

# eNARST NEWS

National Association for Research in Science  
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## A MESSAGE FROM THE PRESIDENT – ORLANDO, FLORIDA 2011

Dana L. Zeidler

Our past conference in Philadelphia was quite a success under the leadership and vision of Rick Duschl, and the many efforts both overt and unseen by Bill Kyle, our Executive Director, the Executive Board Members, Strand Coordinators, Reviewers, Graduate Student Volunteers, Drohan Management, and all the participants. Thanks to all for a successful and enlightening conference!

I would also like to take this opportunity to welcome our new Board members: Steve Norris, University of Alberta, Canada; John Falk, Oregon State University; and Xiufeng Liu, University at Buffalo, State University of New York. Our new International Coordinator is Sibel Erduran, University of Bristol, UK and our President-elect is J. Randy McGinnis, University of Maryland. It is a great pleasure to work with our current board members and our new team.

We now turn our thoughts to the Sunshine State for the 2011 Annual International Conference that will be held at the Caribe Royale Orlando in Florida, April 3-6. The Caribe Royale is an All-Suite Hotel and Convention Center and will provide an excellent conference venue. Remember you can take advantage of hotel conference rates 3 days prior to and after the conference if you wish to extend your stay to take advantage of many internationally known theme parks, cultural and natural attractions that the greater Orlando area has to offer.

Now is also the time to begin thinking about the 2011 conference theme: *Global Sustainability and Public Understanding of Science: The Role of Science Education Research in the International Community*. As we continually revisit what our notions of educating to promote scientific literacy entails, we would be remiss if we failed to contextualize that notion in a



world where our future survival is intricately linked to the quality of the decisions our students and the public will make with respect to how they impact political, environmental and social matters of importance. If we accept the premise that global sustainability is predicated on the quality and commitment of world citizens to act in responsible ways, then it becomes imperative that the science education community take measured and deliberate steps to direct a significant portion of attention to aligning our research efforts in a manner that produces quality research and scholarship in ways that create opportunities to engage our students and the public to discuss, think and act on the many critical issues that confront us. This suggests that both pedagogy and curriculum foster a sense of conscience and respect to enter into such dialogues. We must ask ourselves where our responsibility as science education researchers

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## A MESSAGE FROM J. RANDY MCGINNIS, PRESIDENT-ELECT

The time since our NARST Annual International Conference in Philadelphia, Pennsylvania USA until present (end of May 2010) was a busy period. My time as newly elected President-elect was devoted to working closely with President Dana Zeidler and Past President Rick Duschl on priority tasks. I worked with Dana Zeidler to ensure that the NARST committee assignments for 2010/2011 were finalized. I thank the association's members who agreed to serve voluntarily as chairs, co-chairs and committee members. The association would certainly not be able to conduct its myriad functions without fully staffed committees. I also assisted Dana and the NARST Annual Meeting Scheduler, Toni Sondergeld to finalize the call for proposals for the 2011 NARST Annual International Conference, Orlando, Florida USA, April 3- April 6. I look forward to an exciting 2011 conference and to seeing everyone in such an engaging venue.

Past President Richard Duschl, who faced a scheduling conflict due to obligations at AERA, asked me to represent NARST at the Council of Scientific Society Presidents (CSSP) held in Washington, DC USA, May 1-4, 2010. The CSSP's biannual conferences bring together presidents of a wide range of scientific societies. Most of the societies focus on specialized science content, while a few, including NARST, focus on science education. Prominent presenters such as John Holdren, Director, Office of Science and Technology Policy, White House and Science Advisor for the USA President Barak Obama, and Robert Zoellick, President, World Bank briefed us on current critical scientific policy issues, while eminent

research scientists like Craig Hill, Emory University, and Michael Strauss, Massachusetts of Technology shared new scientific findings. I found Professor Jonathan R. Cole's presentation on contemporary issues in higher education particularly useful in considering possible impacts on our association's membership.

