



SIG/Research in Mathematics Education
American Educational Research Association
<http://www.sigrme.org>

Fall 2005 Newsletter

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Important Changes

Members no longer receive a hard copy of the SIG/RME newsletter through U. S. mail unless they specifically request the hard copy. The newsletter will be available through the SIG/RME website. Each time a newsletter is posted, members will receive an email informing them of the newsletter's availability. Members can read the newsletter on-line or download it to have a hard copy.

Beginning in February 2006, members will no longer receive a hard copy of the SIG/RME Annual Membership Directory unless a specific request is made for the hard copy. As with the newsletter, members will be notified through email when the Annual Directory is available on the SIG/RME website.

Any member who would like to receive the SIG/RME newsletter and/or Annual Membership Directory in hard copy form rather than electronically should contact Rose Mary Zbiek at rmz101@psu.edu.

Remember to Vote for Officers

It's time for the SIG/RME officer elections. The biographies of the candidates appear below. You can vote electronically by going to the SIG/RME website (www.sigrme.org) or you can vote by using the ballot at the end of this newsletter. Either way, please vote! Ballots are due by January 1, 2006.

Officer Candidate Biographies

Co-Chair Candidates

Catherine A. Brown is a Professor of Mathematics Education in the School of Education of Indiana University, Bloomington. Her principal research interest throughout her career has been the professional development of teachers of mathematics. Dr. Brown is currently the Associate Dean for Research and Development for the School of Education at Indiana University. In this role she and her staff are responsible for assisting faculty, staff and students in their pursuit of external funding for their research and other activities. The School's six research centers report to her and she coordinates the School's R&D activities.

Dr. Brown has published articles and book chapters and given numerous talks and workshops related to her research. Recently she completed work on the Collaboration for the Enhancement of Mathematic Instruction, a three-year project funded by the Lucent Foundation to establish Lesson Study as a form of professional development for local secondary mathematics teachers as well as mathematicians and mathematics educators at Indiana University. She is currently a co-PI on the IU-NAEP Project, an NSF-funded project focusing on the mathematics assessments administered as part of the National Assessment for Educational Progress

(NAEP) program. Dr. Brown has overseen the authoring of teacher development materials, based on released NAEP items and other NAEP data. These materials will be published by NCTM sometime in 2006. In addition to her work in mathematics education, Brown is a member of and has recently been the Chair of the Executive Committee of the Organization of Institutional Affiliates (OIA). OIA is an organization of AERA, composed primarily of deans and associate deans, that is concerned with federal policies and their impact on educational research.

Barbara Dougherty is a Professor in the Department of Curriculum & Instruction at University of Mississippi in Oxford, MS. Her principal research interests are focused around the teaching and learning of algebra, associated with effective teaching practices emphasizing problem solving and communication strategies. Currently, she is the principal investigator of a technology project investigating the effects of the TI Navigator system on student achievement, attitudes, and classroom discourse in high school algebra. Additionally, she is the founding director of Measure Up, an elementary research and development project that emphasizes young children's acquisition of mathematics through measurement and algebraic concepts in grades 1–5. She continues as the director of the Hawaii Algebra Learning Project and was the lead developer of its professional development component that was recognized by the National Staff Development Council as one that changes teacher practices and improves student achievement (2001).

Dr. Dougherty has given over 100 national and international invited talks and workshops about mathematics education research on teaching and learning, including a plenary session for the International Meeting of the Psychology of Mathematics Education. She has authored more than 60 books and articles in mathematics education, primarily in the areas of algebra (K–12) and its associated teaching. These publications include curriculum materials, articles in the National

Council of Teachers of Mathematics journals, and international books, such as *The Teaching and Learning of Algebra* produced by the International Commission on Mathematics Instruction.

Dr. Dougherty has previously served on the Research Committee of NCTM (2001–2004) and was chair of this committee from 2002–2004. She is a member of a committee recently established by NCTM called Essential Understandings for Teaching and Learning whose mission includes addressing mathematics ‘Big Ideas’ in grades preK–12 through a series of publications.

Treasurer Candidates

Beth Herbel-Eisenmann is an Assistant Professor in Mathematics Education at Iowa State University where she teaches graduate courses on the teaching and learning of algebra, curriculum theory, and classroom discourse. She also teaches elementary mathematics methods and has supervised practicum students and student teachers. Dr. Herbel-Eisenmann’s research has focused on discourse in middle school mathematics classrooms, enacted and hidden curriculum, and teacher learning.

