh.edu

French, Brian, Washington State University, College of Education, Cleveland Hall,
PO Box 642136, Pullman, WA, 99164-2136, frenchb@wsu.edu

Frisbie, David, University of Iowa, 334 Lindquist Center, Iowa City, IA, 52242,
dfrisbie@uiowa.edu

Fu, Jianbin, Educational Testing Service, 12937 Ness Hollow Ct, Bristow, VA, 20136,
jfu@ets.org

Furgol, Katherine, University of Iowa, Education Measurement and Statistics,
224 Lindquist Center, Iowa City, IA, 52242, katherine-furgol@uiowa.edu

Gaertner, Matthew, University of Colorado, UCB 249, Boulder, CO, 80301,
matthew.gaertner@colorado.edu

Gallagher, Carole, WestEd, 730 Harrison St, San Francisco, CA, 94107,
cgallag@wested.org

Gao, Furong, CTB/McGraw-Hill, 4446 Headen Way, Santa Clara, CA, 95054,
furong_gao@ctb.com

Gao, Xiaohong, ACT, Inc., Measurement Research Dept, 500 ACT Dr, MZ 62,
PO Box 168, Iowa City, IA, 52243-0168, gao@act.org

Gazzerro, Paul, Standard & Poor's School Evaluation Services, 55 Water St,
44th Floor, New York, NY, 10041, paul_gazzerro@standardandpoors.com

Geranpayeh, Ardeshir, University of Cambridge, ESOL Examinations, 1 Hills Rd,
Cambridge, CB1 2EU, United Kingdom, geranpayeh.a@cambridgeesol.org

Gialluca, Kathleen A., Pearson, 5601 Green Valley Drive, Bloomington, MN 55437,
kathleen.gialluca@pearson.com

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Gierl, Mark, University of Alberta – CRAME, 6-110 Education Centre North, Faculty of Education, Edmonton, AB, T6G 2G5, Canada, mark.gierl@ualberta.ca

Glasnapp, Douglas, University of Kansas – Lawrence, 735 J.R. Pearson Hall, 1122 W Campus Rd, Lawrence, KS, 66045, drg@ku.edu

Goodman, Joshua, James Madison University, Center for Assessment & Research Studies, MSC 6806, Harrisonburg, VA, 22807, goodmajt@jmu.edu

Gorin, Joanna, Arizona State University, Div of Psych in Education, Measurement, Statistics, and Methodological Studies, PO Box 870611, Tempe, AZ, 85287-0611, joanna.gorin@asu.edu

Grady, Matthew, University of Texas – Austin, 1411 Norwalk Lane #101, Austin, TX, 78703, mattgrady81@hotmail.com

Greenberg, Ariela, University of Miami, Department of Psychology, Child Division, Coral Gables, FL, 33124-0751, a.greenberg2@umiami.edu

Gu, Lixiong, Educational Testing Service, 660 Rosedale Rd, MS 13-P, Princeton, NJ, 08541, lgu@ets.org

Guo, Fanmin, Graduate Management Admission Council, 1600 Tysons Blvd, Ste 1400, McLean, VA, 22102, fguo@gmac.com

Guo, Hongwen, Educational Testing Service, Rosedale Rd, MS 02-P, Princeton, NJ, 08541, hguo@ets.org

Haberman, Shelby, Educational Testing Service, Rosedale Rd, MS 12T, Princeton, NJ, 08541, SHaberman@ets.org

Habing, Brian, University of South Carolina, Department of Statistics, Columbia, SC 29208, habing@stat.sc.edu

Hachey, Krystal, University of Ottawa, 145 Jean-Jacques Lussier, Ottawa, ON, K1N 6N5, Canada, khach026@uottawa.ca

Hagge, Sarah, University of Iowa, 603 Brookland Park Dr, Iowa City, IA, 52246, sarah-l-hagge@uiowa.edu

Hambleton, Ronald, University of Massachusetts – Amherst, 152 Hills South, Amherst, MA, 01003, rkh@educ.umass.edu

Hansen, Eric, Educational Testing Service, Rosedale Rd, MS 13-E, Princeton, NJ, 08541, ehansen@ets.org

Harris, Deborah, ACT, Inc., Research Division, PO Box 168, Iowa City, IA, 52243, deborah.harris@act.org

Harris, Lisa, Winthrop University, 307 Withers, College of Education, Rock Hill, SC, 29732, harrisl@winthrop.edu

Harvey, Anne, American Board of Emergency Medicine, 3000 Coolidge Rd, East Lansing, MI, 48823-6319, aharvey@abem.org

Hattie, John, Auckland UniServices Ltd, Private Bag 92019, Auckland, New Zealand, j.hattie@auckland.ac.nz

Hauser, Carl, Northwest Evaluation Association, 10065 SW Flicka Pl, Beaverton, OR, 97008, carl.hauser@nwea.org

San Diego, California

He, Wei, Michigan State University, 6837 Kingsbury Blvd, Apt 2W, St Louis, MO, 63130, hewei1@msu.edu

He, Yi, University of Iowa, 315 Hawkeye Dr, Iowa City, IA, 52246, yi-he@uiowa.edu

Hendrickson, Amy, College Board, 1233 20th St. NW, Suite 600, Washington, DC, 20036, ahendrickson@collegeboard.org

Hendrix, Leslie, University of South Carolina, Department of Statistics, 216 Leconte College, Columbia, SC, 29208, hendrixl@stat.sc.edu

Henson, Robert, University of North Carolina – Greensboro, 1109 Spring Garden St, 207 Curry Bldg, Greensboro, NC, 27412, rahenson@uncg.edu

Hsieh, Chueh-An, Michigan State University, 3000 Trappers Cove Trl Apt. 3C, Lansing, MI, 48910, hsieh.103@osu.edu

