The Stats Source: Newsworthy Notes from the Ed Stats SIG

President's Column

Greetings Educational Statisticians SIG Members,

I hope everyone has made their travel and lodging arrangements for the annual conference of the American Educational Research Association in Chicago. Tasha Beretvas did a fantastic job as the program chair and it looks like the sessions should be well attended and academically stimulating.

I have invited Ross
Santy, Deputy Assistant
Secretary for Data and
Information at the U.S.
Department of Education to speak at our business meeting. Ross oversees the Education Data and Evaluation Network
(EDEN), the Longitudinal Data Modeling grants
program, Consolidated
State Performance Reports, and generally all aspects of data modeling

and assessment for the U.S. Department of Education. I have asked him to present and discuss the challenges of developing better data and statistical models to support educational reform. The title of his presentation is "Improving Data and Statistical Analyses at the U.S. Department of Education." As many of you may know, I am an advocate of educational statisticians being more proactive in supporting K-12 and postsecondary educational reform efforts.

I am creating the first Educational Statisticians SIG awards committee. I am recommending the committee consist of three at-large members of the SIG, the current President and Past-President of the SIG. Debbie Hahs-Vaughn, Rhonda Kowalchuk, and Ann O'Connell have volunteered to be at-large members, with Tasha and I representing the current and past president component. The committee will meet at AERA and develop guidelines, procedures, and a nomination process for the 2007 academic year and length of terms. It is my hope by fall we can have our first series of nominations for someone to receive an award for their contributions to the SIG. [Note: Please thank Ann O'Connell for this idea.]

Once again we will have our Three SIGS Social off-campus (i.e., outside the convention hotels). Ed Stats SIG

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Program Chair &
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President's Column (continued...)

Once again we will have our Three SIGS Social off-campus (i.e., outside the convention hotels). This year we have selected a pizza place called Giordanos. The social will be Wednesday April 11th from 7:00 to 9:00 p.m. and there will be free pizza and beer/wine/sodas for SIG Members who submitted papers, presented papers or were discussants/chairs of sessions. If the drink allocation lasts, those who were discussants or paper presenters will get two beer tickets. Giordanos is located at 135 E. Lake St, Chicago, IL. Their website is http://giordanos.com.

I have really enjoyed the last two years as the Program Chair and President of the SIG. I look forward to seeing all of you in Chicago.

Sean

Sean W. Mulvenon, Ph.D.
Senior Adviser
Office of the Deputy Secretary
400 Maryland, S.W., Office 7w114
Washington, DC 20202
Phone: (202) 260-1470
Email: sean.mulvenon@ed.gov

Email: seanm@uark.edu

Professor of Educational Statistics
Billingsley Chair for Educational Research and
Policy Studies
254 Graduate Education Building
University of Arkansas
Fayetteville, AR 72701
Phone: (479) 575-8727

There are many great research conferences upcoming...

See back page for dates and locations!

International Statistical Institute

The 56th session of the International Statistical Institute will be held August 22-29, 2007 in Lisboa Portugal. The ISI has held sessions biennially since 1853. ISI sessions provide an opportunity for statisticians to attend scientific meetings focusing on their own specialty and at the same time absorb new

research in other statistical fields that may have unanticipated applications to one's own specialty. Registration for the conference will begin in March 2007.

Information on the conference can be obtained at http://www.isi2007.com.pt/



Three SIGS Social



WHERE

Giordano Pizza Place 135 E. Lake St, Chicago, IL http://giordanos.com

WHEN

Wednesday April 11th 7:00 to 9:00 p.m.

WHAT

Free pizza and beer/wine/sodas for SIG Members who submitted papers, presented papers or were discussants/ chairs of sessions. If the drink allocation lasts, those who were discussants or paper presenters will get two beer tickets.