At the CSSP meeting, I was asked to chair, along with Patricia Simmons, President-elect of NSTA, the Mathematics and Science Education committee. I appreciated the opportunity to represent NARST's leadership in this area. Iris Weiss, President, Horizon Research presented to the committee her findings from an evaluation of the National Science Foundation's Math, Science Program (MSP). Based on her findings, our committee crafted a position statement for CSSP's consideration that supported the participation in education initiatives of higher education faculty in science, technology, engineering, and mathematics (STEM), and science and mathematics education. We advocated that such participation by faculty be positively measured in their formal performance reviews. Our position statement received unanimous approval by the CSSP voting members. Two other statements drafted by our committee that recommended that the CSSP support the development of scientifically, mathematically, and educationally sound common core USA curricula for K-12 and for CSSP to hold a Gordon-style conference on mathematics and science education were met positively but were not ready to be put up for vote. Those two positions will be developed and considered further at the winter CSSP meeting.

## A MESSAGE FROM THE PRESIDENT

lies in embracing a global vision of scientific literacy. I would encourage all to think about such issues as you craft proposals for the conference.

Related to the idea that NARST truly represents the finest efforts of an international research community, I wish to explore our organizational identity. In deciding to accept an invitation to run for the presidency of NARST, I made it clear that my main goal would be to provide the leadership necessary for us to carefully examine our presence as an international organization. NARST has historically been an American-based association, founded in 1928. The overriding mission of NARST is: "... to help all learners achieve science literacy." Given that we think of ourselves as the leading organization for advancing research in science education, and given that our international membership exceeds

30%, with the *Journal of Research in Science Teaching* recognized as an authoritative source for research in the field world-wide, perhaps it is time for us to rethink our identity from that of an American-based association to that of an international association. In other words, perhaps the "National" part of (N)ARST is too restrictive in terms of our identity as a global science education community.

I have, therefore, formed an *ad hoc* committee charged with conceptualizing our identity from an international perspective. Thus, they will be gathering information related to whether a name change is warranted for the Association – or even desired by members. There are numerous issues related to reconceptualizing our identity. The Committee will be communicating with members in the future to gather your input regarding these issues.

Obviously, any fundamental change to NARST's mission would ultimately require approval from the Board and

the Membership, since it would involve Bylaw changes. But it seems to me, that we ought to at least begin a dialogue on our future identity. I have asked J. Randy McGinnis, President-elect, to chair this *ad hoc* committee and he has graciously agreed to do so. We will formulate timelines and mechanisms for the refinement of ideas and keep the membership engaged throughout the process.

The Board does indeed work exceedingly hard on many matters related to the everyday business of NARST, as well as on many new initiatives, visions and goals for our Association. It is my intention to facilitate this process to the best of my ability.

I thank you for the opportunity and privilege to serve the NARST community. I look forward to seeing you in Orlando for the 2011 Annual International Conference.

*(PS – Don't forget the sunscreen!!)*

## A MESSAGE FROM RICHARD A. DUSCHL, PAST PRESIDENT

The 2010 International Annual meeting in Philadelphia was a success. Thank you to the presenters, the Strand Coordinators and to the Board members for helping to pull together the exciting workshops, paper sessions and sponsored symposia on the conference theme 'Research Influencing Practice, Practice Informing Research'. Thanks also go to Bill Kyle, Robin Turner, and their team of graduate students and staff for coordinating the registration, banquet, receptions, and social events. And finally, a thank you to Toni Sondergeld for her leadership in putting together the on-line and published NARST conference program.

### NSTA John Glenn Center

The meeting in Philadelphia was in tandem with the annual meeting of the US based National Science Teachers Association (NSTA). NARST was well represented at this meeting with several sponsored sessions as well as many members participating in the Research Dissemination Conference on Elementary Science Education. In recent years, NARST and NSTA have taken steps to strengthen our ties as affiliate associations. We look to NSTA for advice on national policy and on national initiatives in matters of science education teacher professional development. One such initiative is the NSTA John Glenn Center for Science Teacher Education, a new facility that will provide space and resources for on-site and on-line events and activities involving science teacher professional development.



From left to right: Rick Duschl, Francis Eberle, Executive Director, NSTA and Julie Luft, NSTA Research Committee Director.

