



# The Stats Source: Newsworthy Notes from the Ed Stats SIG

## President's Column

I hope each of you is enjoying a pleasant Fall!

Our esteemed 2010 Program Chair (Dr. Laura Stapleton) is putting together a wonderful program for the upcoming conference in Denver. Many thanks go to her and her review panel members for all the hard work they put into selecting the finest proposals. Thanks also to each of you who submitted a proposal. Do keep recruiting fellow educational statisticians to join our SIG because the larger our membership (and the more proposals that are submitted), the larger our presence can be (in terms of presentations) at the AERA national conference.

At the AERA conference in San Diego, Dr. Ron Serlin was awarded the second Educational Statisticians' SIG Annual Service Award. Many congratulations go to Ron and many thanks to him for his many years of generous service to our SIG. Ron was invited and agreed to give the invited speaker's address at the upcoming Educational Statisticians' SIG Business meeting in Denver. So do join us at the Business Meeting to hear and support him.

The nominations committee (Dr. Laura Stapleton - Chair,

Dr. Debbie Hahs-Vaughn, Dr. Dena Pastor, and Dr. Ron Serlin) has two assignments. First, they have been asked to help select nominations for the recipient of the third Educational Statisticians' SIG Annual Service Award (to be presented in Denver). They have also been charged with selecting nominations for the Program Chair for the 2011 program. Thus, please help them by emailing nomination ideas to any of the members of this committee. Note that when submitting a nomination for the Service Award, please include a short summary justifying your choice of candidate.

The Educational Statisticians' SIG's two members-at-large (Drs. Bruno Zumbo and Rhonda Kowalchuk) have been charged with deriving a policy to direct how the Educational Statisticians' SIG can divert the SIG's book royalties for use in supporting graduate students' participation at the annual meeting of AERA. Specifically, the authors and editors of the SIG's books have very generously defrayed some of their own royalties expressly for this purpose and we do not yet have a policy for how to redistribute these funds. Drs.

Zumbo and Kowalchuk's goal is to come up with this policy by December 1<sup>st</sup> and if the Educational Statisticians' SIG members vote in favor of the policy, we plan to use it for graduate student members of the Educational Statisticians' SIG at the upcoming conference. Please share any suggestions you have for this process to facilitate this task for them.

It is almost time to start organizing the Quantitative SIGs' social event for Denver. If any of you are very familiar with Denver and have some ideas for where to hold the social, please let Dr. Laura Stapleton know so she can share your ideas with the Program Chairs of the Advanced Studies of National Databases, Multilevel Modeling, and Structural Equation Modeling SIGs (with whom we frequently co-sponsor the social).

Note that AERA is being held a little later in the year (Friday, April 30<sup>th</sup> through Tuesday, May 4<sup>th</sup>) and over a weekend. I look forward to seeing many of you in gorgeous Denver at the beginning of May. Happy (early) holidays to each of you!

Regards,  
Tasha Beretvas  
*Educational Statisticians' SIG President 2008-2010*

*President*  
**Tasha Beretvas**  
University of Texas

*Program Chair & President Elect*  
**Laura Stapleton**  
University of Maryland-Baltimore County

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**Josh Goodman**  
James Madison University

*Book Series Editor*  
**Ron Serlin**  
University of Wisconsin

*Newsletter Editors & Webmasters*  
**Debbie Hahs-Vaughn**  
**Steve Sivo**  
**Lea Witte**  
University of Central Florida

*Members-at-Large & Awards Committee Members*  
**Rhonda Kowalchuk**  
Southern Illinois University  
**Bruno Zumbo**  
University of British Columbia



## A Note from the Ed Stats Program Chair...

I am pleased to say that the programming for the AERA 2010 annual meeting is drawing to a close. Thanks to the wonderful submissions and the quality and timely reviews of our review panel, I am confident that our SIG will enjoy a thought-provoking and educational time in Denver. I specifically want to thank our review panel: Michael Cohen, Joshua Goodman, Debbie Hahs-Vaughn, Gregory Hancock, Michael Harwell, Janet Holt, Alan Klockars, Roy Levy, Sean Mulvenon, Ann O'Connell, Michael Seaman, Paul Vogt, Andrew White, and Tiffany Whittaker. The time that it takes to review a whole set of proposals can be great and I would like for us all to thank them personally when we see them at the annual meeting!