Dr. Herbel-Eisenmann is currently the PI for an NSF Early CAREER award entitled *Discourse analysis: A catalyst for reflective inquiry in mathematics classrooms*. This five-year project includes a team of eight teacher-researchers who teach in grades 6-10, two doctoral students, and Dr. Herbel-Eisenmann. Case studies of each teacher’s classroom discourse are underway. In the upcoming years, the teacher-researchers will use these case studies to develop action research projects that will prompt change to and study of their classroom discourse. The main goal of the project is to understand how middle grades mathematics teacher’s conceptions change in the process of doing action research on his/her own classroom discourse practices.

Dr. Herbel-Eisenmann is also a Research Associate for the Center for the Studies of Mathematics Curriculum (CSMC), one of the Centers of Teaching and Learning funded by NSF. Through this association, she has led working groups and done presentations related to teachers’ use of mathematics curriculum materials. She is the co-editor (with Drs. Janine Remillard and Gwen Lloyd) of a peer-reviewed book on this topic. Additionally, Dr. Herbel-Eisenmann has co-organized a new discussion group at PME-NA on classroom discourse and has been involved in two efforts related to classroom discourse at ISU (a cross-departmental discussion group on classroom discourse, which involves faculty and graduate students in English, education, sociology, mathematics, and anthropology, as well as the Consortium for Cross-Curricular Inquiry Related to Community, Language and Education (C²IRCLE)). Her work has been published (or is in press) in *Mathematics Teaching in the Middle School*, the *Mathematics Teacher*, and the *Journal of Mathematics Teacher Education*. She has also presented her work at AERA, NCTM, PME, PME-NA, and MERGA.

Despina Stylianou is an Assistant Professor at City College—The City University of New York. Her research interests lie in the area of mathematical cognition; her work explores the mathematical skills, sensibilities, and habits of mind and action that are critical to doing, learning, and using mathematics proficiently. In particular, she focuses on the use of visual representation and justification in the process of solving problems in advanced mathematics. This past year she was awarded an NSF Early CAREER grant to support her project *Fostering Mathematical Practices In Urban Classrooms: Focus On Representation and Justification*.

Dr. Stylianou is currently also a co-PI of an NSF-funded project on mathematical proof and she is co-editing a volume on the learning and teaching of proof. More information about

her work and publications can be found at www.theproofproject.org.

Steering Committee Candidates

Rochelle Gutiérrez is Associate Professor of Curriculum and Instruction at the University of Illinois, Urbana-Champaign, where she teaches undergraduate secondary math methods courses along with graduate courses in mathematics education. She has been a Spencer Dissertation Year Fellow, Spencer Post Doctoral Fellow, Fellow at the Bureau of Educational Research at the University of Illinois, and Summer Fellow at the Center for Advanced Study in the Behavioral Sciences at Stanford University. Among recent appointments, she was a member of the RAND National Study Panel on Mathematics and a member of the National Academy of Sciences' Committee on Increasing Urban High School Students' Engagement and Motivation to Learn. Before and throughout graduate school, she taught middle and high school mathematics to adolescents in East San José, California.

Dr. Gutiérrez has researched and written about: effective math teacher communities; the role of language in teaching Latina/o students mathematics; teacher biographies and math education; multicultural mathematics; definitions of equity in mathematics education research; preparing pre-service teachers for urban math classrooms; and the politics of practicing new mathematics reforms.

During the 2004-2005 year, Dr. Gutiérrez was a Fulbright scholar in Zacatecas, México, studying the teaching of secondary mathematics. The goals of this project are: 1) to document mathematics teaching in México and 2) to understand notions of collective teacher practice in order to help professionally develop teachers in the US and better support Latina/o students learning mathematics.

Dr. Gutiérrez' work has been published in *Mathematical Thinking and Learning*, *Journal of Curriculum Studies*, *American Educational*

Research Journal, and the *Urban Review*. She is currently on the editorial advisory board for *Journal of Mathematics Teacher Education*.

Miriam Gamoran Sherin is Associate Professor of Learning Sciences and in the School of Education and Social Policy at Northwestern University. Miriam's research focuses on mathematics teaching and learning, teacher cognition, and on the role of video in teacher learning. She is Principle Investigator of an NSF-funded project examining how recent video-based professional development programs for mathematics teachers help teachers to develop new ways to notice and interpret classroom interactions. Miriam previously taught middle-school mathematics. At Northwestern she teaches math methods for undergraduate and graduate students as well as graduate-level courses in teacher cognition and professional development.

Miriam served as co-chair of Division K Section 1 for the 2004 and 2005 AERA Annual Meetings. In April 2003, she received Division K's Early Career Award for her research on mathematics teacher learning. Recent articles have appeared in the *Journal of Mathematics Teacher Education*, *Cognition and Instruction*, and *Mathematics Teaching in the Middle School*.

New Directory Coming Soon

A new SIG/RME Annual Membership Directory will be available in January 2006. To ensure that you will receive the directory, please check your contact information in the current directory. If you do not have your hard copy at hand, you can check the electronic directory on the SIG/RME website. The user ID is **math** and the password is **sigrme**.