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DATIC 2007:

Data Analysis Training Institute of Connecticut

There will be four one-week workshops to be held at the University of Connecticut in May and June of 2007. The three topics are offered are as follows:

Dyadic Data Analysis

May 21-25, 2007

Instructors: David A. Kenny & Tessa West

Web address: http://davidakenny.net/datic/datic.dyad.htm

The workshop on Dyadic Data Analysis will focus on data where both members of a dyad are measured (e.g., married or dating couples). Among the topics to be covered are the measurement of nonindependence, the Actor-Partner Interdependence Model, and the analysis of distinguishable and indistinguishable dyads. The software package used in the workshop will be SPSS, but there will be discussion of other packages (e.g., HLM).

Hierarchical Linear Modeling

Session A: June 11-15, 2007 Session B: June 25-29, 2007

Instructors: Ann A. O'Connell & D. Betsy McCoach

Web address: http://davidakenny.net/datic/datic.hlm.htm

The workshop on Hierarchical Linear Models covers basics and applications of multilevel modeling with extensions to more complex designs. Participants will learn how to analyze data via a multilevel model interpret the results of their analyses. The primary software is HLM, but some coverage of SPSS is also provided. Please visit our link above for more detailed information about the topics covered.

Structural Equation Modeling

June 18-22, 2007

Instructors: David A. Kenny & Stephanie Milan

Web address: http://davidakenny.net/datic/datic.sem.htm

The workshop on Structural Equation Modeling covers basics of path analysis, confirmatory factor analysis, and latent variable modeling. Using AMOS Graphics, participants will learn how to build, evaluate, and revise a structural equation modeling.

Workshops are held at the beautiful Storrs campus of the University of Connecticut.

To register for any of these workshops go to http://davidakenny.net/doc/regform.doc



Pre-AERA Workshop: An Introduction to Rasch Measurement: Theory and Applications

April 7-8, 2007 University of Illinois - Chicago Chicago, IL

WORKSHOP DESCRIPTION

The purpose of this training session is to introduce participants to the theory and applications of Rasch measurement. This session will provide participants with the necessary tools to become effective consumers of research employing Rasch measurement and the skills necessary to solve practical measurement problems. Instructional material will be based on four Rasch measurement models: dichotomous, rating scale, partial credit, and many-facet data. Participants will have the opportunity to use current Rasch software.

The format will consist of eight self-contained units. The units are:

Introduction to Rasch
Measurement; Item and Person
Calibration; Dichotomous and
Polytomous Data; Performance and
Judged Data; Applications of
Rasch Measurement I and II;
Examples of Rasch Analyses; and
Analysis of Participants Data. The
material covered is these units are
an overview of material that would
normally be covered in
approximately three graduate

level measurement courses. The co-directors will divide the topics in each session to maximize individual strengths.

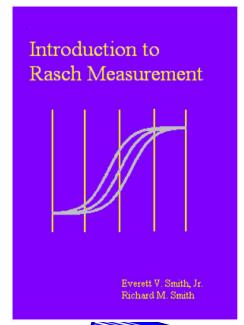
Registration includes the full 2-day workshop, a continental breakfast each morning, over 550 pages of handouts and tutorial material, a copy of Introduction to Rasch Measurement (a 698 page book) and a one-year subscription to the Journal of Applied Measurement. See www.jampress.org for more details on these publications.

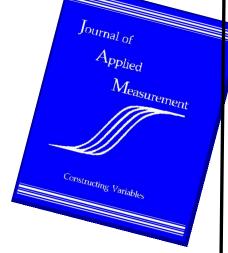
Audience: Anyone interested in learning about the practical aspects of Rasch measurement. Previous training in measurement is recommended, but not necessary.

Directors Names: Everett V. Smith Jr. and Richard M. Smith Contact Everett Smith at evsmith@uic.edu or visit www.jampress.org under

Rasch Measurement Workshops for more details and registration materials.

For more information on the book, please see www.jampress.org.