Ho, Andrew, University of Iowa, 316 Lindquist Center, Iowa City, IA, 52242, andrew-ho@uiowa.edu

Ho, Tsung-Han, University of Texas – Austin, 1618 West 6th St, Apt J, Austin, TX, 78703, tsunghan@mail.utexas.edu

Hong, Guanglei, Ontario Institute for Studies in Education of the University of Toronto, 252 Bloor Street West, 9-184, Toronto, Ontario, Canada M5S 1V6, ghong@oise.utoronto.ca

Hong, Tao, Purdue University, Department of Educational Studies, Beering Hall of Liberal Arts & Education, West Lafayette, IN, 47907-2098, hong13@purdue.edu

Hong, Yuan, Rutgers University, 10 Seminary Place, New Brunswick, NJ, 08901, yuanhong@eden.rutgers.edu

Hovanetz-Lassila, Christy, MGT of America, Inc., 2123 Centre Pointe Blvd., Tallahassee, FL, 32308, classila@mgtamer.com

Hu, Huiqin, DRC, 3715 Yellowstone Ln N, Plymouth, MN, 55446, huiqin_hu@yahoo.com

Huebner, Alan, ACT, Inc., 500 ACT Dr, Iowa City, IA, 52243, huiqin_hu@yahoo.com

Huff, Kristen, College Board, 45 Columbus Ave, New York, NY, 10023, khuff@collegeboard.org

Huo, Yan, University of Illinois–Urbana-Champaign, 1942 S Orchard St Apt C, Urbana, IL, 61801, yanhuo@uiuc.edu

Huynh, Huynh, University of South Carolina, Wardlaw 138, College of Educaiton, Columbia, SC, 29208, hhuynh@mailbox.sc.edu

Ito, Kyoko, Human Resources Research Organization, 40 Ragsdale Dr, Ste 150, Monterey, CA, 93940-5703, kito@humrro.org

Janssen, Rianne, KU Leuven, Dekenstraat 2 (PB 3774), Leuven, 3000, Belgium, rianne.janssen@ped.kuleuven.be

Jeon, Minjeong, University of California – Berkeley, 2333 College Ave. 215B, Berkeley, CA, 94704, mjj@berkeley.edu

Jiao, Hong, University of Maryland, 4022 Wisteria Way, San Antonio, TX, 78259, hjiao@umd.edu

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Jiyoung, Jung, Yong-jae Hall #201, Yonsei University, 134 Shinchon-Dong, Seoul, 120-749, South Korea, longlong@yonsei.ac.kr

Johnson, Matthew, Baruch College, CUNY, One Bernard Baruch Way, Box B 11-220, New York, NY, 10010, masjohns@stat.cmu.edu

Johnstone, Christopher, University of Minnesota, Room 201 PtH, 150 Pillsbury Dr SE, Minneapolis, MN, 55455, john4810@umn.edu

Julian, Marc, CTB/McGraw-Hill, 360 Stanton Way, Athens, GA, 30606, Marc_Julian@ctb.com

Jung, Eunju, University of Oregon, 2250 Patterson St, Apt 271, Eugene, OR, 97405, ejung@uoregon.edu

Kahraman, Nilufer, National Board of Medical Examiners, 3750 Market St, Philadelphia, PA, 19104, nkahraman@nbme.org

Kalohn, John, FINRA, 19932 Mastenbrook Pl, Montgomery Village, MD, 20886, john.kalohn@finra.org

Kamata, Akhito, Florida State University, 1620 Alshire Ct, Tallahassee, FL, 32317, kamata@coe.fsu.edu

Kane, Michael, National Conference of Bar Examiners, 302 S Bedford St, Madison, WI, 53703, mkane@ncbex.org

Kang, Taehoon, CRESST/UCLA, 300 Charles E. Young Drive North, GSE&IS Bldg, Suite 320, Los Angeles, CA, 90095-1522, taehoonkang@gmail.com

Kannan, Priya, University of Pittsburgh, 5562 Hobart St, #102, Pittsburgh, PA, 15217, prk16@pitt.edu

Keller, Lisa, University of Massachusetts – Amherst, 150 Hills House South, Amherst, MA, 01003, lkeller@educ.umass.edu

Keng, Leslie, Pearson, 8001 Tantara Ct, Austin, TX, 78729, leslie.keng@pearson.com

Kenyon, Dorry, Center for Applied Linguistics, 800 21st St. NW, Washington, DC, 20052, dorry@cal.org

Ketterlin-Geller, Leanne, Educational Leadership, 102S College of Education, 5267 University of Oregon, Eugene, OR, 97403-5267, lketterl@uoregon.edu

Kettler, Ryan, Vanderbilt University, Peabody #59, 230 Appleton Place, Nashville, TN, 37023, ryan.j.kettler@vanderbilt.edu

Kim, Do-Hong, University of North Carolina – Charlotte, UNCC Dept of Educational Leadership, 9201 University City Blvd, Charlotte, NC, 28223, dkim15@uncc.edu

Kim, Doyoung, American Institutes for Research, 1000 Thomas Jefferson Street NW, Washington, DC, 20007-3835, dkim@air.org

Kim, Heekyoung, ACT, Inc., 500 ACT Drive, PO Box 168, Iowa City, IA, 52243, heekyoung@kice.re.kr

Kim, Ja Young, University of Iowa, 2613 Westwinds Dr. Apt #3, Iowa, IA, 52246, jayoung-kim@uiowa.edu

San Diego, California

Kim, Jee-Seon, University of Wisconsin – Madison, Dept of Educational Psychology, 1025 W Johnson St, Madison, WI, 53705, jeeseonkim@wisc.edu

Kim, Ji-yoon, Sung Kyun Kwan University, 53 Myeongnyun-dong 3-ga, Jongno-gu, Seoul, 110-745, South Korea, kissme26@skku.edu