If any changes need to be made to your contact information, please notify Rose Mary Zbiek by December 15, 2006. You may notify

Rose by email at rmz101@psu.edu or by using the address correction form at the end of this newsletter.

NCTM Research Pre-Session Information

The NCTM Research Pre-Session will be held in St. Louis, Missouri, April 24-26, 2006. The opening session invited speaker will be Barry Sloane. His talk is titled *Unifying mathematics education research by quantifying qualitative insight*. A plenary session is also planned to address the conference theme of research to practice. The invited speakers, Ruth Heaton and Matt Larson, will discuss *Challenges of Researchers and Schools Working Together*.

The final program for the NCTM Research Pre-Session will be available in January 2006 through NCTM's website at <http://nctm.org>

Pre-registration for the Research Pre-Session will also be made available electronically through NCTM's website at <http://nctm.org> or by calling (888) 241-8406. On-site registration will also be available. For more information on registration costs, please consult the NCTM website.

AERA Information

The Annual Meeting of AERA will be held at the Moscone Center in San Francisco April 7-11, 2006. The SIG/RME invited speaker is John Bruer. His talk, titled *Spanning Disciplines*, will address educational insights in light of current research in cognitive neuroscience.

In addition to the invited speaker session, the SIG/RME 2006 program will consist of 6 symposia sessions, 4 paper sessions, 4 roundtable sessions, a poster session, and our annual Business Meeting. For program details as well as information regarding registration for the Annual Meeting and lodging, please consult the AERA website at

<http://aera.net/>. Pre-registration will be made available electronically at the AERA website in early December or through U.S. mail with the forms provided in an upcoming issue of *Educational Researcher*. On-site registration will also be available.

Graduate Students to Meet at the NCTM Research Pre-Session

At the 2005 Annual Meeting in California, the SIG/RME Board together with the NCTM Research Committee sponsored a graduate student session. Many attended and the consensus was that the session was useful to graduate students. In response to the demand, a graduate student session has been scheduled during the 2006 Annual Meeting at 6PM on Tuesday. Faculty representatives from the SIG/RME Board and the NCTM Research Committee will attend the meeting and act as mentors and supporters of the discussions. We encourage interested faculty to attend the 2006 session!

Call for Senior Scholar Award Nominations

In the business meeting at AERA 2005, SIG/RME approved changes in the Senior Scholar Award, to be given biannually. The guidelines for this award have been posted on the SIG/RME website. Changes made to the nomination process are also described in the Business Meeting Minutes included in the Summer 2005 newsletter, also available on the website.

The Special Interest Group for Research in Mathematics Education (SIG/RME) of AERA invites nominations for the Senior Scholar Award, to be presented at AERA 2007. This award recognizes and celebrates the programmatic research of a senior scholar within the field of mathematics education.

The SIG/RME will present the award to an individual who is active in mathematics education research at the time the award is granted and who is nominated by members of

the community as an exemplar in regard to the following two basic criteria.

The nominee has

- designed and carried out programmatic research that has been grounded empirically and has contributed to the theoretical development of the field;
- developed the research capacity of the field, as attested to by the existence of a “school of thought” or intellectual heritage whose constructs and results are used regularly by others.

One or more of the following criteria can strengthen the nomination. The nominee has also made

- major contributions to the broader field of educational research,
- a major impact to the practice of mathematics education at large.

Scholars worldwide can be nominated for this award and membership in AERA or SIG/RME is not required of the nominees. Self-nominations are not accepted.

Nominations must include the following.

A letter of nomination e-mailed to the senior steering committee member proposing the name of the nominee and describing the grounds on which the nominee meets the requirements for the award. Three criteria should be addressed in the letter:

1. A brief (no more than 250-word) description of the program of research carried out by the nominee;
2. A list of significant publications representing the contributions described, and;
3. A list of scholars who have been significantly affected by the work of the nominee. The list of scholars may include, but need not be limited to, doctoral students who worked with the nominee. Include current contact information for the list of scholars.

The nomination packet should be sent to

Eric Knuth
knuth@education.wisc.edu
University of Wisconsin
Teacher Education 476C
225 N. Mills Street
Madison, WI 53706.

All nomination packets must be received by **February 6, 2006**.

An awards committee composed of the senior co-chair, two retired scholars in mathematics education, and two active members of SIG/RME will decide on the award. The awardee will be expected to deliver the SIG/RME invited address at AERA 2007.

More information on the award, criteria and nomination procedures can be found at the SIG/RME’s website: <http://www.sigrme.org>.

SIG/RME Website

Please check our website at <http://www.sigrme.org> for information related to SIG/RME announcements, positions available, upcoming conferences, and much more. The Annual Membership Directory can also be accessed through the website. (The user ID is **math**, and the password is **sigrme**.)