The NSTA 2010 national conference was the occasion for announcing the launch of the John Glenn Center for Science Teacher Education. I am pleased to report to NARST members that the NARST board voted to support a gift to NSTA in the amount of \$25,000 that will be paid out over the next decade. Francis Eberle, Executive Director, NSTA and Julie Luft, NSTA Research Committee Director are pictured above with me at the reception honoring major donors. In recognition of

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## A MESSAGE FROM THE PAST PRESIDENT

our substantial gift, NSTA has made a commitment to involve and engage NARST in future research dissemination and research and development activities including conferences, webinars, and special reports of research in NSTA publications. We are excited about this deepening and broadening relationship with NSTA and with the other NSTA affiliates. Discussions are taking place for NARST to receive a naming opportunity in the lobby/reception area of Glenn Center auditorium. I am hopeful and will propose to the NARST Board that we place a plaque in that space listing the recipients and affiliates of the Distinguished Career Award and updated annually. The plaque will serve as concrete evidence for NARST's commitment to 'Research Influencing Practice.'

### NARST Endowment

NARST is a well-respected international organization. In December 2009 NARST went live with accepting donations. A next step in our growth is establishing an endowment. The NARST Leadership has created an *ad hoc* committee to develop a strategic plan for NARST endowments. John Falk and I will lead this initiative. John and I would welcome your thoughts and ideas about how to proceed with developing a plan for building the NARST endowment. I am hopeful in the years to come we can secure foundation, corporate and philanthropist endowments that can be used to support NARST's continued outreach in areas of policy, research and development.

### NARST Retreat for Strategic Planning

The 2010 March Board meeting took place the day before and day after the annual meeting. This year time was given over to some brainstorming about the structure and activities of the organization. Board members were split into small groups and were asked to report back on three questions:

- What is NARST doing, and doing well, that you want to see continued?
- What has NARST begun to do that you want to see continued?
- What is NARST not doing that you'd like to see taking place?

After two hours of discussions and reporting out conversations, the Board members were energized about the opportunity to rethink how NARST does its business. For the upcoming Board meeting in October, we agreed to show up a day early and to use that day to continue brainstorming how NARST can become a better association. Topics will include a review of our Strand structures, a review of our committee structures, a review of Board member duties, among others.

So, I invite NARST members to contact a member of the Board or one of the three Presidents if you have some suggestions or personal responses to the questions above.

# NARST 2010 AWARDS

## Awards Committee

Phil Scott and Xiufeng Liu, Co- Chairs

## DISTINGUISHED CONTRIBUTION THROUGH RESEARCH AWARD

Two awards were made for Distinguished Contributions through Research at the NARST 2010 Annual International Conference, at Philadelphia.

**Reinders Duit**, IPN Leibniz Institute of Science Education  
University of Kiel, Germany

Reinders Duit is a pioneer in the field of science education and this award recognizes his unique contributions that span more than four decades of exemplary research, service and leadership. His prodigious research output has been of the highest quality throughout his career. Reinders has been a role model not only in terms of how he has personally conducted research but also in the remarkably positive manner with which he has engaged with colleagues in Germany, Europe, and throughout the world.

Reinders is particularly well-known for his research on several aspects of science education including: students' understandings of physics concepts at school and university, science instruction, and professional development. In recent years he has used the Model of Educational Reconstruction to link research on teaching and learning with instructional design. Reinders has a particular gift for synthesizing, blending ideas from different areas of study, and distilling the essence of research findings. His reviews of research provide a model for future scholars.

Reinders has contributed to the remarkable growth of science education in Germany and to the awareness internationally of the IPN as one of the major world centres for research in science education. His contributions to science education around the world through collaborations and presentations in Asia, Australasia, Europe and North and South America continue to shape the field of science education. He has achieved all of this with unique wit and good grace without seeking personal aggrandizement. Reinders is universally regarded as a unique and outstanding scholar whose presence at any event provokes inspiration and affection in equal and deserved measure.