Kim, Jungnam, CTB/McGraw-Hill, 7400 S Alton Ct, Centennial, CO, 80112, jungnam_kim@ctb.com

Kim, Seock-Ho, University of Georgia, Dept of Educational Psychology, Instructional Technology, 325 Aderhold Hall, Athens, GA, 30602-7143, shkim@uga.edu

Kim, Sooyeon, Educational Testing Service, Rosedale Rd, MS 11-P, Princeton, NJ, 08541, skim@ets.org

Kim, Yeonjeong, Yonsei University, 64-21, Eunpyung-gu, Seoul, South Korea, yj1117@yonsei.ac.kr

King, Teresa, Educational Testing Service, Rosedale Rd, MS 09-R, Princeton, NJ, 08541, tking@ets.org

Kingsbury, G. Gage, Northwest Evaluation Association, 6134 SE Lincoln, Portland, OR, 97215, gage.kingsbury@nwea.org

Kingston, Neal, University of Kansas, JB Pearson Hall, Room 744, 1122 West Campus Rd, Lawrence, KS, 66045-3101, nkingsto@ku.edu

Kitmitto, Sami, American Institutes for Research, 1000 Thomas Jefferson Street, Washington, DC, 20007, skitmitto@air.org

Klein Entink, Rinke, University of Twente, PO Box 217, 7500AE Enchede, The Netherlands, rinke@kleinentink.eu

Knupp, Tawnya, University of Iowa, 2037 Kountry Ln #2, Iowa City, IA, 52240, tawnya-knupp@uiowa.edu

Kohli, Nidhi, University of Maryland – College Park, 1230 Benjamin Building, College Park, MD, 20742, nidhik@umd.edu

Kolen, Michael, University of Iowa, 224 B1 Lindquist Center, Iowa City, IA, 52242-1529, michael-kolen@uiowa.edu

Kopriva, Rebecca, University of Wisconsin – Madison, 3628 Fessenden St NW, Washington, DC, 20008, rkopriva@wisc.edu

Koran, Jennifer, University of Maryland, 1230 Benjamin Bldg, College Park, MD, 20742, jkoran@umd.edu

Kyllonen, Patrick, Educational Testing Service, MS 16-R, Princeton, NJ 08541, pkyllonen@ets.org

Laitusis, Cara Cahalan, Educational Testing Service, Rosedale Rd, MS 09-R, Princeton, NJ, 08541, ccahalan@ets.org

Lam, Wendy, University of Massachusetts – Amherst, 529 Hawhill Place NW, Calgary, AB, T3G 3M3, Canada, waiyan@educ.umass.edu

Lane, Suzanne, University of Pittsburgh, 5916 Posvar Hall, School of Education, Pittsburgh, PA, 15260, sl@pitt.edu

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Launey-Rodolf, Renee, Oklahoma Commission for Teacher Preparation, 4545 N. Lincoln Blvd, Suite 275, Oklahoma City, OK, 73105, rlrudolf@octp.org

Lee, Guemin, Yonsei University, 134 Shinchon-Dong, Seodaemoon-Gu, Dept of Education, Seoul, 120-749, South Korea, guemin@yonsei.ac.kr

Lee, Sunbok, University of Georgia, Athens, GA, 30602, sunboklee@gmail.com

Lee, Sung-Hyuck, ACT, Inc., 500 ACT Dr, PO Box 168, Iowa City, IA, 52243-0168, sung.lee@act.org

Lee, Won-Chan, University of Iowa, CASMA, 210E Lindquist Center, Iowa City, IA, 52242, won-chan-lee@uiowa.edu

Lee, Yi-Hsuan, Educational Testing Service, Rosedale Road, MS 03-T, Princeton, NJ, 08541, ylee@ets.org

Lee, Yoonsun, Seoul Women's University, 126 Kongneung 2-dong, Nowon-gu, Seoul 139-774, South Korea, ylee@swu.ac.kr

Leighton, Jacqueline, University of Alberta, Dept of Educational Psychology, 6-110 Education North, Edmonton, AB, T6G 2G5, Canada, jacqueline.leighton@ualberta.ca

Levy, Roy, Arizona State University, PO Box 870611, Payne Hall, Rm 302, Tempe, AZ, 85287-0611, roy.levy@asu.edu

Li, Deping, Educational Testing Service, Rosedale Rd, MS 06-P, Princeton, NJ, 08541, dli@ets.org

Li, Dongyang, University of Maryland – College Park, 430-10 Ridge Rd, Greenbelt, MD, 20770, dli@umd.edu

Li, Feifei, University of Maryland, 11360 Evans Trail, Apt T3, Beltsville, MD, 20705, feifeili@umd.edu

Li, Xin, Pearson, 5601 Green Valley Drive, Bloomington, MN 55437, xin.li@pearson.com

Liang, Longjuan, Educational Testing Service, Rosedale Rd, MS 11-P, Princeton, NJ, 08541, longjuan.liang@gmail.com

Lin, Yi-Hung, University of California – Berkeley, 1906 Mendocino St., Richmond, CA, 94804, s05307@seed.net.tw

Ling, Guangming, Educational Testing Service, Rosedale Rd. MS 03-P, Princeton, NJ, 08541, gling@ets.org

Link, Valerie, Educational Testing Service, 115 Shady Branch Trl, Ormond Beach, FL, 32174, vlink2@cfl.rr.com

Linn, Robert, University of Colorado, PO Box 1815, 100 Miners Cabin Lane, Ouray, CO, 81427, robert.linn@colorado.edu

Linquanti, Robert, WestEd, 300 Lakeside Dr, 25th Floor, Oakland, CA, 94612, rlinqua@wested.org

Liou, Pey-Yan, University of Minnesota, Educational Psychology, 250 EdSciB, Minneapolis, MN, 55455, lioux005@umn.edu

Lissitz, Robert, University of Maryland, EDMS/College of Education, College Park, MD, 20742, rlissitz@umd.edu