We have been allocated by the association to have one business meeting, three substantive paper sessions, and a smattering of roundtable papers or posters. The format of the roundtable sessions this coming year will be different than in past years; each table will be shared by three to five papers on a similar topic and a chair will serve as facilitator of discussion. In order to stimulate discussion, if you are assigned to a roundtable, please plan to share your paper with your facilitator (and, if possible, the other authors at the table) prior to the annual meeting.

This year at our business meeting we will start an annual tradition of having the EdStat SIG Service Award honoree from the prior year give an address to the membership. Last year's honoree, Dr. Ron Serlin, has indicated that the (working) title of his address is "Fisher was Right." I am sure we will all not want to miss that! Finally, we will again join with other quantitative SIGs to host a social during the annual meeting. If you have any questions or suggestions for making the 2010 annual meeting a successful one, please do not hesitate to contact me at [stapleton@umbc.edu](mailto:stapleton@umbc.edu).

Thank you!

LauraStapleton



### SEEKING NOMINATIONS FOR THE ED STATS SIG SERVICE AWARD!

Past award recipients include Dr. Ingram Olkin and Dr. Ron Serlin.

Now is the time for members to submit names for this year's award.

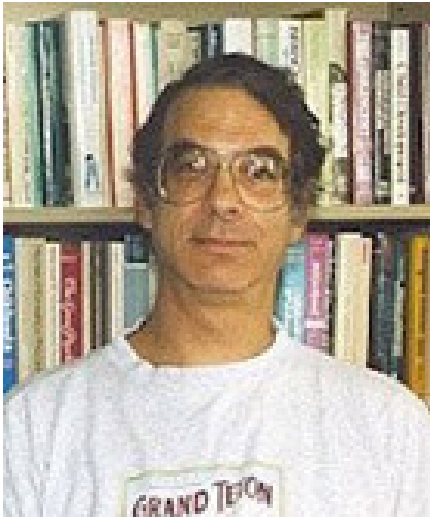
Please forward suggestions (and supporting documentation you may have) to members of the Nominations Committee:

Laura Stapleton  
(chair, ex officio)  
[lstaplet@umbc.edu](mailto:lstaplet@umbc.edu)

Ron Serlin  
[rcserlin@wisc.edu](mailto:rcserlin@wisc.edu)

Dena Pastor  
[pastorda@jmu.edu](mailto:pastorda@jmu.edu)

Debbie Hahs-Vaughn  
[dhahs@mail.ucf.edu](mailto:dhahs@mail.ucf.edu)



## **Second Annual Educational Statisticians Service Award Winner: DR. RON SERLIN**

Dr. Ron Serlin was selected as the second annual Educational Statisticians Service Award recipient.

Dr. Serlin was recognized for with award for his many contributions to the SIG since its inception.

We are appreciative of his service to helping to build a strong SIG that has contributed greatly to the field of educational statisticians.

