



**SIG/Research in Mathematics Education  
American Educational Research Association**

**Fall 2003 Newsletter**

<http://www.sigrme.org>

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**Do You Know Someone...?**

Do you know someone who should be considered for the SIG/RME Early Career Publication Award? If so, please see *Call for Research Award Nominations* on p. 2 or contact Patricio Herbst at [pgherbst@umich.edu](mailto:pgherbst@umich.edu).

**SIG/RME Website**

The SIG/RME has a permanent website located at <http://www.sigrme.org>. Please check the website for information related to SIG/RME announcements, positions available, upcoming conferences, and much more.

If you have any information that you think should be posted on the SIG/RME

website, please contact Cengiz Alacaci at [alacaci@fiu.edu](mailto:alacaci@fiu.edu).

### Receive the Newsletter Electronically

If you would like to receive the SIG/RME newsletter electronically rather than by U.S. mail, please notify Cindy Langrall at [langrall@ilstu.edu](mailto:langrall@ilstu.edu). You will receive email notification each time the newsletter is published. You can then obtain the newsletter from the SIG/RME website at your convenience. Members who choose to receive the newsletter electronically will still receive a hard copy of the SIG/RME directory through U.S. mail.

### New Directory Coming Soon!

A new SIG/RME directory will be published in January 2004. 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 Cindy Langrall by December 15, 2003. You may notify Cindy by email at [langrall@ilstu.edu](mailto:langrall@ilstu.edu) or by using the address correction form at the end of this newsletter. Several copies of the last newsletter, as well as electronic notification of its publication, were returned due to incorrect address information. We want everyone to receive the new directory.

### Call for Research Award Nominations

The Special Interest Group for Research in Mathematics Education established the "SIG/RME Early Career Publication Award" in 2001. The first award was presented to Michelle Zandieh in 2002 (see Summer 2002 Newsletter) and the second award was presented to Patricio Herbst in 2003 (see Winter 2003 Newsletter). The purpose of the award is to recognize outstanding mathematics education research publications

by individuals within five years of receiving their doctoral degrees. 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 paper 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 paper). Note that only published articles are eligible for nomination; the award will not be given for a dissertation. The nominee should have received his/her doctoral degree in mathematics education no earlier than 5 years prior to the nomination deadline (e.g., no earlier than September 1998 for this year's nominations).

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

- (1) a letter nominating the author of an early career publication. Please include the name of 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 article 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 published paper, including complete bibliographic information.
- (3) a copy of the Table of Contents of the journal in which the paper appeared.

Nominations will be considered by a committee consisting of the Steering Committee Members of the SIG/RME Executive Board. The decisions of that committee will be final. Please send nomination materials **by January 16, 2004** to

Patricio Herbst  
School of Education, University of Michigan  
610 East University Ave. # 1350

Ann Arbor, MI 48109-1259

## Remember to Vote!

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](http://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, 2004.

## Officer Candidate Biographies

### Co-Chair Candidates

#### **Marta Civil**

Marta Civil is Professor of Mathematics Education in the Department of Mathematics at the University of Arizona. Her research interests are in teacher education, cultural and social aspects in the teaching and learning of mathematics, equity, and parental involvement in mathematics. Her work is primarily in working class, ethnic and language minority communities.

She teaches mathematics content courses for elementary teachers (K-8) (preservice and practicing teachers), mathematics education courses for preservice secondary teachers and graduate courses on research in mathematics education. She supervises masters and Ph. D. students. She also works with children and parents in local schools engaging them in mathematical explorations.

She has written several articles and chapters for researchers and for practicing teachers. She has directed a project aimed at incorporating families' knowledge of mathematics in school classrooms. She has also been the director of a gender equity project in Science, Technology, Engineering, and Mathematics. She is currently the co-director of a program for parental involvement in mathematics in the Southwest.

She is an active member of PME, PME-NA, AERA, and NCTM, both as reviewer and conference presenter. She has served as coordinator of a working group for PME, as member of the editorial panel for JRME, and is currently serving as a member of the

organizing team for a Topic Study Group for ICME-10.

#### **Judit Moschkovich**

Judit Moschkovich is Associate Professor of mathematics education in the Department of Education at the University of California Santa Cruz. Her research focuses on three main areas: the transition from arithmetic to algebraic thinking (especially representations of linear functions), mathematical discourse, and mathematics learning/teaching in classrooms with Latino English Language Learners.