*From left to right: Reinders Duit, Richard Duschl and Joe Krajcik*

**Joe Krajcik**, University of Michigan

Joe Krajcik has an unbroken string of leadership experience in directing multi-disciplinary research projects that span a wide range from elementary to post-secondary education. He has made important contributions to project-based science, student modelling skills and accompanying software innovations, the role of explanations, and the role of visualization in learning chemistry. Not only is Joe at the cutting edge, he often defines it. He has provided leadership to the research community in different ways, and has built many successful and productive bridges between science educators, scientists, teachers, and school districts that integrate teacher professional development with the creation and implementation of innovative teaching materials and methods.

Joe also provides leadership through international collaboration: mentoring researchers, sitting on review panels and taking part in projects in countries such as Taiwan, China, South Korea and Israel. He has mentored an impressive cadre of graduate students and post-doctoral fellows who are now faculty, teachers, and administrators at universities, research institutes, and schools throughout the world. Many of his students have won prestigious young researcher awards from NARST and APA. Researchers, scientists, teachers, administrators, and funding organizations go to Joe to learn about new directions, get feedback on their ideas, and seek his collaboration. Joe's ability to combine a strong theoretical grounding with the realities of students and teachers in classrooms across diverse settings has resulted in research, innovations, and a general approach to science education that have both impact and staying power.

Joe is a most deserving recipient of the 2010 NARST Distinguished Contributions to Science Education through Research Award.



Tom Tretter (right) and Richard Duschl

## EARLY CAREER RESEARCH AWARD

**Thomas R. Tretter**, University of Louisville

The Early Career Research Award recognizes Thomas R. Tretter for his outstanding professional accomplishments. Thomas Tretter's record of research and publications make him well known and respected as an emerging scholar in Science Education, particularly in nanoscale cognition. Colleagues have described his work as innovative and significant. His scholarship sets the context for further research on student understanding of scale and also provides necessary diagnostic tools. As a recipient of the National Association for Research in Science Teaching Early Career Research Award, Thomas Tretter joins his predecessors in setting high standards for future awardees.



(From left to right) Richard Duschl, Mark W. Winslow, John R. Staver, Lawrence C. Scharmann

## OUTSTANDING PAPER AWARD AT NARST 2009

**Mark W. Winslow**, Southern Nazarene University

**John R. Staver**, Purdue University

**Lawrence C. Scharmann**, Kansas State University

Article title: *Evolution and Personal Religious Belief: Christian Biology-Related Majors' Search for Reconciliation at a Christian University*



Helen Patrick (right) and Richard Duschl

## JRST AWARD

**Helen Patrick, Panayota Mantzicopoulos and Ala Samarapungavan**, Department of Educational Studies, Purdue University

Article title: *Motivation for Learning Science in Kindergarten: Is there a Gender Gap and does Integrated Inquiry and Literacy Instruction make a Difference?*

Citation: *Journal of Research in Science Teaching*, 2009, 46(2), 166-191.



Heather Toomey Zimmerman, with Philip Bell (supervisor, right) and Richard Duschl

## NARST OUTSTANDING DOCTORAL RESEARCH AWARD

**Heather Toomey Zimmerman**

Dissertation Title: *Everyday Science And Science Every Day: Science-Related Talk And Activities Across Settings*

Institution awarding degree: University of Washington, College of Education, Seattle. Advisor: Philip Bell

Institution where Heather Toomey Zimmerman is currently working: Pennsylvania State University.

# EQUITY AND ETHICS COMMITTEE

Julie Bianchini, Chair

We begin by thanking our hard-working outgoing Equity and Ethics Committee members for their boundless enthusiasm, great ideas, and hard work: Felicia Moore Mensah, Lisa Martin-Hansen, and Jrene Rahm. Our current committee includes Michiel van Eijck, Sumi Hagiwaras, Kathy Fadigan, Doris Ash, Jim Ellis, Sarah Barrett, Matthew Weinstein, Geeta Verma, and Bhaskar Upadhyay. Please contact the chair, Julie Bianchini ([jbianchi@education.ucsb.edu](mailto:jbianchi@education.ucsb.edu)), to get involved in our committee and/or to provide input!