## ***Statistical Simulation: Power Method Polynomials and Other Transformations***

**Author:**

Todd Headrick, Southern Illinois University-Carbondale

**Publisher:**

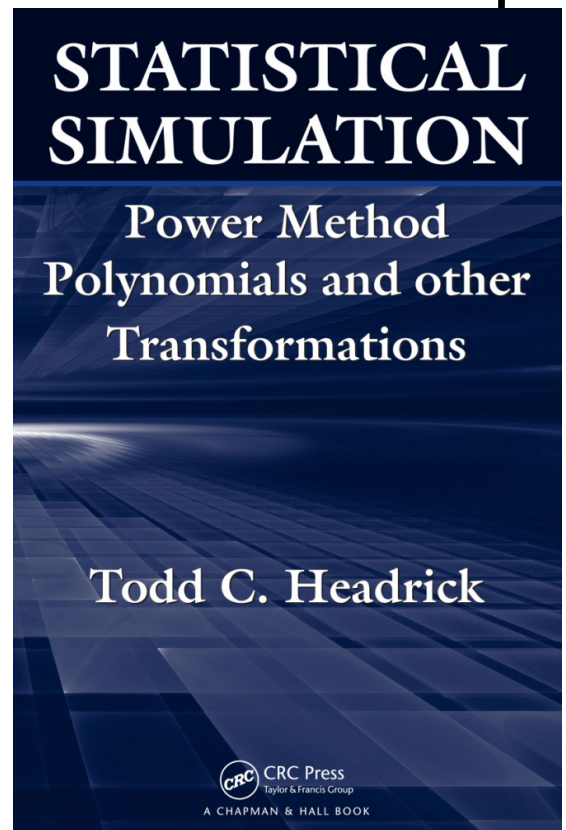
Chapman & Hall/CRC

**Release date:**

Fall 2009

The power method transformation is a popular technique that is used for simulating non-normal distributions often used in Monte Carlo or simulation studies, such as computer adaptive testing, hierarchical linear modeling, item response theory, logistic regression, and other univariate or multivariate nonparametric tests.

This book covers the theory underlying the power method as well as many applications associated with it. It presents a development of the theory that leads to a general framework for implementation. The text also provides many examples to demonstrate the procedure, along with Monte Carlo results to support the theory. The author includes a "Mathematica"(R) package for implementation of the procedure. The Tukey  $g$ -and- $h$  and generalized lambda distributions are also presented and discussed in the context of multivariate data generation.



## Number Insight and Narrative Image: Developing Statistical Analysis Strategies Utilizing Graphical Displays of Quantitative Information

Wendy B. Dickinson  
*Ringling College of Art and  
Design*  
*Fellow of the Royal Statistical  
Society*

*Presented at the Royal  
Statistical Society 175th  
Annual Conference, Edinburgh  
Scotland*

Pictorial representation of data embodies the best of visual display and information transmission. Pictorial representation organizes and summarizes research data in a visual format. Within this visual format, number patterns are more readily discerned and themes magnified through visual data exploration and discovery.

Creating a visual rendition of research data provides a powerful channel for information exchange with increased communication of findings, magnification of ideas, and enhanced pattern recognition. Providing students with "real-world" opportunities for data analysis and reflection helps to both introduce and reinforce statistical concepts and strategies.

Thus, students in my Visual Mathematics course (statistics and graphical display) are asked to examine various graphical displays of data in order to investigate and analyze the underlying quantitative information, and develop critical thinking skills with regard to both the relationships between variables, and the phenomena of interest.

One famous example of graphical display presented to the students is Dr. John Snow's *Broad Street Pump* graph. The students examine the graph and then respond in writing to the following items (prompts adapted from Tuft's *Beautiful Evidence*, 2006):

1. Place the data in an appropriate context for answering cause and effect;
2. Make quantitative comparisons;
3. Consider alternative explanations and contrary cases;
4. And assess possible errors in reported numbers.

Students are then asked to describe the narrative story told by the underlying data—to describe the connections between the location of water pumps and the frequency and location of reported cholera deaths.

This presentation shared examples of student writing and thinking regarding visual data displays and presented original graphical displays constructed by students.





## Submissions Sought for the *Journal of Experimental Education*

You are invited to submit manuscripts to *The Journal of Experimental Education* (JXE). JXE publishes theoretical, laboratory, and classroom research studies that use the range of quantitative and qualitative methodologies.

Recent articles have explored the correlation between test preparation and performance, enhancing students' self-efficacy, the effects of peer collaboration among students, and arguments about statistical significance and effect size reporting. In recent issues, JXE has published examinations of statistical methodologies and editorial practices used in several educational research journals.

## In-progress Research Paper Gala for Graduate Students

Division D is seeking graduate students who are interested in sharing their in-progress research with an audience of interested researchers, including a panel of reviewers who will provide feedback on the research. Research proposals will be reviewed by a panel of professionals and scholars in the field and the top 3 will be honored at the Division D Business Meeting. The overall best proposal will receive conference registration fee for the 2011 conference. All participants in the Division D In-Progress Research Gala will have the opportunity to network with researchers in the field of measurement and research methodology, including senior scholars whose work shaped the field and representatives from higher education and industry.

More information about the In-Progress Research Gala and the proposal guidelines are available on the graduate student committee's website at (see under Points of Interest): [http://www.aera.net/divisions/Default.aspx?menu\\_id=70&id=3896](http://www.aera.net/divisions/Default.aspx?menu_id=70&id=3896)

Important dates to keep in mind are:

**November 23** - statement of intent due (available from the website)

**December 21** - summary of research project due

We hope you will consider taking advantage of this professional opportunity to share your research plans, to receive feedback from scholars in the field, and to network at the research gala.