She has co-edited a JRME monograph titled "Everyday and academic mathematics: Implications for the classroom," published research articles in *Cognition & Instruction*, *Journal of the Learning Sciences*, *Educational Studies in Mathematics*, *For the Learning of Mathematics*, and *Mathematical Thinking and Learning*, chapters in a volume on the graphical representations of functions and in the *Handbook of Research Design in Mathematics & Science Education*, and pieces for practitioners in two of the NCTM volumes *Changing the Faces of Mathematics*.

Her current research examines how middle-school Latino students learn to participate in mathematical discussions. She was the Principal Investigator of a National Science Foundation project (1998-2003) titled "Mathematical discourse in bilingual settings: Teaching and learning mathematics in two languages."

Before joining the Education Department at UCSC she taught undergraduate mathematics courses at San Francisco State University and worked at IRL and TERC as research scientist and project director. She currently teaches undergraduate and graduate courses in mathematics education, supervises doctoral students, and is the co-director of a service learning program for undergraduate mathematics majors interested in teaching.

She has served on the JRME Editorial Panel, the JLS Review Board, and on the AERA Professional Development and Training

Committee. She has been a reviewer for JRME, JLS, and ER. She is an active member of AERA, PME, PME-NA, and NCTM and ISLS (International Society of the Learning Sciences) as both a reviewer and conference presenter.

### Treasurer Candidates

#### **Joy W. Whitenack**

Joy W. Whitenack is Associate Professor of Mathematics Education in the College of Education at James Madison University where she teaches mathematics education and mathematics courses. Her research interests include teacher professional development, children's conceptualizations, and contexts for teaching and learning mathematics. As a consequence of these interests, she has conducted several classroom teaching experiments in elementary school classrooms as well as several professional development initiatives for K-5 teachers.

She has published articles in Journal of Mathematical Behavior, Educational Studies in Mathematics, Journal of Mathematics Teacher Education, Journal for Research in Mathematics Education, Journal of Mathematical Thinking and Learning, and Teaching Children Mathematics.

#### **Rose Mary Zbiek**

Rose Mary Zbiek is an Associate Professor of Mathematics Education at the Pennsylvania State University where she teaches undergraduate methods and content courses and graduate mathematics education courses. Her research focus unites interests in the role of representations in mathematical reasoning with mathematics technology and how students and teachers learn mathematics via mathematical modeling.

For the past five years, she has been a co-principal investigator for the Computer Algebra Intensive (CAS)-Mathematics Project. In addition to co-authoring the project's technology-intensive secondary school curriculum materials, she is currently editing a

collection of theoretical and empirical papers that articulate a new perspective on investigating and facilitating mathematical learning in technology settings.

She has co-edited book and journal issues and has published article and chapters in a range of research and practice venues, including Journal for Research in Mathematics Education (JRME), Educational Studies in Mathematics, and the Mathematics Teacher.

### Steering Committee Candidates

#### **Eric Knuth**

Eric Knuth is an Assistant Professor at the University of Wisconsin-Madison. His professional interests are in the areas of learning to teach mathematics, mathematics teacher education, the development of mathematical reasoning, and uses of technology in teaching and learning mathematics.

He is currently the PI on one NSF funded project and a co-PI on another. In the former project, his research seeks to understand how students acquire and develop their understandings of what constitutes evidence and justification in mathematics, and how such understandings can be extended and refined. In the latter project, the research seeks to understand middle school students' transition from arithmetic to algebraic reasoning, and to develop and evaluate effective educational approaches to improve the teaching and learning of increasingly complex mathematics.

His work has been published in the Journal for Research in Mathematics Education, Journal of Mathematics Teacher Education, Cognition and Instruction, and the Mathematics Teacher, among others.

#### **Miriam Gamoran Sherin**

Miriam Gamoran Sherin is Assistant Professor of Learning Sciences and Director of Undergraduate Teacher Education 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 is currently serving as co-chair of AERA Division K Section 1.

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* and *Mathematics Teaching in the Middle School*.

### **AERA Information**

The Annual Meeting of AERA will be held in San Diego April 12-16, 2004. The SIG/RME invited speaker is Etienne Wenger. His talk is titled *Learning in Communities of Practice: A Journey of the Self*.

The new AERA electronic process is not yet complete. Consequently, information about SIG/RME sponsored sessions is not currently available. This information will be posted on the SIG/RME website ([www.sigrme.org](http://www.sigrme.org)) as soon as it is available, which should be by the first of 2004. Additionally, information about SIG/RME, Division C.3, and Division K.1 sponsored sessions will be included in the Winter 2004 newsletter.