The Equity and Ethics Committee sponsored a number of important activities at the NARST 2010 Annual Conference. These included our Jhumki Basu Scholarship Program, Pre-conference Workshop, New Scholars Session, Sponsored Symposium, and the annual Equity Dinner at Cuba Libre in Philadelphia. Below, we describe these events in greater detail.

## Jhumki Basu Scholarships

Twelve new scholars were awarded 2010 Jhumki Basu Scholarships: Rezelie Barreto, Mohammad Basir, William Calhoun, Athena Banchorre, Shannon Graham, Miancheng Guo, Young (Gina) Lee, Enrique Lopez, Carmen Mendoza, Tapati Sen, Ashraf Shady, and Blakely Tsurusaki. Awards are to help early career science educators from underrepresented groups contribute to science education research, scholarship, and leadership. Award recipients received \$750 to attend the annual conference in Philadelphia. Congratulations to these amazing scholars!

## Pre-conference Workshop

The Equity and Ethics Pre-conference Workshop “Research into Practice: Practice Informing Research for Equity Scholarship and Teaching” was organized by Felicia Moore Mensah, Regina Wragg, Sarah Barret, and Lisa Martin-Hansen. This workshop is held every year. It is part of the E & E Committee’s charge to promote and support research from underrepresented groups at NARST – to provide opportunities for scholars of color and scholars who do research on equity to share ideas and develop relationships. The keynote speaker, Dr. Janell N. Catlin from Teachers College, discussed the Harlem Schools Projects and school and community partnerships. Forty-two NARST members attended. Regina Wragg and Geeta Verma will facilitate the 2011 E & E Pre-conference Workshop.



*Photographs are from from Equity Dinner at Cuba Libre in Philadelphia*

## New Scholars Symposium

In the New Scholars Symposium “Presenting Examples of Research into Practice and Practice Informing Research,” five winners of the 2009 Jhumki Basu Scholarship presented their research: Rashmi Kumar, Fran Mateycik, Joi Merritt, Younkyeong Nam, and Mamta Singh. Julie Bianchini served as the organizer, chair, and discussant. Each new scholar used a different theoretical frame and methodological approach to better understand issues of equity in the teaching, learning, and researching of science in schools. Lisa Martin-Hansen and Mamta Singh will organize the 2011 New Scholars Symposium.

## Committee-sponsored Symposium

Doris Ash and Jrene Rahm organized an interactive and informative symposium: “Learning to Participate in the Culture of Science through Connecting Research and Practice — Equity and Access in Science Education.” Panel members Bryan Brown, Pauline Chinn, Sumi Hagiwara, Noah Feinstein, and Maria Rivera Maulucci began the symposium by providing brief overviews of their research. Attendees then engaged with panelists in lively discussions of ways to achieve equity and access in science education. Doris Ash, Kathy Fadigan, and Matthew Weinstein will organize the E&E Sponsored Symposium for the 2011 conference.

# EXTERNAL POLICY AND RELATIONS COMMITTEE

Betsy Davis and John Falk, Co-Chairs

The External Policy and Relations Committee (EPRC) continues to work on efforts related to fostering the development of partnerships and collaborations with professional organizations and groups concerned with the quality of science teaching and learning. We also are working to support increased awareness among NARST members about policy issues relevant to science education.

## Policy for Affiliation with NARST

NARST should have meaningful affiliations with other science education organizations. Our recently-approved policy regarding affiliations indicates that affiliations might work toward collaborative organization of conference sessions, writing of position or policy statements, development of research studies, sponsorship of professional learning communities—or other joint ventures we haven't thought of yet! EPRC is working to bring our existing affiliations into accordance with the policy, and then to begin to foster new affiliations. Do you have thoughts about how we can make these affiliations even more meaningful, or about groups you think NARST might productively affiliate with? Please feel free to let us know!

## NARST at NSTA 2010

NARST hosted a booth at the 2010 NSTA annual meeting. We use the booth as a means to raise our visibility among K-12 classroom teachers. Thanks so much to all the NARST members who helped staff the booth. This is a great way to provide service to the organization and work to improve connections between NARST and the membership of NSTA! If you anticipate going to NSTA next year in San Francisco and are interested in helping to staff the booth, please email Betsy Davis at [betsyd@umich.edu](mailto:betsyd@umich.edu).