We also invite all scholars in the Ed Stats SIG to come to our second annual Gala at the AERA Meeting. During this session, which is a networking, mentoring, academic, and social event, measurement and research methodology graduate students share posters of their in-progress research. Students will be available to discuss their studies, including the conceptual framework, their research questions, and research design and methodology. We encourage you to attend to provide participants with feedback and new perspectives that could influence the in-progress research as well as to be renewed by the many creative projects being designed by new researchers. Refreshments will be provided.

*Dubravka Svetina and  
Karen Rambo*  
Div D GSC Representatives

# **Alternate Assessments Based on Alternate Achievement Standards: Policy, Practice and Potential**

*Edited by William D. Schafer, Ed.D., & Robert W. Lissitz, Ph.D.*

What really works in alternate assessment based on alternate achievement standards?

Every state is working to know the answer—both to comply with federal requirements for evaluating students with severe cognitive disabilities, and to ensure that all students reach their full potential. This comprehensive book is the first to gather today's best knowledge about alternate assessments so professionals can act quickly to shape the future of this rapidly developing field.

An urgently needed resource for assessment developers, researchers, policy makers, special education directors, and students in graduate-level courses in both special education and assessment, this book is a rigorous investigation of the challenges, recent successes, and key components of assessing alternate achievement standards.

Top assessment experts show readers

**What we know about alternate assessments.** Readers will start with the foundational knowledge they need for effective development and implementation. They'll learn how to determine which students should take alternate achievement standards assessments, what these assessments should measure, how to align assessments with state standards, and how to set standards for and evaluate the success of these unique assessments.

**What's working today in states across the country.** Diverse examples of programs from seven states—complete with insightful commentary from the experts behind the programs—give readers an inside look at approaches such as skills checklists, portfolios, and performance tasks. Includes in-depth information on program development and technical data.

**What we need to know going forward.** Today's most prominent experts come together to give readers clear direction for future efforts. Developers and evaluators will discover what new knowledge they should expand in the next few years, and they'll get specific take-away ideas they can use to ensure validity, reliability, and documented success in alternate assessments.

With this big-picture examination of one of the most critical new topics in education, researchers and practitioners will work together toward alternate assessments that accurately pinpoint the strengths and needs of students with severe cognitive disabilities—so their teachers can help improve academic outcomes for *all* students.

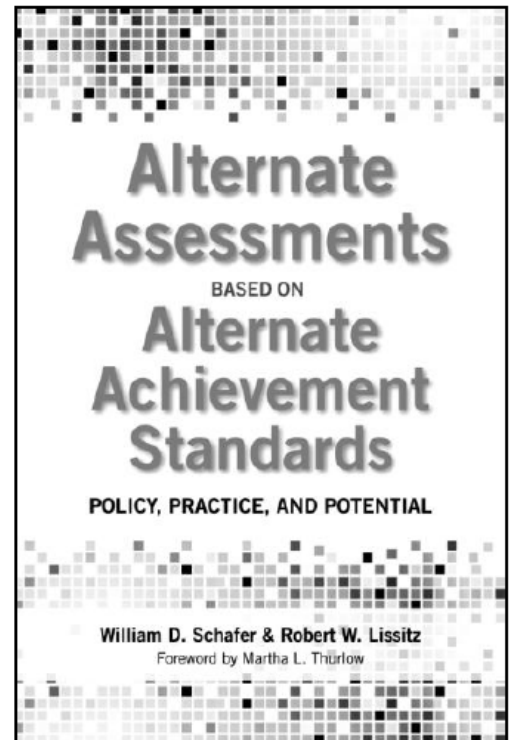
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# AERA Statistics Institute for Faculty Call for Applications

With support from the National Science Foundation (NSF), the AERA Grants Program announces the new **AERA Statistics Institute for Faculty**. The Institute's goal is to help develop a critical mass of U.S. education researchers using large-scale federal data sets, especially those sponsored by the National Center for Education Statistics (NCES), NSF, and other federal agencies. These data sets, which are often longitudinal and nationally representative, offer an excellent opportunity for students and early career scholars to conduct research and learn advanced quantitative methods with high quality policy relevant data. Secondary data analysis of federal data sets provides one of the most opportune and cost-effective ways of generating knowledge and contributing to policy deliberations based on large numbers of individuals and observations. This Institute aims to "train-the-trainers," enabling more education researchers to take advantage of these rich data resources.