Assistant/Associate Professor, Educational Research & Measurement at the University of Central Florida

Position Number: 33265 **Description**: The Department of Educational Research, Technology, and Leadership in the College of Education at the University of Central Florida invites applications for the position of Assistant/Associate Professor, Educational Research and Evaluation. The position is available August 2007 with possibility of employment during summer 2007. Candidates must demonstrate an ability to maintain an active research and publication agenda and work collaboratively with faculty members, masters and doctoral students. The candidate must be willing to serve on masters' theses and doctoral dissertation committees and to participate in professional and university service. The successful candidate will teach graduate qualitative and quantitative research methodology courses as well as others as needed

.

University background

within the program.

The University of Central Florida is a major metropolitan research university, providing the academic core for central Florida. The multi-campus university enrolls approximately 47,000 students and is the fastest growing university in Florida. The main campus is located in northeastern Orlando, a growing diverse community of nearly 2 million people. Regional campuses are located in Volusia, Brevard and Lake Counties, with many additional sites in the central Florida region. UCF provides academic leadership for the central Florida region through strategic partnerships with public and private sector organizations and corporations. It also has met all criteria for the Carnegie classification of doctoral intensive and is accredited

by the Southern Association of Colleges and Schools. (www.ucf.edu). The College of Education employs about 130 full-time faculty members serving approximately 5000 students in 12 undergraduate programs and 25 graduate programs. The College is accredited by the National Council for Accreditation of Teacher Education (NCATE). The University of Central Florida is an equal opportunity, equal access, and affirmative action employer.

Departmental information

The Educational Research, Technology, and Leadership department consists of 20 faculty members (6 in the research area). Research faculty members provide service to the College, University, school districts, and professional organizations and are currently developing the following programs: doctoral program in Research, master's in Evaluation, and an Evaluation certificate.

Qualifications

Required qualifications are (1) earned doctorate in Educational Research, Measurement, and Evaluation or related area from an accredited institution by time of hire; (2) competence in integrating technology into teaching/research; (3) flexibility to work in qualitative and quantitative research methods and evaluation at the graduate level; (4) potential/demonstrated ability to maintain an active research and publication agenda in educational research. Desired qualifications are: (1) experience in teaching K-12 or at the university/college-level; (2) experience with online teaching; (3) experience

mentoring, supervising, and/or advising graduate students; (4) experience in evaluation.

Correspondence information

Address all correspondence to: Dr. Michelle Spinella, Assistant to the Chair; Educational Research, Measurement, and Evaluation Search; Department of Educational Research, Technology and Leadership; College of Education; University of Central Florida; P.O. Box 161250; Orlando, FL 32816-1250 or FAX (407-823-4880), em: ertl@mail.ucf.edu. An application will consist of a letter of intent, vita, names and contact information for three references, copy of graduate college transcripts, and UCF Faculty Application available at http://provost.ucf.edu/forms/docs/faca pp.pdf.

Finalists will be asked to submit three recent letters of recommendation that address the criteria of the position and official transcripts before they can be recommended for hire. Candidates also are encouraged to submit an applicant survey, which can be found at http://hr.ucf.edu/web/forms/employmen t/Surv_hr.pdf

Initial screening begins immediately and continues until position is filled or closed. Members of ethnic minority groups, women, and persons with disabilities are encouraged to apply. As an agency of the State of Florida, UCF makes all application materials, including transcripts, available to the public upon request.

Salary range

\$50,000 to negotiable

Application deadline

Open; for best consideration, apply by

Have information to share?

Do you have information that you would like to share with your colleagues in the Educational Statisticians SIG via the newsletter? We are looking for the following types of news:

- Upcoming conferences and calls for proposals
- Calls for authors and other contributions (e.g., Sky Huck's website)
- Book reviews and other resources of interest to statisticians as well as graduate students enrolled in statistics
- Other worthy contributions that are of value to your colleagues

Contributions should be sent in a **Word** document to the newsletter co-editors:

Lwitta@mail.ucf.edu ssivo@mail.ucf.edu dhahs@mail.ucf.edu







1) Program Director Assessment & Measurement PhD 2) Associate Director of CARS

The Department of Graduate Psychology and the Center for Assessment and Research Studies (CARS) invite applications for two positions: (1) Program Director for our Assessment and Measurement PhD and (2) Associate Director for the Center for Assessment and Research Studies (CARS). CARS is nationally recognized for its comprehensive program of assessment of student learning and development. The PhD program is a unique and innovative collaboration between CARS and Graduate Psychology that provides exceptional training in collegiate outcome assessment, with our campus as a living laboratory. We seek two individuals to promote and enhance our standing at state and national levels as leaders in higher education outcome assessment. Fluency with policy issues in assessment practice is desirable.