## Thanks!

A big thank you to all of the External Policy and Relations Committee members for their on-going hard work and dedication to the charge of the committee and mission of NARST.

## NARST External Policy and Relations Committee

Co-Chairs:  
Betsy Davis  
John Falk

Members:  
Michael Vitale  
Sharon Lynch  
Kevin Holtz  
Mike Barnett  
Nam Hwa Kang  
Kathy Malone  
Chris Wilson  
Meredith Houle  
Tim Scott

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Do you have any suggestions, comments, or questions about any of the above activities? Are you interested in becoming involved in the External Policy and Relations Committee? If so, please email the EPRC co-chairs, Betsy Davis ([betsyd@umich.edu](mailto:betsyd@umich.edu)) or John Falk ([falkj@science.oregonstate.edu](mailto:falkj@science.oregonstate.edu)), or any of the EPRC members.

# INTERNATIONAL COMMITTEE

Sibel Erduran, International Coordinator  
Mei-Hung Chiu, Ex-Officio Chair of International Committee

## IC Scholarship Award

The NARST International Committee offers travel scholarship to NARST members for attending the annual conference. We were pleased to announce the total amount of travel scholarship raised to US\$700 in 2009. The awardees are Dvora Katchevich, Jing Wen Lin, Carlos Ormond, Chris Tippet, Ji yeong Mun, Shirly Avarg, Shirly Avargil, Aylin Cam, Isha DeCoito, Ebru Kaya, Murat Gunel, Marie-Claire Shanahan, Angela Fitzgerald, Louisa Tomas, Anna Jobér, and Ozgul Yilmaz-Tuzun. All the applications were reviewed by two members of International Committee and then ranked them according to the scores they received. The top qualified 15 applicants receive the scholarships very year.

## Linking Science Educators Program (LSEP)

International Committee initiated the LSEP in 2008 and then two LSEPs have launched in Malawi in 2008 and in Nigeria in 2009. As the first LSEP resource person, Bill Kyle organized a session to discuss the implementation and impact of LSEP in Africa at NARST conference held in March 2010. This year, the LSEP 2010 was submitted by Peter Hewson and granted to Marissa Rollnick, University of the Witwatersrand, Johannesburg, Gauteng, South Africa. The program will offer a Research School with two resource persons, Julie Luft at Arizona State University, and Eduardo Fleury Mortimer from Federal University of Minas Gerais in Brasil, during June 7-11, 2010. A report is included in this edition of E-NARST News (see p.14).

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## INTERNATIONAL COMMITTEE

### International Committee Sponsored Sessions at NARST 2010 Conference

The International Committee also sponsored a session entitled as Challenges and Opportunities between Research and Practice – From International Perspectives. The discussant was Justin Dillon, King's College London. The presenters were Ling L. Liang, La Salle University; Xian Chen, Nanjing Normal University, China; Uri Zoller, Haifa University, Israel; Claudia von Aufschnaiter, IPN, Germany; Miancheng Guo and Norman G. Lederman, Illinois Institute of Technology; Vanashri Nargund, Indiana University; and Meredith A. Park Rogers, Indiana University.

Second, the symposium was organized by the first LSEP resource person, Bill Kyle, University of Missouri-St. Louis, USA, who has been very supportive to promote LSEP in the past two years. This symposium was entitled as The NARST Linking Science Educators Program (LSEP): Enhancing Capacity Building in Science Education in Developing Countries and the contributors to the papers were the LSEP program chairs and task group members from the first and the second LSEP. They were Bill C. Kyle, Jr.; Astrid T. Sinnes, Norwegian University of Life Sciences, Norway; Mercy Kazima, Chancellor College, Malawi; Dorothy Nampota, Chancellor College, Malawi; Uchenna Udeani, University of Lagos, Nigeria; and John E. Penick, Sangari, Brasil. Issues discussed included external persons's involvement in LSEP and respect each other's cultural differences.