## Eligibility

The AERA Statistics Institute for Faculty is geared for faculty members at postsecondary institutions who teach quantitative research methods courses at the graduate level and who seek to integrate the analysis of large-scale federal education data sets into the curriculum. Applicants may be faculty members in schools or departments of education, or from

other disciplines with an interest in education research. Prior experience using large-scale data sets is not required. Underrepresented minority researchers are strongly encouraged to apply.

## Description

The Institute will focus on how to incorporate secondary data analysis, especially the use of large-scale federal data sets, into the curriculum of quantitative research methods courses. Instruction will be provided in three interrelated areas: current statistical methods, information on the data sets, and complex issues of modeling and design. Topics such as weights, missing data, the pitfalls of using large-scale data sets, selection bias and causality will be included. Participants who attend the 3-day hands-on training should leave with the knowledge and resources necessary to teach the quantitative statistical methods learned at the Institute to students at their home institutions. Publicly available education data, such as the Education Longitudinal Study of 2002 ([ELS:2002](#)) and the Early Childhood Longitudinal Study, Kindergarten Class of 1998-99 ([ECLS-K](#)), will be used in this training.

## Participant Fellowships

A select group of faculty will be chosen to participate in the Institute. Those selected for participation will receive support covering the Institute's fees, transportation to Stanford, CA, housing, and per diem for the dates of the Institute.

## Dates and Location

June 18-20, 2010, in Stanford, CA

## Institute Personnel

### *Director:*

William Schmidt, Michigan State University

### *Faculty:*

Martin Carnoy, Stanford University  
Richard Houang, Michigan State University  
Chandra Muller, University of Texas at Austin  
Others TBA

## Application Submission

The deadline for applications is **January 6, 2010**.

**Information and the application procedures can be accessed at**

[https://www.aera.net/grantsprogram/res\\_training/stat\\_institute/SI\\_FacFly.html](https://www.aera.net/grantsprogram/res_training/stat_institute/SI_FacFly.html)

## Assistant/Associate/Full Professor (Tenure Earning) Quantitative Methods Position at Florida State University

The Measurement and Statistics program in the Department of Educational Psychology and Learning Systems at Florida State University seeks a quantitative methodologist with a strong program of research in quantitative methods relevant to educational problems. Candidates should have expertise in psychometric and/or statistical methods and an existing or developing program of research in this area. A focus on psychometrics and measurement issues is highly desirable. Candidates should have interest in, or experience with, obtaining external funding. Candidates will be expected to show potential for excellence in teaching graduate students in educational-statistics, psychometrics or research-methods courses, including advanced courses in his/her area of expertise, as well as interest in advising graduate students specializing in measurement and statistics. Applicants at the associate and professor ranks must have strong publication records in the area. Candidates with strong interests and/or experience in collaborating with colleagues from multiple disciplines, such as policy analysis, large-scale assessment, learning and cognitive research, and teacher education, and particularly candidates interested

in collaboration with the Office of Assessment at the Florida Department of Education are strongly encouraged to apply.

**Qualifications:** Candidates should possess an earned doctorate with a specialization in educational statistics, quantitative psychology or psychometrics, or a closely related field; and evidence of scholarship in quantitative methods.

**Application inquiries should be sent to:**

Dr. Robert Eklund; Chair, M&S Search Committee  
3204K Stone Building, MC 4453  
College of Education; Florida State University  
Tallahassee, FL 32306-4453

You may also contact Dr. Eklund at 850-645-2909 (phone), 850-644-8776 (fax), or by email at [erobert@fsu.edu](mailto:erobert@fsu.edu).

**DEADLINE TO APPLY:  
NOVEMBER 15, 2009**

Also though the closing deadline for the position is in November, we urge interested candidates to submit materials as soon as possible, because we will begin to interview as soon as we have a pool of qualified candidates.