If you have any information you think should be posted on the SIG/RME website, please contact Karen Hollebrands at karen_hollebrands@ncsu.edu.

Call for Early Career Publication Award Nominations

In 2001, the Special Interest Group for Research in Mathematics Education established the "SIG/RME Early Career Publication Award". The first award was presented in 2002. The most recent award was presented to Wanda Nabors in 2005 (see Winter 2005 Newsletter).

The purpose of the Early Career Publication Award is to recognize an outstanding mathematics education research publication by an individual within five years of receiving her/his doctoral degree. The award includes a stipend of \$500, announcement in the SIG/RME newsletter and on the SIG/RME website, and recognition at the annual NCTM Research Pre-Session.

The publication being nominated for the SIG/RME Early Career Publication Award may be based on the dissertation work of the nominee or other recent research the nominee has conducted. The nominee should be either the single author or the first author (in the case of a jointly authored publication). Note that only a peer-reviewed research publication is eligible for nomination; the award will not be given for a dissertation. The nominee should have received her/his doctoral degree in mathematics education no earlier than 5 years prior to the nomination deadline (e.g., no earlier than September 2000 for this year's nominations).

Nominations should include (and are restricted to) **2 copies** of the following items.

1. A letter nominating the author of an early career publication. Please include the name of the author, the date he/she received the doctoral degree, and the name of the institution that conferred the degree. The nominator should also include reasons that the paper should be considered as an example of an outstanding mathematics education research publication.

If the publication is based on the author's dissertation, please include the name of the dissertation director and complete bibliographic information about the dissertation (including the dissertation abstract's number). (Self nominations will be accepted.)

2. A copy of the paper, including complete bibliographic information.
3. A copy of the Table of Contents of the journal or other peer-reviewed research publication in which the paper appeared.

Nominations will be considered by a committee consisting of the Steering Committee members and the Electronic Communications Secretary of the SIG/RME Executive Board. The decisions of that committee will be final. Please send nomination materials **no later than January 15, 2006** to

Janine Remillard
Graduate School of Education
University of Pennsylvania
3700 Walnut Street
Philadelphia, PA 19104-6216
janiner@gse.upenn.edu

Membership Dues & Contact Information

A few years ago, a change occurred in our membership policy as dictated by AERA. AERA members may renew their SIG/RME

memberships through AERA at the same time they renew their AERA memberships. (Go to <http://aera.net> for membership information.) This way, all funds are processed by AERA, and your membership dates are always the same. Therefore, membership expiration dates no longer appear on the mailing labels of SIG/RME publications.

If you wish to be only a member of SIG/RME and not AERA, download the membership form from the SIG/RME web site, and send it to Rose Mary Zbiek with your dues. If you are currently a member of SIG/RME but not AERA and are unsure of your membership expiration date, please contact Rose Mary Zbiek.

It is important to note that slots on the AERA Annual Meeting program are

allocated to our SIG based on the number of people who are members of both SIG/RME and AERA. Therefore, we strongly encourage you to be a member of both organizations.

If your mailing address or other contact information is incorrect, please use the form at the end of this newsletter to send corrections to Rose Mary Zbiek.

**SIG/RME OFFICER ELECTION
BALLOT**

Note: You may vote by using this ballot or vote electronically by going to the SIG/RME website (www.sigrme.org).

Vote for one person for each office.

Co-Chair

_____ Catherine A. Brown

_____ Barbara Dougherty

Treasurer

_____ Beth Herbel-Eisenmann

_____ Despina Stylianou

Steering Committee

_____ Rochelle Gutiérrez

_____ Miriam Gamoran Sherin

Return your ballot by

January 1, 2006

to

Eric Knuth
knuth@education.wisc.edu
University of Wisconsin
Teacher Education 476C
225 N. Mills Street
Madison, WI 53706.

Address Correction Requested!

If your newsletter did not reach you at the correct address, please e-mail Rose Mary Zbiek (rmz101@psu.edu) with updated information, or mail the form below to her. If any of your contact information has changed since the last SIG/RME directory (e-mail address, phone number, etc.), please provide corrected information.

Please update my information!

Name _____

Institution _____

Mailing Address _____

Phone Number _____ Fax Number _____

e-mail Address _____ AERA Member Number _____

All SIG/RME members will receive the newsletter electronically. The Annual Membership Directory will be available electronically. *Please check the line only if you prefer to receive a paper copy of one or both documents.*

_____ Please mail me a hard copy of the newsletter.

_____ Please mail me a hard copy of the directory.

(This information will assist us with keeping our membership records accurate and up-to-date with AERA.)

Rose Mary Zbiek
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University Park, PA 16802
rmz101@psu.edu