Finally, Mei-Hung would like to express her sincere thankfulness to the NARST Board, IC members, and people who helped the IC carry out different projects for the past three



*(From left to right:) New International Coordinator, Sibel Erduran; Rachel Mamlok-Naaman, long-term member of the International Committee and Mei-Hung Chiu, Ex-Officio Member of International Committee.*

years. Not only the number of awardees was raised from 10 to 15 but the amount of each scholarship was also increased from \$500 to \$700. In addition, the Linking Science Educators Program (LSEP) launched. LSEP was conducted in four countries ever since. Furthermore, the Committee co-organized sessions for NARST annual conference with our affiliated associations including ASERA and ESERA.

### New International Coordinator

Sibel Erduran from University of Bristol, United Kingdom was elected the new international coordinator. Her term of 3 years started at the Board meeting of the NARST 2010 conference.



*Members of the International Committee at the 2010 Conference in Philadelphia.*

# MEMBERSHIP & ELECTIONS COMMITTEE

Renee' Schwartz, Chair

NARST is an international association with approximately 1400 members, representing 48 countries. With such diverse membership, we are seeking ways to increase communication and information access. Every NARST member has a voice in the organization. There are several ways to effectively express that voice that will shape and advance the mission of NARST, as well as support the professional growth of our membership. These include (1) nominating and voting for leadership positions; (2) getting involved in committees; and (3) building networks that support various needs of member communities (e.g. graduate students, new scholars, international members, research strands, etc). The Membership & Elections committee works to support these areas, as well as continue to build the NARST membership.



Attendees at the New Researcher and Junior Faculty Early Career Discussion

## 2010 NARST International Conference

The Membership & Elections committee sponsored three sessions at the 2010 international conference. These sessions support early career researchers and help new NARST members get acquainted with the conference and organization. The 2010 *Mentor-Mentee-Nexus* was organized by April Adams and Julia Grady. This session brought new and experienced NARST members together for conversation and to facilitate networking. The other two sponsored sessions were the *Graduate Student Forum*, organized by Mary Atwater and Corrine Lardy; and the *New Researcher and Junior Faculty Early Career Discussion*, organized by Julie Luft and Laura Henriques. Both had a panel of outstanding NARST members provide insights and guidance for attendees at these critical stages of their careers.

The NARST International Committee and the Membership & Elections Committee co-sponsored a session, *Research into practice: Various strategies in countries around the world*, organized by Mei-Hung Chiu and Reinders Duit. Contributing members were Julie Luft (USA), Phil Scott (UK), John Loughran (Australia), Chorn-Jee (Taiwan).

## 2011 Elections: Board of Directors and President-Elect

The process of electing three new Board members and President-elect is underway. Thank you to all who nominated NARST colleagues. Online elections will be held early in 2011. Let your voice be heard by voting!

## Getting Involved in NARST Committees

The M & E committee wants to raise awareness of committee opportunities within the organization. Committee work is one of the best ways to become involved. A list of current committees and their charges can be found in the NARST Policies and Procedures manual (NARST website: [www.narst.org](http://www.narst.org)). A list of current committee Chairs and members can be found in the 2010 conference program (also available through the NARST website). Each year there are openings on nearly every committee. Look for an announcement requesting volunteers and send your requests early in 2011. Members are also encouraged to volunteer to review conference proposals. Proposal reviews begin in late August. The Call for Proposals has information on how to volunteer. If you have questions regarding committee work or proposal review, please contact the Chair of the M & E committee, Renee' Schwartz ([r.schwartz@wmich.edu](mailto:r.schwartz@wmich.edu)), or the Executive Director, Bill Kyle ([bill\\_kyle@umsl.edu](mailto:bill_kyle@umsl.edu)).

## Creating an Online Presence for NARST

The organization is discussing ways to move NARST forward with available technology to increase membership communication, collaboration, information access and impact. The M & E committee has been part of these discussions. An ad-hoc technology committee, chaired by Charlene Czerniak, made great progress in identifying needs of the association to develop an online presence that includes a more interactive and useful website and discussion forums for special interest groups. The M & E committee looks forward to helping advance the process to better serve the needs of our membership.