San Diego, California

Liu, Hong-Yuen, Beijing Normal University, School of Psychology, Beijing, 100875, China, hylu@bnu.edu.cn

Liu, Jinghua, Educational Testing Service, Rosedale Rd, MS 02-P, Princeton, NJ, 08541, jliu@ets.org

Liu, Ou Lydia, Educational Testing Service, 666 Rosedale Road MS 16-R, Princeton, NJ, 08541, lliu@ets.org

Liu, Yuming, Educational Testing Service, 12 Manley Rd, Pennington, NJ, 08534, wgyuming@yahoo.com

Lochbaum, Karen, Pearson, 4940 Pearl East Circle 200, Boulder, CO, 80301, kel@pearsonkt.com

Lohman, David, University of Iowa, 366 Lindquist Ctr, Iowa City, IA, 52242, david-lohman@uiowa.edu

Lu, Ru, University of Maryland, 920 Sycamore Ave, #28, Vista, CA, 92081, elynlu@umd.edu

Lu, Ying, Educational Testing Service, Rosedale Rd, MS 13-P, PO Box 6666, Princeton, NJ, 08541, ylu@ets.org

Luecht, Richard, University of North Carolina – Greensboro, Department of Educational Research Methodology, 209 Curry Bldg, PO Box 26170, Greensboro, NC, 27402-6170, rmluecht@uncg.edu

MacDonald, George, University of South Florida, College of Education, 4202 E. Fowler Avenue, Tampa, FL, 33620-5650, gmacdona@mail.usf.edu

Mao, Xia, Pearson, 2339 Cameron Way, Iowa City, IA, 52246-1830, xia.mao@pearson.com

Mariano, Louis, Rand, 1200 S Hayes St, Arlington, VA, 22202, lou_mariano@rand.org

Marion, Scott, National Center for the Improvement of Educational Assessment, Inc., PO Box 351, Dover, NH, 03821, smarion@nceia.org

Martineau, Joseph A., Michigan Department of Education, 1125 Pennway Drive, Lansing, MI, 48910, MartineauJ@michigan.gov

Martiniello, Maria, Educational Testing Service, Rosedale Rd, MS 09R, Room R138, Princeton, NJ, 08541, mmartiniello@ets.org

Mattar, John, American Institute of Certified Public Accountants Examinations Team, 1230 Parkway Ave, Ste 311, Ewing, NJ, 08628-3018, jmattar@aicpa.org

Mayenga, Charles, Assessment Strategies, Inc., 1400 Blair Pl, Suite 210, Ottawa, ON, K1J 9B8, Canada, cmayenga@asinc.ca

Maynes, Dennis, Caveon, LLC, 745 E Stubbs Dr, Pleasant Grove, UT, 84062, dennis.maynes@caveon.com

Mbella, Kinge, University of North Carolina – Greensboro, 4416 Willow Lake Rd, Raleigh, NC, 27616, kkmbella@uncg.edu

McClarty, Katie, Pearson, 400 Center Ridge Drive, Austin, TX, 78753, katie.mcclarty@pearson.com

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McCormick, Carina, University of Nebraska, 1345 E St, Apt 2, Lincoln, NE, 68508, carinamc@gmail.com

McHale, Frederick, Educational Testing Service, Rosedale Rd, MS 03-P, Princeton, NJ, 08541, fmchale@ets.org

Mead, Alan, Illinois Institute of Technology, 3101 S Dearborn, Second Floor, Chicago, IL, 60616, amead@alanmead.org

Mekhael, Michael, Educational Testing Service, Rosedale Rd, MS 11-P, Office P-216, Princeton, NJ, 08541, mmekhael@ets.org

Melican, Claire, Educational Testing Service, Princeton, NJ 08541, cmelican@ets.org

Melican, Gerald, CollegeBoard, 1079 Drew Dr, Yardley, PA, 19067, gmelican@collegeboard.com

Meng, Huijuan, Pearson, 7719 Tanglewood Court, Edina, MN, 55439, huijuan.meng@pearson.com

Meng, Yu, University of Massachusetts – Amherst, 152 Hills South, Amherst, MA, 1003, ymeng@educ.umass.edu

Meyer, J. Patrick, University of Virginia, Curry School of Education, 405 Emmet Street South, P.O. Box 400277, Charlottesville, VA, 22903, meyerjp@virginia.edu

Meyers, Jason, Pearson, 400 Center Ridge Dr, Austin, TX, 78753, jason.meyers@pearson.com

Miller, Tim, Pearson, 127 N 6th St, West Branch, IA, 52358, tim_miller@hmco.com

Morse, Philip, Los Angeles Unified School District, 12582 Foster Rd, Los Alamitos, CA, 90720-4737, phil.morse@lausd.net

Moses, Tim, Educational Testing Service, Rosedale Rd. MS 03-P, Princeton, NJ, 08541, tmoses@ets.org

Myers, Amy, Baylor University, 3220 Stonewall Road, Hampton Cove, AL, 35763, Amy_Myers@baylor.edu

Ngudgratoke, Sungworn, Michigan State University, Department of Counseling, Educational Psychology And Special Education, 447 Erickson Hall, East Lansing, MI, 48824, ngudgrat@msu.edu

Nhouyvanisvong, Adisack, Data Recognition Corporation, Psychometric Services, 13490 Bass Lake Rd, Maple Grove, MN, 55311, anhoyvanisvong@datarecognitioncorp.com

Nichols, Paul, Pearson, 2510 N Dodge, Iowa City, IA, 52240, paul.nichols@pearson.com

Nogami, Yasuko, The Japan Institute for Educational Measurement, Inc., JIEM 55 Yokodera-cho Shinjuku-ku, Tokyo, 162-8680, Japan, nogami@jiem.co.jp