Interested candidates must submit an online application at <http://www.jobs.fsu.edu>. The posting number for this position in the jobs.fsu.edu web site (described below) is 30922. The online application should include a letter of application documenting interest and qualifications, current vita, writing sample(s) in the form of published articles or manuscripts submitted for publication, and three letters of reference. For assistance in applying for faculty positions, please contact the Office of the Dean of Faculties at 850-644-6876.

*Florida State University is a comprehensive, graduate-research university with a liberal arts base located in Florida's capital city of Tallahassee. The College of Education has a long history as the second founded College in the University and offers undergraduate and graduate degree programs in 27 fields of study. Florida State University is an equal opportunity, affirmative action employer, and women, minorities and individuals with disabilities are strongly*



THE FLORIDA STATE UNIVERSITY



## Chair, Department of Education University of Maryland, Baltimore County (UMBC)

UMBC seeks an educational leader with vision and demonstrated ability to head the Department of Education in the College of Arts, Humanities and Social Sciences. Eligible to be appointed at Full Professor rank, the successful candidate for Chair must have a doctoral degree, a minimum of 5 years of administrative experience, a substantive scholarly record, and a record of successful teaching.

Located between Baltimore and Washington, D.C., UMBC is an NCATE-accredited, Carnegie Research University (RU/H) widely recognized for its commitment to diversity and excellence in undergraduate and graduate education, with a total enrollment of 12,000 students, 40% of whom are minorities. The Department has 80 full- and part-time faculty members, with 21 full-time faculty on tenure-track, clinical, and lecturer lines. Serving over 550 graduate students, the Department enrolls the largest number of graduate students on campus in the Master of Arts in Teaching (MAT) initial certification program, the Master of Arts in Instructional Systems Development Program, the Master of Arts in TESOL (Teaching English to Speakers of Other Languages), and the Master of Arts in Education (MAE) advanced degree program. It also partners with six other

departments in offering the interdisciplinary Ph.D. Program in Language, Literacy, and Culture. In addition, approximately 250 students are seeking initial teacher certification through the Early Childhood, Elementary, and Secondary Education undergraduate programs. The Department is actively engaged in state and national initiatives to increase the number of science, technology, engineering, and mathematics (STEM) teachers. The department also has strong online programs.

Committed to PreK-16 collaboration, UMBC has built strong ties with the State of Maryland's network of teacher education institutions, as well as partnerships with culturally and linguistically diverse school districts, including Professional Development Schools (PDS) and MAE cohort programs for in-service teachers. The Department also collaborates on several NSF grants designed to educate more STEM teachers, and has recently received a \$1 million U.S. Department of Education ESOL development grant, as well as substantial scholarship funds from private donors.

The Chair will supervise all departmental activities, including curriculum development, the department budget, personnel, and coordination of accreditation reviews for the Maryland State

Department of Education (MSDE) and NCATE. The Chair will also assist in the University's marketing efforts of Department programs and pursue funding opportunities. The Chair must be able to communicate effectively with multiple stakeholders.

Applicants should send a letter of interest including a description of major leadership accomplishments and research activities, curriculum vitae, and manuscript reprints to: Dr. Sarah Shin, Chair, Search Committee, Department of Education, University of Maryland Baltimore County, 1000 Hilltop Circle, Baltimore, MD 21250 or by email to [shin@umbc.edu](mailto:shin@umbc.edu). In addition, applicants should ask for three letters of reference to be sent to the same address.

Consideration of candidates will begin October 15, 2009 and continue until the position is filled; for optimal consideration, applications should be received by October 15.

For information about UMBC and the Department of Education, respectively, visit:

<http://www.umbc.edu/> and <http://www.umbc.edu/education/>.

UMBC is an Affirmative Action/Equal Opportunity Employer and encourages applications from a diverse pool of candidates.

## Ed Stats SIG

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Mark your  
calendars for a  
wonderful meeting  
in Denver in 2010!

We will soon be hosted from the AERA website! Until then, our temporary address is:

<http://homes.education.ucf.edu:16080/~ssivo/EDSTATS/Ed%20Stat%20Homepage.htm>

## Upcoming Conferences

American Educational Research Association (AERA)

[www.aera.net](http://www.aera.net)

April 30-May 4, 2010, Denver

Florida Educational Research Association Annual Meeting

[www.feraonline.org](http://www.feraonline.org)

November 18-20, 2009, Orlando



## 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