The PhD Program Director will oversee the doctoral program; mentor students and faculty; teach; conduct research in an area that complements existing faculty strengths; and work collaboratively with other graduate programs in the department and within the University. The program director must qualify for tenure and the rank of Associate or Full Professor in the Department of Graduate Psychology.

The Associate Director of CARS will work with the Executive Director to build strategic alliances with external partners; exhibit leadership in assessment practice and higher education accountability issues on and off-campus; teach; and conduct research. The appointment may be tenure track or a renewable term appointment at the Associate or Full Professor level, held jointly with a relevant academic department.

All CARS/Assessment & Measurement faculty members are involved in assessment activities on campus, and all teach and engage in scholarship. Areas of teaching need include but are not limited to higher education assessment practice and policy, program evaluation, college student development, qualitative methods, mixed-methods, foundations of statistics and measurement. Requirements for both positions include a relevant doctorate, credentials commensurate with a rank of associate professor or higher, scholarship and experience in educational assessment (at any level), and relevant leadership experience. The positions are year-round appointments.

More about the University, the Department, CARS, and the position can be found at www.jmu.edu, www.psyc.jmu.edu/gradpsyc and www.jmu.edu/assessment. The Department of Graduate Psychology is an academic unit within the College of Integrated Science and Technology (www.jmu.edu/cisat/). Questions about the Associate Director positions may be directed to Dr. Dary Erwin (erwintd@jmu.edu). Questions about the PhD Program Director position may be directed to Dr. Sheena Rogers (rogerssj@jmu.edu).

Apply online at https://JobLink.jmu.edu referencing posting number 0401138 for the PhD Program Director and 0401137 for the Associate Director of CARS.

Attach a letter of interest, curriculum vitae/resume, sample publications, and names and contact information for three references to the electronic application. Review of applications will begin immediately and continue until the positions are filled.

James Madison University is an equal opportunity/affirmative action/equal access employer and especially encourages applications from women, minorities and persons with disabilities.

Research Synopsis: Statistics Teachers' Ideas About Teaching and Learning Statistics at University

Statistics Teachers' Ideas about Teaching and Learning Statistics at University

Researchers:
Sue Gordon, The University of
Sydney, Sydney, Australia
Anna Reid, Peter Petocz,
Macquarie University, Sydney,
Australia

The research investigates university statistics teachers' ideas on teaching and learning statistics and on developing professionally as statistics educators. The focus is on "service courses", where statistics is taught to groups of students from various disciplines, such as engineering, psychology, public health and business, rather than to students who plan to become mathematicians or statisticians. We conducted interviews by email with participants from many countries. Our aim is to broaden knowledge of statistics pedagogy for these important and diverse groups of students and to increase the effectiveness of statistics teaching and learning.

The following papers on this project are published or in press.

Gordon, S., Reid, A. & Petocz, P. (2007). Teachers' conceptions of teaching service statistics courses. *International Journal for the Scholarship of Teaching & Learning*. Online at:

http://www.georgiasouthern.edu/ ijsotl/v1n1/gordon_et_al/ index.htm

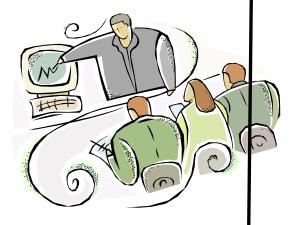
Gordon, S., Petocz, P. & Reid, A. (2007, in press). Tools, artefacts, resources and pedagogy—stories of international statistics educators. In Australian Association for Research in Education 2006 Conference Papers, compiled by P. L Jeffery, AARE, Adelaide. To be online at: http://www.aare.edu.au/06pap/gor06358.pdf