O'Malley, Kimberly, Pearson Educational Measurement, 400 Center Ridge Dr, Austin, TX, 78753-1034, kimberly.omalley@pearson.com

Olivieri, Maria Elena, University of British Columbia, 2125 Main Mall, Dept of ECPS, Vancouver, BC, V6T2G2, Canada, moliveri@vsb.bc.ca

Olsen, James, Alpine Testing Solutions, 1781 N Sunrise Dr, Orem, UT, 84097, jim.olsen@alpinetesting.com

San Diego, California

Oranje, Andreas, Educational Testing Service, Rosedale Rd, MS 02-T, Princeton, NJ, 08541, aoranje@ets.org

Orr, Cornelia, Florida Department of Education, 2566 Noble Dr, Tallahassee, FL, 32308, cornelia.orr@comcast.net

Pak, Seohong, Yonsei University, YongJae-Hall 115, 134 Shinchon-dong, Seodaemun-gu, Seoul, South Korea, 120-749, sh.pak4am@gmail.com

Park, Yoon Soo, Teachers College, Columbia University, 1230 Amsterdam Avenue Apt 210, New York, NY, 10027, ysp2102@columbia.edu

Parker, Pauline, University of Massachusetts – Amherst, 188 Earle St, Northampton, MA, 01060, paparker@educ.umass.edu

Patelis, Thanos, College Board, 45 Columbus Ave, New York, NY, 10023, tpatelis@collegeboard.org

Patton, Jeffrey, University of Massachusetts – Amherst, 14B Brandywine Dr, Amherst, MA, 01002, jpatton@educ.umass.edu

Patz, Richard, CTB/McGraw-Hill, 20 Ryan Ranch Rd, Monterey, CA, 93940, richard_patz@ctb.com

Pei, Lai Kwan, Purdue University, 222 Arnold Dr, Apt 14, West Lafayette, IN, 47906-3343, lpei@purdue.edu

Pellegrino, James, University of Illinois – Chicago, Dept of Psychology (M/C 285), 1007 W Harrison St, Chicago, IL, 60607, pellegjw@uic.edu

Penfield, Randall, University of Miami, 312 Merrick Bldg, PO Box 248065, Coral Gables, FL, 33124-2040, penfield@miami.edu

Perie, Marianne, National Center for the Improvement of Educational Assessment, Inc., 1408 Sarah Dr, Silver Spring, MD, 20904-2150, mperie@nceia.org

Petersen, Nancy, ACT, Inc, PO Box 168, Iowa City, IA, 52243-0168, nancy.petersen@act.org

Pitoniak, Mary, Educational Testing Service, Rosedale Rd, MS 02-T, Princeton, NJ, 08541, mpitoniak@ets.org

Plake, Barbara, University of Nebraska, 10515 US Hwy 24 & 285, PO Box 4658, Buena Vista, CO, 81211, bplake@unl.edu

Poggio, John, University of Kansas, 738 Pearson Hall, School of Education, Lawrence, KS, 66045-3101, jpoggio@ku.edu

Pommerich, Mary, DMDC DOD Center – Monterey Bay, 400 Gigling Rd, Seaside, CA, 93955-6771, mary.pommerich@osd.pentagon.mil

Powers, Sonya, University of Iowa, 904 9th Ave, Coralville, IA, 52241-1921, sonya-powers@uiowa.edu

Puhan, Gautam, Educational Testing Service, Rosedale Rd, MS 11-P, Princeton, NJ, 08541, gpuhan@ets.org

Qian, Jiahe, Educational Testing Service, Rosedale Rd, MS 02-T, Princeton, NJ, 08541, jqian@ets.org

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Quellmalz, Edys, WestEd, 400 Seaport Court, Suite 222, Redwood City, CA, 94063, equellm@wested.org

Ra, Jongmin, University of Georgia, 1222 - 1287 Cedar Shoals Dr, Athens, GA, 30605, rems2002@gmail.com

Rabinowitz, Stanley, WestEd, 730 Harrison St, San Francisco, CA, 94107, srabino@wested.org

Ragland, Shelley, James Madison University, 146 Chestnut Ridge Dr, Apt C, Harrisonburg, VA, 22801, raglansx@jmu.edu

Rawls, Anita, University of South Carolina, 2009 Double Cedar Dr., Charlotte, NC, 28214, awrawls@yahoo.com

Rigney, Sue, US Dept of Education, 49 Arell Ct, Alexandria, VA, 22304, sue_rigney@ed.gov

Rijmen, Frank, Educational Testing Service, Rosedale Rd, MS 02T, Princeton, NJ, 08541, frijmen@ets.org

Roach, Andrew, Georgia State University, Department of Counseling and Psychological Services, PO Box 3980, Atlanta, GA, 30302-3980, aroach@gsu.edu

Roberts, James, Georgia Institute of Technology, 905 Dogwood Trl, Tyrone, GA, 30290, james.roberts@psych.gatech.edu

Rodeck, Elaine, American Institute of Certified Public Accountants, 5315 Cuming St, Omaha, NE, 68132, elainerodeck@hotmail.com

Rodriguez, Michael, University of Minnesota, 163 Education Sciences, 56 East River Road, Minneapolis, MN, 55455, mcrdz@umn.edu

Rogers, W. Todd, University of Alberta—CRAME, 6-110 Education Centre North, Faculty of Education, Edmonton, AB, T6G 2G5, Canada, todd.rogers@ualberta.ca

Romhild, Anja, University of Nebraska, 21 Teachers College Hall, Lincoln, NE, 68588-0353, roemhild@bigred.unl.edu

Roussos, Louis, Measured Progress, 100 Education Way, Dover, NH, 03820, Iroussos@measuredprogress.org

Rupp, André, University of Maryland, Dept of Measurement, Statistics, and Evaluation (EDMS), 1230 Benjamin Building, College Park, MD, 20742, ruppandr@umd.edu

