



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

Fall 2006 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.

In addition, members 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 Beth Herbel-Eisenmann at bhe@iastate.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, 2007.

Officer Candidate Biographies

Co-Chair Candidates

Sarah Burke Berenson (Sally) has dedicated nearly 20 years at NC State, helping to build a nationally and internationally recognized mathematics education program. Known for her creative approaches to investigating educational problems, her work focuses on the preparation of teachers and the under-representation of women minorities in science, technology, engineering and mathematics careers. Her efforts have impacted university faculty members (organizing 14 research conferences attended by more than 500 faculty members from around the world), K-12 teachers (gaining grant support to pay tuition and a stipend for more than 500 teachers to take graduate courses), and middle school and high school students (more than 5,000 students in two mathematics and science enrichment programs she has directed over the past 18 years). She has obtained more than 40 grants, published more than 85 research articles, delivered more than 60 presentations at national and international meetings, and supervised 15 doctoral and master's students. Berenson received the NCSU Holladay Medal, the highest award given by the Board of Trustees in recognition of faculty achievements. Previously she received the NCSU Outstanding Outreach and Extension Award and the Alumni Outstanding Outreach and Extension Award. She was elected chair of the North American Chapter of the Psychology of Mathematics Education, served as SIG RME secretary, was appointed research fellow in 2002 at Queensland University of Technology in Brisbane, Australia, and chaired the International Research Conference to Investigate Mathematical Reasoning.

Patricia Campbell is Associate Professor of Mathematics Education in the Center for Mathematics Education within the Department of Curriculum and Instruction at the

University of Maryland, College Park, MD. At Maryland, Dr. Campbell teaches undergraduate elementary mathematics methods courses as well as graduate courses in mathematics education. Her principal research interests address efforts to transform research on mathematics teaching and learning into effective school practice by stimulating and then studying implementation efforts in urban public schools. Contrasts between two such longitudinal implementation efforts have led to more recent interests investigating the nature of teacher knowledge and its implications for student achievement as well as the effectiveness of elementary mathematics specialists as a vehicle for school reform.

Dr. Campbell has published over 50 articles and book chapters and is a frequent speaker at national conferences. Her publications and presentations address issues spanning the teaching and learning of elementary mathematics, professional development, instructional change, and systemic reform. Currently, she is working on two NSF-funded research projects. As the principal investigator at the University of Maryland for the Mid-Atlantic Center for Mathematics Teaching and Learning, she is leading a research team investigating the relationship between the mathematical and pedagogical content knowledge of teachers in Grades 4-8 and their students' mathematics achievement, as measured by standardized state assessments in Maryland, Delaware, and Pennsylvania. Dr. Campbell is also a co-PI investigating the activity and impact of elementary mathematics specialists in a project involving the collaboration of mathematicians and mathematics educators from three universities and five school districts in Virginia.

Dr. Campbell's work addressing systemic reform in elementary mathematics with the Baltimore City Public School System was recognized with the Urban Impact Award from The Council of Great City Schools as well as the University of Maryland Board of Regents Faculty Award for Excellence in Public Service. Dr. Campbell was elected to the Board of Directors of the National Council of Teachers of Mathematics (NCTM) and was appointed to the National Research Council's Mathematical Sciences Education Board. She has served on numerous research advisory boards and professional task forces and has both chaired and served as Board Liaison for the Research Advisory Committee (now titled the Research Committee) of the NCTM.

Junior Steering Committee Member Candidates

Sandra Crespo is an Associate Professor of mathematics education in the Department of Teacher Education at Michigan State University. Sandra's research has focused primarily on preservice elementary teachers and their development as learners of mathematics and mathematics teaching. She is currently the PI of her NSF-CAREER grant that is studying prospective elementary teachers' learning of three essential practices of mathematics teaching—the practice of posing math problems to school students, the practice of interpreting students' mathematics, and the practice of responding to students' mathematical ideas.

Dr. Crespo was formerly a mathematics teacher. She taught mathematics to middle, secondary, and university level students. At Michigan State University she teaches undergraduate and graduate level courses in mathematics education. As a teacher and researcher she is committed to improving students' experiences with school mathematics. Sandra is involved in various curriculum and teacher development projects

that seek to engage a wider population of students in the study of mathematics. She works closely with teachers, especially those who mentor teacher preparation students, helping them to understand the big ideas of elementary school mathematics, to work with children's mathematical ideas, and to explore teaching practices that support students' meaningful and equitable participation with mathematics.

Dr. Crespo is a member of many research and professional organizations. She has served as reviewer to conference proposals and papers (i.e., AERA various divisions, NCTM, PME and PME-NA) and as a reviewer to various professional and research journals (i.e., JRME, TATE, JMTE, MTL, FLM, TCM). She has served in the program committees of research and professional conferences (PME-NA 2004, NCTM-Chicago, 2006). Her work has been published in *Educational Studies in Mathematics*, *Journal of Mathematics Teacher Education*, *Teaching and Teacher Education*, *For the Learning of Mathematics*, *School Science and Mathematics*, and *Teaching Children Mathematics*. To learn more about Sandra's work visit <http://www.msu.edu/~crespo>.