Pre-registration for the Annual Meeting can be made electronically through AERA's website ([www.aera.net](http://www.aera.net)) or through U.S. mail with the forms provided in the November issue of *Educational Researcher*. On-site registration will also be available.

### **NCTM Research Pre-Session Information**

The NCTM Research Pre-Session will be held at the Pennsylvania Convention Center in Philadelphia April 19-21, 2004. The opening session speaker will be Ed Silver, outgoing editor of *JRME*. His talk is titled *My Unfinished Editorial:...* The closing session's topic on Wednesday afternoon will be the Research Catalyst Conference, which will include representation from all the working groups.

A record 116 proposals were submitted for presentations at the Research Pre-Session. Seventy one of these proposals were accepted. The preliminary, tentative, and unconfirmed program for the pre-session can be found on pp. 7-11 of this newsletter.

Pre-registration for the Research Pre-Session can be made electronically through NCTM's website ([www.nctm.org](http://www.nctm.org)) or through U.S. mail with the registration forms provided by NCTM in the Preview Brochure that will be mailed to members in November. On-site registration will occur outside Room 105AB of the Convention Center on Monday, April 19, 4:30-7 p.m., Tuesday, April 20, 7 a.m. – 3 p.m., and Wednesday, April 21, 7 a.m. - noon. The registration cost is \$65.00 for the entire pre-session, \$32.50 for one day registration, and \$32.50 for student registration.

### **Graduate Students to Meet at the NCTM Research Pre-Session**

A graduate student session will be held at 4:30 p.m. on Tuesday, April 20 at the Pennsylvania Convention Center. This session is a follow-up to a call from graduate students, who at the 2003 SIG/RME Annual Business Meeting requested a session where they could become acquainted with each other, discuss important issues related to their developing identities as mathematics education researchers, and share their intellectual work.

This will be a working session where participants will discuss key issues and

brainstorm about ways that a graduate student organization could address them. Jim Middleton, chair of the NCTM Research Committee, and Randy Philipp, co-chair of the SIG/RME Executive Board, will be present to act as mentors and supporters of the discussions.

### **Check Your Membership!**

Please remember that there has been a change in the membership policy as dictated by AERA. You should now renew your SIG/RME membership when you renew your AERA membership. (Download the form at [http://www.aera.net/member/SIG\\_renewal\\_for\\_m.rtf](http://www.aera.net/member/SIG_renewal_for_m.rtf).) This way, all funds will be processed by

AERA, and your membership dates will always be the same. If you wish to be a member of SIG/RME only, download the membership form from the SIG/RME web site, and send it to Cindy Langrall with your dues.

**Because 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, we strongly encourage you to become a member of both organizations.**

If your mailing address is incorrect, please use the form at the end of this newsletter to send corrections to Cindy Langrall.

**NCTM Research Pre-Session  
Preliminary, Tentative, and Unconfirmed Program**

**Tuesday, April 20, 2004 – Pennsylvania Convention Center**

**9:00 a.m.**

- K. Renninger (Swarthmore College)  
*Collaboration as a Foundation for the Design and Usage of Technology Rich Problems.* (work session)
- Annette Baturu (Queensland University of Technology)  
*Improving the Mathematics Learning of Indigenous Australian Students* (thematic presentation)
- Raven Wallace (Michigan State University)  
*An Analysis of Mathematics Textbooks and Courses for Prospective Elementary Teachers* (research)
- Linda Davenport (Boston Public Schools)  
*Please Select: Leadership and Learning in Elementary Schools: Assessment* (research)
- Natasha Murray (University of Pennsylvania)  
*Multiple Perspectives on Negotiating Mathematics Reform in Urban Schools* (research)
- Zhonghe Wu (Texas A & M University)  
*Improving Mathematics Proficiency in Classrooms – Chinese Mathematics Lessons* (work session)

**11:00 a.m.**

- Sandy Dawson (University of Hawaii)  
*Mentoring Novice Teachers of Mathematics: What Methods Do We Use to Determine Success* (work session)
- Barbara Miller (Education Development Center)  
*Developing Strategic Leadership: Insights from Research and Practice* (research)
- Hollylynn Stohl (North Carolina State University)  
*Research on Students' Learning of Probability: Implications and Connections* (research)
- Denisse Thompson (University of South Florida)  
*International Project on Mathematical Attainment: Five Perspectives* (research)
- Paul Kehle (Indiana University)  
*What Are They Learning? Designing Studies of Elementary Math Curricula* (work session)