Ryan, Joseph, Arizona State University, 2221 East Turquoise Ave, Phoenix, AZ, 85028-3627, jmryan@cox.net

Ryan, Katherine, University of Illinois, 3305 S Pine Circle, Urbana, IL 61802-7130, Ryan6@uiuc.edu

Samejima, Fumiko, University of Tennessee, 7910 High Heath Dr, Knoxville, TN, 37919, fsamejim@utk.edu

Sandilands, Dallie, University of British Columbia, Faculty of Education, 2125 Main Mall, Vancouver, BC, V6T 1Z4, Canada, sandilan@interchange.ubc.ca

Scalise, Kathleen, University of Oregon, 4716 Bennett Valley Rd., Santa Rosa, CA, 95404, kscalise@uoregon.edu

San Diego, California

Schaeffer, Gary, CTB/McGraw-Hill, 20 Ryan Ranch Rd, Monterey, CA, 93940,
Gary_Schaeffer@ctb.com

Schmidt, Amy, Educational Testing Service, Rosedale Rd, MS 04-P, Princeton, NJ,
08541, aschmidt@ets.org

Schneider, Christina, CTB/McGraw-Hill, 3303 Murray St, Columbia, SC, 29201,
christina_schneider@ctb.com

Schrah, Gunnar, CorVirtus, 1287 Lake Plaza Dr., Colorado Springs, CO, 80906,
gschrah@corvirtus.com

Schwarz, Richard, CTB/McGraw-Hill, 20 Ryan Ranch Rd, Monterey, CA, 93940,
richard_schwarz@ctb.com

Seo, Daeryong, Pearson, 19500 Bulverde Rd, San Antonio, TX, 78259,
daeryong.seo@pearson.com

Seo, Minhee, University of North Carolina – Greensboro, 1921 New Garden Rd.
#D304, Greensboro, NC 27410, m_seo2@uncg.edu

Sgammato, Adrienne, University of North Carolina – Chapel Hill, 5700 Thistleton Lane,
Raleigh, NC, 27606, sgammato@email.unc.edu

Shea, Christine, University of Massachusetts, 56 College View Heights, S Hadley,
MA, 01075, cshea@educ.umass.edu

Shen, Xuejun, American Institutes for Research, 11801 Rockville Pike #1107,
Rockville, MD, 20852, xuejuns@yeah.net

Sheng, Yanyan, Southern Illinois University, WHAM 223, Mail Code 4618,
Carbondale, IL, 62401-4618, ysheng@siu.edu

Shermis, Mark, University of Florida, 1403 Norman Hall, PO Box 117047,
Gainesville, FL, 32611-7047, mshermis@ufl.edu

Shim, Hi Shin, Georgia Institute of Technology, 654 Cherry St, Atlanta, GA, 30332,
hishin@gatech.edu

Shin, Chingwei David, Pearson, 1543 McKinley Pl, Iowa City, IA, 52246,
david.shin@pearson.com

Simon, Mayuko, Data Recognition Corporation, 13490 Bass Lake Road,
Maple Grove, MN, 55311, kanad001@umn.edu

Sinharay, Sandip, Educational Testing Service, Rosedale Rd, MS 12-T, Princeton, NJ,
08541, ssinharay@ets.org

Skaggs, Gary, Virginia Tech University, 145 Dixon Dr, Hardy, VA, 24101,
gskaggs@vt.edu

Slater, Sharon, Educational Testing Service, 286 Hazel Dr, Pittsburgh, PA, 15228,
sslater@ets.org

Slater, Stephen, Oregon Dept of Education, 255 Capitol Street NE, Salem, OR,
97310, steve.slater@state.or.us

Smith, Lisa F., University of Otago, College of Education, 145 Union Street East,
Dunedin, 9054, New Zealand, lisa.smith@otago.ac.nz

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Smith, Russell, Alpine Testing, 51 West Center #514, Orem, UT, 84057,
russ@alpinetesting.com

Smith, Robert, Educational Testing Service, Rosedale Rd, MS 13-P, Princeton, NJ,
08541, rsmith@ets.org

Song, Tian, Michigan State University, 1075 Barton Dr Apt 213, Ann Arbor, MI, 48105,
songtian@msu.edu

Staniewska, Dorota, Educational Testing Service, Rosedale Road, MS 02-T,
Princeton, NJ, 08541, dstaniewska@ets.org

Steinberg, Jonathan, Educational Testing Service, Rosedale Rd. MS 20-T, Princeton,
NJ, 08541, jsteinberg@ets.org

Stone, Elizabeth, Educational Testing Service, Rosedale Rd, MS 09-R, Princeton, NJ,
08541, estone@ets.org

Su, Chi-Ming, National Chung Cheng University, No.3-5, Lane 12, Kong Shue Rd,
Taichung, 402, Taiwan, jean6636@msn.com

Su, Ya-Hui, University of California-Berkeley, IF., No.4, Lane 39, Linsen Rd,
Yonghe City, Taipei County, 234, Taiwan, fionacoco@hotmail.com

Suh, Youngsuk, University of Wisconsin – Madison, 1210 Twinleaf Lane, Madison, WI
53719, yssuh327@gmail.com

Subedi, Dipendra, American Institutes for Research, 1000 Thomas Jefferson Street
Washington, D.C., 20007, subedidi@msu.edu

Sunnassee, Devdass, University of North Carolina – Greensboro, 2202 Plainview Dr,
High Point, NC, 27265, d_sunnas@uncg.edu

Svetina, Dubravka, Arizona State University, 3866 E. Bighorn Ave, Phoenix, AZ,
85044, dubravka.svetina@asu.edu

Swygert, Kimberly, National Board of Examiners, 3750 Market St, Philadelphia, PA,
19104, kswygert@nbme.org

Tan, Rachael, Schroeder Measurement Technologies, 1440 Duncan Loop S. #102,
Dunedin, FL, 34698, jinbee@yahoo.com