Olof Bjorg Steinhorsdottir is an assistant professor of Mathematics Education at University of North Carolina in Chapel Hill. She studies the teaching and learning of mathematics. Her research interests include students' understanding of mathematics, especially their understanding of whole numbers, fractions and proportion, and how gender, class, race and culture impact students' learning experiences and achievement. Steinhorsdottir teaches both undergraduate and graduate courses. At the undergraduate level she teaches mathematics method course for Elementary Education majors and Mathematics content course for Elementary and Middle school majors. At a graduate level she teaches mathematics education courses.

Steinhorsdottir is currently a PI of Children's Understanding of Numbers in Preschools in her native Iceland funded by the Ministry of Education in Iceland. Presently she also serves on the planning committee for the First School Initiative of the Frank Porter Graham Child Development Institute, a proposed school for three-year-olds through third graders. Steinhorsdottir has given numerous invited workshop internationally. Dr. Steinhorsdottir is an active member of PME-International, EECERA (European Early Childhood Education Research Association), AERA, NCTM.

Recording Secretary Candidates

Jeffrey Choppin is an Assistant Professor in Mathematics Education at the University of Rochester where he teaches courses on the theory of teaching and learning in mathematics education, implementing innovation in mathematics education, integrating literacy in mathematics education, and integrating technology in mathematics education. Dr. Choppin's research has focused on teachers' and students' discourse practices in middle school mathematics classrooms using NSF-funded curricula, particularly on how teachers socialize students into forms of mathematical argumentation. For the last two years, Dr. Choppin has helped initiate and organize a discussion group at PME focused on classroom discourse. Dr. Choppin's research has more recently focused on district-level reform and he is currently implementing a study that investigates the reform efforts in five districts that have implemented the Connected Mathematics Project (CMP) curriculum.

Dr. Choppin is currently a faculty associate on the Teachers/Leaders Quality Partnership Grant which focuses on collaborative professional development with Rochester City Public Schools mathematics teachers. He also leads the CMP Community of Inquiry, a group of middle school teachers from several districts in the Rochester, NY area who engage in sustained and reflective professional conversations about how CMP can be used to engage students mathematically.

Choppin taught mathematics for 12 years in Washington, DC public schools and won the Presidential Award for Excellence in Mathematics and Science Teaching in 1995. He has served as chair of the editorial panel of the *Mathematics Teacher*, the practitioner journal for secondary teachers published by the National Council of Teachers of Mathematics (NCTM). He was also a co-editor of the *Empowering the Beginning Teacher of Mathematics* series published by NCTM. Choppin has presented at AERA, PME, NCTM, and AMESA (South Africa) conferences.

Choppin has published in the *Mathematics Teacher* and in the 2003 and 2007 NCTM yearbooks, has written technical reports that focus on schools' use of data to make decisions and on the Institute for Advanced Studies /Park City Mathematics Institute professional development program, and has authored several editorials or letters in support of efforts to reform mathematics education, the most recent of which appeared in the Wall Street Journal.

John Kirk Lannin is an Assistant Professor in Mathematics Education at the University of Missouri where he teaches graduate courses on the research in mathematics education and on integrating mathematics and science in middle and secondary classrooms. In addition, he has designed and taught elementary content/methods mathematics courses for preservice teachers. Dr. Lannin's research has focused on the development of early algebraic reasoning and teacher development across the professional continuum from a teacher's apprenticeship of observation in K-16 schooling and continues through teacher preparation programs, instructional practice, professional development, leadership development, and other life and professional experiences.

Dr. Lannin is currently a Co-PI for several externally funded projects. These projects include NSF-funded projects that examine the development of teacher knowledge in alternative certification programs in mathematics and science and the impact of professional development that intertwines mathematics, science, and engineering design concepts in the middle grades. In addition, Dr. Lannin is involved with a funded project that has led to the development of an alternative certification program in mathematics and science education and a project that evaluates mathematics and science professional development projects in the state of Missouri.

Dr. Lannin is a co-editor of the Supporting Teacher Learning department for *Teaching Children Mathematics* and serves on the membership committee for the Association of Mathematics Teacher Educators. His work has been published (or is forthcoming) in *Educational Studies in Mathematics*, the *Journal of Mathematical Behavior*, *For the Learning of Mathematics*, *Mathematical Thinking and Learning*, the *Journal of Mathematics Teacher Education*, the *International Journal in Mathematics and Science Education*, the *Mathematics Education Research Journal*, *Teaching Children Mathematics*, *Mathematics Teaching in the Middle School*, and the *Mathematics Teacher*. He has also presented his work at AERA, AMTE, NCTM, and PME-NA.

Electronic Communications Secretary Candidate

Keith R. Leatham is an Assistant Professor in the Department of Mathematics Education at Brigham Young University where he teaches undergraduate and graduate courses in mathematics education as well as the occasional Calculus course.