Petocz, P., Gordon, S. & Reid, A. (2006). Recognising and developing good statistics teachers. In Rossman, A. and Chance, B. (Eds.), Proceedings of the Seventh International Conference on Teaching Statistics, ICOTST, Salvador, Brazil: ISI, Voorburg, The Netherlands (On CD). Online at:

http://www.stat.auckland.ac.nz/ ~iase/ publications/17/5B2_PETO.pdf Gordon, S., Reid, A. & Petocz, P. (2005). How important are communication skills for 'good' statistics students? - An international perspective. In L. Weldon, and B. Phillips (Eds.), Proceedings of the ISI/IASE Satellite Conference on Statistics Education and the Communication of Statistics, Sydney: ISI, Voorburg, The Netherlands (On CD). Online at:

http://www.stat.auckland.ac.nz/ ~iase/publications/14/gordon.pdf

Researchers interested in receiving pdf copies of any of the conference papers are encouraged to contact Sue Gordon at sueg@mail.usyd.edu.au.



Real Data Analysis; A Volume in the Series Quantitative Methods in Education and the Behavioral Sciences: Issues, Research, and Teaching

Real Data Analysis
Edited by:
Shlomo S. Sawilowsky
Wayne State University
A volume in the series:
Quantitative Methods in
Education and the Behavioral
Sciences: Issues, Research, and
Teaching. Series Editor: Ronald
C. Serlin, University of
Wisconsin—Madison.

The invited authors of this edited volume have been prolific in the arena of Real Data Analysis (RDA) as it applies to the social and behavioral sciences, especially in the disciplines of education and psychology. Combined, this brain trust represents 3,247 articles in refereed journals, 127 books published, US \$45.3 Million in extramural research funding, 34 teaching and 92 research awards, serve(d) as Editor/Assistant Editor/Editorial Board Member for 95 peer reviewed journals, and provide (d) ad hoc reviews for 362 journals. Their enormous footprint on real data analysis is showcased for professors, researchers, educators, administrators, and graduate students in the second text in the AERA/SIG ES Quantitative Methods series. CONTENTS: Preface. Shlomo S. Sawilowsky.

PART I: FOUNDATIONS. The Co-Evolution of Statistics and Hz, Joseph M. Hilbe. Effective Sample Size: A Crucial Concept, Thomas R. Knapp. Advances in Missing Data Methods and Implications for Educational Research, Chao-Ying Joanne Peng, Michael Harwell, Show-Mann Liou, Lee H. Ehman. Methods for Simulating Real World Data for the Psycho-Educational Sciences, Todd Christopher Headrick. How and Why I Use Real, Messy Data to Investigate Theory and Inform Decision Making, Ted Micceri.

PART II: STATISTICAL METHODS. Using E-Mail Messages to Help Students Prepare for a Statistics Exam, Schuyler Huck. Randomization Tests: Statistical Tools for Assessing the Effects of Educational Interventions When Resources are Scarce, Joel R. Levin. A Skipped Multivariate Measure of Location: One- And Two-Sample Hypothesis Testing, Rand R. Wilcox, H. J. Keselman. Robust Step-Down Tests for Multivariate Group Differences, Lisa M. Lix, Ian Clara, Aynslie Hinds, Charles Bernstein, Dunn-Sidak Critical Values and p Values, Roger E. Kirk, Joel Hetzer. Controlling Experiment-wise Type I Errors: Good Advice for Simultaneous and Sequential Hypothesis Testing, Shlomo S. Sawilowsky, Patric R. Spence.