**(NCTM Research Pre-Session continued)**

**1:30 p.m.**

- Stephanie Behm (Virginia Tech)  
*A Math Projects' Impact on Preservice Teachers' Notions of Student Thinking*  
(poster session)
- Donna Diaz (Clemson University)  
*Teacher Development Through Research-Based Curricular Materials* (poster session)
- Angeles Dominguez (ITESM, Campus Monterrey)  
*Students' Algebraic Understandings of the Concepts of Variable and Function*  
(poster session)
- Shawn Garnett (Humboldt Elementary School, Portland Public Schools)  
*Balanced Approach to Mathematics: Developing Number Sense Through Reasoning* (poster session)
- Christopher Hartmann (Georgia State University)  
*Preservice Teachers' Use of Student Work as Warrant for Claims to Proficiency*  
(poster session)
- Gwendolyn Lloyd (Virginia Tech)  
*One Instructor's Experience Implementing Reform-Oriented Materials* (poster session)
- Chandra Orrill (University of Georgia)  
*InterMath: Five Implementations* (poster session)
- Enrique Ortiz (University of Central Florida)  
*Research Findings Involving Number Operations and Algebraic Thinking Games* (poster session)
- Anne Papakonstantinou (Rice University)  
*The Impact of a Professional Development Program on Teachers' Self-Efficacy*  
(poster session)
- Rebecca Perry (Mills College)  
*What Can We Learn from Lesson Study Debriefing Sessions?* (poster session)
- Olga Ramirez (University of Texas – Pan American)  
*South Texas Mathematics Teachers – Survey Data About Preparation* (poster session)
- Jeanne Rast  
*An Exploration of Children's Probabilistic Reasoning – A Bayesian Approach*  
(poster session)
- Celia Rousseau (University of Memphis)  
*Toward a Model of Mathematics Reform in Urban Secondary Schools* (poster session)
- Laurie Rubel (Brooklyn College, City University of New York)  
*Black-White Mathematics Achievement Gap: Teacher Beliefs and Practices*  
(poster session)
- Robb Sinn (North Georgia College & State University)  
*The Parent-Child Self-Efficacy Connection in Mathematics* (poster session)
- Laura Spielman (Virginia Tech)  
*Preservice Teachers' Observations of Children's Mathematical Thinking* (poster session)
- Olof Steinthorsdottir (University of North Carolina at Chapel Hill)  
*Proportional Reasoning: Hypothetical Learning Trajectory* (poster session)



## **(NCTM Research Pre-Session continued)**

### **1:30 p.m. (continued)**

Akihiko Takahaski (DePaul University)

*Three Major Forms of Lesson Study: Rigidity and Flexibility of Lesson Study*  
(poster session)

Robin Ward (University of Arizona)

*Preservice Teachers' Use of Representation in Math and Science Lesson Plans* (poster session)

Jesse Wilkins (Virginia Tech)

*Modeling Children's Early Developmental Patterns in Mathematics* (poster session)

Mathew Winsor (University of Texas at El Paso)

*Preservice Teachers' Knowledge of Functions and Its Effect on Lesson Plans*  
(poster session)

Joseph Winters (Middle Tennessee State University)

*The Impact of Locale and Looping on Mathematics Achievement in Tennessee*  
(poster session)

Makoto Yoshida (Global Education Resources)

*Enhancing Students' Understanding Through Effective Use of the Blackboard*  
(poster session)

### **3:00 p.m.**

Kathleen Morris (American Association for the Advancement of Science Project 2061)

*Using Classroom Videos as a Vehicle for Teacher/Research Dialogue* (work session)

Eric Gutstein (University of Illinois – Chicago)

*Parents of Color Speak on Math Education: Equity and Social Justice Issues*  
(research)

Joan Ferrini-Mundy (Michigan State University)

*NSF Investment in Mathematics Education: Past History and Future Directions*  
(thematic presentation)

J. Michael Shaughnessy (Portland State University)

*Some Aspects of Students' and Teachers' Conceptions of Variability* (research)

Beatriz D'Ambrosio (Indiana University Purdue University Indianapolis)

*Assessing Mathematical Reasoning by Embedding Tasks in Contexts* (research)

Rebecca McGraw (University of Arizona)

*Studying Teacher Development Through the Lenses of Community and Identity*  
(work session)

### **4:30 p.m.**

Randolph A. Philipp (San Diego State University) & James A. Middleton (Arizona State University)