Tan, Xuan (Adele), Educational Testing Service, Rosedale Rd, MS 11-P, Princeton,
NJ, 08541, atan@ets.org

Tannenbaum, Richard, Educational Testing Service, Rosedale Rd, MS-01R,
Princeton, NJ, 08541, rtannenbaum@ets.org

Tanner, John, CCSSO, 506 Kokomo, San Antonio, TX, 78209, johnt@ccsso.org

Tatsuoka, Kikumi, Teachers College, 46100 Mather Lane, Chagrin Falls, OH 44022,
kumitats@yahoo.com

Taylor, Catherine, University of Washington, 312 Miller Hall Box 353600, Seattle,
WA, 98195-3600, ctaylor@u.washington.edu

Templin, Jonathan, University of Georgia, 570B Aderhold Hall, Athens, GA, 30602,
jtemplin@uga.edu

Thompson, Tony, Pearson, 2510 North Dodge St, Iowa City, IA, 52245,
tony.thompson@pearson.com

San Diego, California

Thompson, Vanessa, Georgia Institute of Technology, School of Psychology, 311 Cobblestone Trail, Avondale Estates, GA, 30002, vanessa.thompson@gatech.edu

Thurlow, Martha, National Center on Educational Outcomes, University of Minnesota, 207 Pattee Hall, 150 Pillsbury Dr. SE, Minneapolis, MN, 55455, thurl001@umn.edu

Tindal, Gerald, University of Oregon, BRT-175 Education, Eugene, OR, 97403, gerald@oregon.edu

Toland, Michael, University of Nebraska, 2169 Pond Circle, Lincoln, NE, 68512, tolandmd@unlserve.enl.edu

Tomkowicz, Joanna, CTB/McGraw-Hill, 4312 Yew Street, Vancouver, BC, V6L3C8, Canada, joanna_tomkowicz@ctb.com

Tong, Ye, Pearson, 1906 Black Hawk Cir, Audubon, PA, 19403, ye.tong@pearson.com

Turhan, Ahmet, Pearson, 3512 Tricking Springs Way, Pflugerville, TX, 78660, ahmet.turhan@gmail.com

Turkan, Sultan, University of Arizona, P.O. Box 210069, Tucson, AZ, 85721, sultant@email.arizona.edu

Um, Kooghyang, Pearson, 2448 E 81st St, Suite 4910, Tulsa, OK, 74137, kay.um@pearson.com

van den Heuvel, Jill, CTB/McGraw-Hill, 5 Dorchester Drive, Ewing, NJ, 08638, jrvandenheuvel@gmail.com

van der Linden, Wim J., CTB/McGraw-Hill, Research, 20 Ryan Ranch Rd, Monterey, CA, 93940, wim_vanderlinden@ctb.com

Van Nijlen, Daniël, KU Leuven, Dekenstraat 2, PO Box 3773, Leuven, B-3001, Belgium, daniel.vannijlen@ped.kuleuven.be

van Rijn, Peter, CITO, PO Box 1034, Arnhem, 6811JB, Netherlands, peter.vanrijn@cito.nl

Vispoel, Walter, University of Iowa, 361 Lindquist Center, Iowa City, IA, 52242-1529, walter-vispoel@uiowa.edu

von Davier, Alina, Educational Testing Service, Rosedale Rd, MS 06-P, Princeton, NJ, 08541, avondavier@ets.org

Walker, Michael, Educational Testing Service, Rosedale Rd, MS 06-P, Princeton, NJ, 08541, mwalker@ets.org

Wan, Lei, Pearson, 2254 E Grantview Dr, Coralville, IA, 52241, lei.wan@pearson.com

Wang, Aijun, University of Georgia, Aderhold Hall, Athens, GA, 30602, wang0855@uga.edu

Wang, Changjiang, Pearson, changjiang.wang@pearson.com

Wang, Chun, University of Illinois–Urbana-Champaign, Department of Psychology, 603 E. Daniel St., Champaign, IL, 61820, cwang49@uiuc.edu

Wang, Chunxin, University of Iowa, College of Education, 577 Hawkeye Ct, Iowa City, IA, 52246, chunxin-wang@uiowa.edu

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Wang, Shudong, Educational Testing Service, Rosedale Road MS 13-P, Princeton, NJ, 08541, swang@ets.org

Wang, Xiang (Bo), ACT, Inc., 500 ACT Dr, Iowa City, IA, 52243, bo.wang@act.org

Wang, Xuan, ACT, Inc., 500 ACT Dr, Iowa City, IA, 52243, xuan.wang@act.org

Wang, Yingchen, University of North Carolina – Greensboro, 316-B Montrose Dr, Greensboro, NC, 27407, y_wang2@uncg.edu

Way, Denny, Pearson, 2510 N. Dodge Street, PO Box 30, Iowa City, IA 52245, Denny.way@pearson.com

Wei, Hua, Pearson, 2424 Gold Canyon Rd, Apt 323, San Antonio, TX, 78259, hua.wei@pearson.com

Williams, Bruce, ACT, Inc., 500 ACT Dr, Iowa City, IA, 52243, Bruce.Williams@act.org

Williamson, David, Educational Testing Service, 25 Riverdale, Yardley, PA, 19067, dmwilliamson@ets.org

Willse, John, University of North Carolina – Greensboro, 215 Curry Building, ERM, Greensboro, NC, 27402-6170, jtwillse@uncg.edu

Wilson, Mark, University of California – Berkeley, Grad School of Education, 4415 Tolman Hall, Berkeley, CA, 94720, markw@berkeley.edu

Winter, Phoebe, Consultant, 2319 Traymore Rd, Richmond, VA, 23235-2577, phoebe_winter@sbcglobal.net