Robustness and Power of Ordinal d for Paired Data, *Du Feng.* Factorial ANOVA in SPSS: Fixed-, Random-, and Mixed-Effects Models, *Richard G. Lomax, Stacy Hughey Surman.* ANOVA: Effect Sizes, Simulating Interaction vs. Main Effects, and a Modified ANOVA Table, *Shlomo S. Sawilowsky.* ANCOVA and Quasi-Experimental Design: The Legacy of Campbell and Stanley, *Shlomo S. Sawilowsky.*

PART III: MEASUREMENT:

Thinking About Item Response Theory from a Logistic Regression Perspective: A Focus on Polytomous Models, Amery D. Wu, Bruno D. Zumbo. Some Practical Uses of Item Response Time to Improve the Quality of Low-Stakes Achievement Test Data. Steven L. Wise, Xiao jing Kong. Using Moving Averages to Detect Exposed Test Items in Computer-Based Testing, Ning Han, Ronald K. Hambleton. An Empirical Calibration of the Effects of Multiple Sources of Measurement Error on Reliability Estimates for Individual Differences Measures, Frank L. Schmidt, Huy Ahn Le. Latent Structure of Attitudes toward Abortion, C. Mitchell Dayton.

CONTINUED... Real Data Analysis; A Volume in the Series Quantitative Methods in Education and the Behavioral Sciences: Issues, Research, and Teaching

PART IV: DATA ANALYSIS.

Hierarchical Linear Models and the Estimation of Students' Mathematics Achievement, Kathrin A. Parks, Dudley L. Poston, Jr. Grade Inflation: An Examination at the Institutional Level, Sharon L. Weinberg. Using Discrete-Time Survival Analysis to Study Gender Differences in Leaving Mathematics, Suzanne E. Graham, Judith D. Singer. Nonparametric procedures for testing for dropout rates on University courses with application to an Italian case study, Rosa Arboretti Giancristofaro, Fortunato Pesarin, Luigi Salmaso, Aldo Solari. Nonparametric Approaches for Multivariate Testing with Mixed Variables and for Ranking on Ordered Categorical Variables with an Application to the Evaluation of Ph. D. Programs, Rosa Arboretti Giancristofaro,

Randomized Replicated Single-case Experiments: Treatment of Pain-related Fear by Graded Exposure In Vivo, Patrick Onghena, Johan W. S. Vlaeyen, Jeroen de Jong. Whole Brain Correlations: Examining Similarity Across Conditions of Overall Patterns of Neural Activation in fMRI, Arthur Aron, Susan Whitfield, Wemara Lichty. Principal Component Analysis of Senate Voting Patterns. Jan de Leeuw

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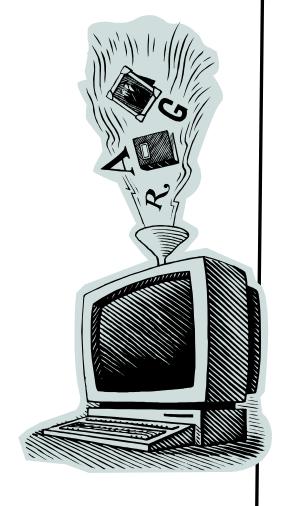
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Fortunato Pesarin, Luigi Salmaso.

AERA Fellowships & Grants Programs

Information on AERA's Fellowships and Grants Programs can be found at http://www.aera.net/fellowships/?id=57. From this site, details and related links for more information on the following programs can be accessed:

- AERA-AIR Fellows Program
- AERA-ETX Fellowship Program in Measurement
- Minority Fellowship Program in Education Research
- AERA Grants Program

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Upcoming Conferences

American Educational Research Association (AERA)
April 9-13, 2007, Chicago, IL

International Statistical Institute (ISI)
August 22-29, 2007, Lisboa Portugal

See you in Chicago in April!

Registration and hotel information for AERA 2007 can be found at www.aera.net.

Some reminders about AERA 2007...

- There will no longer be a printed copy of the AERA program that will be mailed to members in advance. The program will be accessible in both a searchable and pdf format from the AERA website. Attendees will be able to pick up their printed program on-site in Chicago at the registration hall.
- If you haven't done so already, book your hotel! Remember, they fill up quickly!