*Identifying Issues to Support the Graduate Student Community*

**(NCTM Research Pre-Session continued)**

**Wednesday, April 21, 2004 – Pennsylvania Convention Center**

**8:00 a.m.**

- Robert Capraro (Texas A & M University)  
*Representational Models for the Teaching and Learning of Mathematics* (work session)
- Thomas Post (University of Minnesota)  
*Student Achievement and Reform Curricula* (research)
- Chris Rasmussen (Purdue University Calumet)  
*The Dialectic Relationship Between Undergraduate and K-12 Research* (research)
- Blake Peterson (Brigham Young University)  
*Preservice Lesson Study: Dialogue, Challenged Beliefs, Reflective Thinking* (research)
- Barbara Pence (San Jose State University)  
*From Tools to Knowledge and From Knowledge to Tools* (research)
- Gail Burrill (Michigan State University)  
*A National Study of Leadership in Mathematics Education* (thematic presentation)
- James Fey (University of Maryland)  
*New Conceptions and Strategies for Doctoral Preparation of Researchers* (work session)
- Barbara Dougherty (University of Hawaii)  
*Measure Up: A Research Perspective on Algebra for Young Children* (work session)

**10:00 a.m.**

- Rose Zbiek (The Pennsylvania State University)  
*Refocusing on Mathematical Modeling to Account for Learning and Discourse* (research)
- Carol Malloy (University of North Carolina at Chapel Hill)  
*Students' Perceptions of Engagement with Mathematics Reform Practices* (research)
- Kara Jackson (University of Pennsylvania)  
*Examining Parent-Child-School Relationships in Teaching and Learning Math* (research)
- Mary Brenner (University of California, Santa Barbara)  
*Publishing in the Journal for Research in Mathematics Education* (thematic presentation)

**1:30 p.m.**

- Diana Steele (Northern Illinois University)  
*In What Ways Do Students Meaningfully Generalize Algebraic Relationships?* (work session)
- Patricio Herbst (University of Michigan)  
*"Theory" in Mathematics Education Scholarship* (thematic presentation)
- Denise Mewborn (University of Georgia)  
*Building Practice from the Ground Up: Potential of Early Field Experiences* (research)

**(NCTM Research Pre-Session continued)**

**1:30 p.m. (continued)**

Jere Confrey (Washington University)

*On the Effectiveness of Mathematics Curriculum: Examining the Evaluations*  
(thematic presentation)

John Olive (University of Georgia)

*Coordinating Research on Student Learning, Teacher Cognition and Practices*  
(research)

Robert Reys (University of Missouri)

*Impact of Standards-Based Middle-School Mathematics Curricula-Three Studies* (research)

Karma Nelson (Montana State University)

*Improving Student Achievement in Mathematics in Low-Income, High Minority*  
(thematic presentation)

Michael Meagher (Ohio State University)

*Wireless Technology in Mathematics Education: Reflections and Directions*  
(work session)

**3:30 p.m.**

Research Catalyst Conference

## BALLOT

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

Vote for one person for each office.

### Co-Chair

\_\_\_\_\_ Marta Civil

\_\_\_\_\_ Judit Moschkovich

### Treasurer

\_\_\_\_\_ Joy W. Whitenack

\_\_\_\_\_ Rose Mary Zbiek

### Steering Committee

\_\_\_\_\_ Eric Knuth

\_\_\_\_\_ Miriam Gamoran-Sherin

Return your ballot by

**January 1, 2004**

to

Dan Chazan  
University of Maryland  
Center for Mathematics Education  
2226 Benjamin Building  
College Park, MD 20742

**Address Correction Requested!**

If your newsletter did not reach you at the correct address, please e-mail Cindy Langrall ([langrall@ilstu.edu](mailto:langrall@ilstu.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 the corrected information.

<b>Please update my information!</b>	
Name _____	
Institution _____	
Mailing Address _____	
_____	
_____	
Phone Number _____	Fax Number _____
e-mail Address _____	<u>AERA</u> Member Number _____
(This information will assist us with keeping our membership records accurate and up-to-date with AERA.)	
Cynthia Langrall Illinois State University Campus Box 4520 Normal, IL 61790-4520 <a href="mailto:langrall@ilstu.edu">langrall@ilstu.edu</a>	

Nancy K. Mack, Recording Secretary  
SIG/RME  
Grand Valley State University  
Department of Mathematics  
Allendale, MI 49401-9403