Wise, Steven, Northwest Evaluation Association, 5885 SW Meadows Road, Suite 200, Lake Oswego, OR, 97035-3256, steve.wise@nwea.org

Wollack, James, University of Wisconsin – Madison, 373 Educational Sciences Bldg, 1025 W Johnson St, Madison, WI, 53706, jwollack@wisc.edu

Wothke, Werner, American Institutes for Research, 3412 15th St N, Arlington, VA, 22201-4911, wewo@smallwaters.com

Wu, Brad Ching-Chao, Pearson, 1 N Dearborn Street Suite 1600, Chicago, IL 60601, brad.wu@pearson.com

Wu, Ningying, Purdue University, 1200 Happy Hollow Rd, Apt 505, West Lafayette, IN, 47906, wu30@purdue.edu

Wu, Qiong, Penn State University, 226 Cedar Bldg, University Park, PA, 16802, qiong@psu.edu

Wyse, Adam, Michigan State University, 516 A Erickson Hall, East Lansing, MI, 48824, wyseadam@msu.edu

Xiang, Bihua, Educational Testing Service, Rosedale Road, MS 13-P, Princeton, NJ, 08541, bhiang@ets.org

Xu, Ming, New York State Education Department, 89 Washington Ave, Education Building Annex Room 775, Albany, NY, 12034, mxu@mail.nysed.gov

Xu, Ting, University of Pittsburgh, 105 Morewood Ave., Apt 1B, Pittsburgh, PA, 15213, tix3@pitt.edu

Xu, Xueli, Educational Testing Service, Rosedale Rd, MS 02-T, Princeton, NJ, 08541, xxu@ets.org

San Diego, California

Xu, Yunmei, Education Quality and Accountability Office, yunmeixu@gmail.com

Yan, Duanli, Educational Testing Service, Rosedale Rd, MS 06-P, Princeton, NJ, 08541, dyan@ets.org

Yang, Chien-Lin, American Dental Association, 211 E. Chicago Ave. #780, Chicago, IL, 60611, yangc@ada.org

Yang, Na, Statistics Department, University of South Carolina, 1404 Dreher St., Columbia, SC, 29205, genuion@hotmail.com

Yang, XiangDong, East China Normal University

Yao, Lihua, Defense Manpower Data Center, 400 Gigling Rd, Seaside, CA 93955, h_lyao@hotmail.com

Ye, Feifei, University of Pittsburgh, 230 S Bouquet St, 5924 Wesley W Posvar Hall, Pittsburgh, PA, 15260, feifeiye@pitt.edu

Yen, Shu Jing, CTB/McGraw-Hill, 20 Ryan Ranch Rd, Monterey, CA, 93940-5703, shu_jing_yen@ctb.com

Yi, Hyun Sook, Konkuk University, Dept of Education, College of Education, 1 Hwayang-dong, Kwangjin-gu, Seoul, 143-701, South Korea, hyunysi@konkuk.ac.kr

Yi, Qing, Pearson, 3115 Monarch, San Antonio, TX, 78259, qing.yi@pearson.com

Yoo, Hanwook, University of Massachusetts, 286 Sunset Ave., Prince Hall #23, Amherst, MA, 1003, hanuki82@gmail.com

Yousfi, Safir, Federal German Employment Agency, Nuernberg, Germany, safir.yousfi@arbeitsagentur.de

Yu, Lei, Pacific Metrics, 585 Cannery Row, Suite 201, Monterey, CA 93940, lyu@pacificmetrics.com

Zara, Anthony, Pearson, 5601 Green Valley Dr, Bloomington, MN, 55437, tony.zara@pearson.com

Zenisky, April, University of Massachusetts – Amherst, 119 Lathrop St, South Hadley, MA, 01075, azenisky@educ.umass.edu

Zeng, Ji, University of Michigan – Ann Arbor, 3310 Alton Ct., Ann Arbor, MI, 48105, jzeng@umich.edu

Zhang, Jinming, Educational Testing Service, Rosedale Rd, MS 02-T, Princeton, NJ, 08541, jzhang@ets.org

Zhang, Lilly (Yuli), Educational Testing Service, 309 Stratford Dr, Lawrenceville, NJ 08648, yzhang@ets.org

Zhang, Liru, Delaware State Department of Education, 401 Federal St, Ste 2, Dover, DE, 19901, lzhang@doe.k12.de.us

Zhang, Su, University of Iowa, Apt 1, 61 Spadina Ave, Toronto, ON, M5S 2H9, Canada, su-zhang-1@uiowa.edu

Zhang, Ting, University of Maryland – EDMS, 1230 Benjamin Bldg, College Park, MD, 20742, zhangt@umd.edu

Zhang, Wenmin, Educational Testing Service, 666 Rosedale Rd, Princeton, NJ, 08541, wzhang@ets.org

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Zhang, Xiuyuan, University of Pennsylvania, 802 Washington St. SE, Apt. 4,
Blacksburg, VI, 24060, xiuyuan@dolphin.upenn.edu

Zhao, Charles, Educational Testing Service, Rosedale Rd, MS 13-L, Princeton, NJ,
08541, jzhao@ets.org

Zhao, Huafang, Maryland Montgomery County Public Schools, 850 Hungerford Dr,
Rm 11, Rockville, MD, 20850, huafangzhao@mcpsmd.org

Zhou, Jiawen, University of Alberta–CRAME, 6-110 Education North, Edmonton,
Canada, T6G AB, jzhou@ualberta.ca

Zhu, Rongchun, ACT, Inc., 1208 Jensen St, Iowa City, IA, 52246,
rongchun@gmail.com

Zhu, Xiaowen, University of Pittsburgh, 13900 Chestnut Dr, Apt 103, Eden Prairie,
MN, 55344, xiaowenpitt@gmail.com

Zu, Jiyun, University of Notre Dame, 118 Haggard Hall, Notre Dame, IN, 46556,
jzu@nd.edu