Dr. Leatham's research focuses on the process of learning to teach mathematics. He continues to be interested in the role technology plays in this process as well as in how future mathematics teachers can best be prepared to use technology effectively with their students. His current research examines the purpose and structure of student teaching in mathematics. One of the primary objectives of the research is to investigate the ways in which the student teaching experience can be focused on students' mathematical thinking.

Dr. Leatham's work has been published in the *Journal of Mathematics Teacher Education*, the *Contemporary Issues in Technology and Teacher Education* and the *Mathematics Teacher*. He has also presented his work at NCTM, PME-NA and AMTE. He currently serves as Associate Editor for *JRME*.

Gwen Lloyd is Associate Professor in the Department of Mathematics at Virginia Tech. She teaches mathematics courses for preservice elementary and secondary teachers and she received Virginia Tech's Alumni Award for Teaching Excellence in 2003. Gwen is currently the Principal Investigator of an NSF-funded study of preservice secondary teachers' interactions with textbooks and curriculum materials in undergraduate mathematics courses. She is a member of the Editorial Panel of the *Journal for Research in Mathematics Education (JRME)* and a Research Associate of the NSF-funded *Center for the Study of Mathematics Curriculum*. Gwen's recent work has been published in *JRME*, the *Journal of Mathematics Teacher Education*, and *Educational Studies in Mathematics*.

Updated Directory Coming Soon

A new SIG/RME Annual Membership Directory will be available in January 2007. 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 Beth Herbel-Eisenmann at bhe@iastate.edu by December 15, 2007. You may also notify Beth 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 Atlanta, Georgia, March 19-21, 2007. The opening session invited speaker will be Alan Schoenfeld. His talk is titled *Problem*

Solving Reconsidered: Toward a Theory of Goal-Directed Behavior and will be held Monday, March 19, 7:00 PM. A plenary session is also planned for Wednesday morning and will highlight the theme, linking research and practice. The Pre-session program includes 45 Individual Sessions, 25 Research Symposia, 14 Work Sessions, and 33 Poster Sessions.

In addition, there will be a mentoring session for new faculty and graduate students on Tuesday, March 20, from 10:30 AM – noon. **Please let your graduate students know about this opportunity.**

The final program for the NCTM Research Pre-Session will be available in January 2007 through NCTM's website at <http://nctm.org>

Pre-registration for the Research Pre-Session is also 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 in Chicago, Illinois April 9-13, 2007. The SIG/RME invited speaker is Les Steffe. Les, the 2006 SIGRME Senior Scholar Award recipient, will speak on “Radical Constructivism as the Core of a Scientific Research Program”. The following is an abstract of the presentation:

In the paper, I portray radical constructivism as the core of a progressive research program in mathematics education that was originally known as “Interdisciplinary Research on Number [IRON].” Starting from Piaget’s explanation of the development of object concepts during the first two years of life, I will present the basic problem of this research program as explaining how we human beings might construct relatively stable and reliable mathematical concepts and operations . Understanding that mathematics is not innate nor given by the environment leads to the necessity of explaining how children *construct* mathematics. In my explanation, I will account for the scientific activity that is involved by means of differentiating between experiential and explanatory models of children’s mathematics. In the first case, I will explain how the scientist uses teaching as a method of scientific investigation and, in the second, how the scientist uses conceptual analysis as a method of scientific investigation. Following on from this account of the scientist in mathematics education, I will present an image of an epistemic mathematical mind constructing mathematics and, following on from this image, I will suggest the most important problems that need to be solved in understanding that constructive activity. In the latter part of the paper, I will comment on my view of the mathematical learner and my view of the mathematical teacher and contrast these views with recommendations that have been made by current political and professional organizations.

Congratulations, again, to Les Steffe for his selection as the first recipient of the SIGRME Senior Scholar Award.

In addition to the invited speaker session, the SIG/RME 2007 program will consist of 7 symposia sessions, 7 paper sessions (3 per session) 2 discussion paper 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.

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 Keith Weber in 2006 (see Winter 2006 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 2001 for this year's nominations).

Nominations should include (and are restricted to) 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 email your nomination materials **no later than January 15, 2007** to Miriam Gamoran Sherin at msherin@northwestern.edu.

If you are unable to email the materials, please send **2 copies** to Miriam at the following address:

Miriam Sherin
Northwestern University
School of Education and Social Policy
2120 Campus Drive
Evanston, IL 60208

Membership Dues & Contact Information

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 Beth Herbel-Eisenmann at bhe@iastate.edu 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 Beth Herbel-Eisenmann.

It is important to note that slots on the AERA Annual Meeting program are allocated to our SIG based in part 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 Beth Herbel-Eisenmann, bhe@iastate.edu.

**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

____ Sarah Berenson

____ Patricia Campbell

Recording Secretary

____ Jeffrey Choppin

____ John Lanin

Electronic Communications Secretary

____ Keith Leatham

____ Gwen Lloyd

Steering Committee

____ Sandra Crespo

____ Olof Bjorg Steinhorsdottir

Return your ballot by

January 1, 2007

to

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

Address Correction Requested!

If your newsletter did not reach you at the correct address, please e-mail Beth Herbel-Eisenmann (bhe@iastate.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.)

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