Impression from the Mentor Mentee Nexus 2010

# PUBLICATIONS ADVISORY COMMITTEE

Jan van Driel, Chair

The Publications Advisory Committee wants to thank their outgoing members, Kathy Roth, Tamara Nelson and Tali Tal for their contributions, and especially Carla Zembal-Saul who served the committee as chair in the past 3 years. We welcome three newly appointed members: James Minogue, Eric Wiebe and Tahsin Khalid.

The PAC sponsored two highly successful sessions and one very well attended pre-conference workshop at the NARST 2010 meeting in Philadelphia. The new editors of the Journal of Research in Science Teaching, Angela Calabrese-Barton and Joe Krajcik, organised a session about publishing in JRST. Members of the editorial team and JRST Office personnel shared experiences and insights with potential authors and reviewers. The JRST editors also organized a pre-conference workshop on developing high quality reviews for JRST. In a very well attended 4-hour workshop the editors worked with reviewers to develop knowledge and skills for preparing high quality reviews for JRST, foster conversation on expectations for and purposes of reviews, and discuss how to handle common reviewer problems and questions. This workshop will be offered again for the 2011 Annual meeting

Finally, the PAC organized a session called Minding the Research–Practice Gap: Attending to the Dialogic Nature of Research AND Practice. This session showcased three examples of the dynamic interplay of research and practice as conveyed by NARST members and their teacher collaborators. After that, a panel of colleagues, with the presenters and the audience, discussed about ways of communicating results of research with practitioners. One of the questions was if and how to revive the NARST sponsored series Research Matters, brief summaries of research on various issues in science education with specific implications for classroom practice. In the PAC business meeting, following up on this session, a suggestion was made to co-operate with NSTA, to invest what sort and modes



of publications science teachers would be most interested in. NSTA is planning to conduct a survey among its 60.000+ members, to investigate their needs and interests. It was agreed in the PAC that, whatever form of publication will be prioritized, teachers should be involved in the process of producing them.

At the request of the NSTA Research committee, the PAC has worked together with the External Policy and Relations Committee and NARST Research committee to select relevant articles from recent volumes of JRST, that focus on elementary science teaching and learning and are likely to be of interest and accessible to participants at NSTA meetings. These articles were discussed at sessions during the National NSTA meeting in Philadelphia, at the Research Dissemination Conference. And, like last year, short summaries of the articles will be published in the NSTA journals. Together we have identified three papers which are listed below:

**Julia D. Plummer (2009).** Early elementary students' development of astronomy concepts in the planetarium. *Journal of Research in Science Teaching*, 46, 192-209.

**Ronald A. Beghetto (2009).** Correlates of intellectual risk taking in elementary school science. *Journal of Research in Science Teaching*, 46, 210-223.

**Schwarz, C. V., Reiser, B. J., Davis, E. A., Kenyon, L., Acher, A., Fortus, D., Shwartz, Y., Hug, B. & Krajcik, J. (2009).** Developing a learning progression for scientific modeling: Making scientific modeling accessible and meaningful for learners. *Journal of Research in Science Teaching*, 46, 632-654.

The PAC continues to welcome your feedback. Please contact me at [Driel@iclou.leidenuniv.nl](mailto:Driel@iclou.leidenuniv.nl) with your questions, suggestions, and/or interest in working with the committee.

# RESEARCH COMMITTEE

Troy Sadler and Stephen Norris,  
Co-chairs

For many years, the Research Committee has coordinated workshops that are held prior to the NARST annual conference. More recently, the Research Committee has assumed a role in coordinating the newly established Summer Research Institute for Doctoral Student Researchers. In this article, we want to share new opportunities for NARST members related to these two initiatives.

In the summer of 2009, the first Summer Research Institute (SRI) was held at the University of Missouri. Science education doctoral students and established researchers came together for a week-long program that featured small group mentoring, seminars and workshops. Based on the success of the 2009 SRI, the NARST Board approved support for future SRI to be held every other summer. The purpose of this initiative is to support the education and professional development of doctoral students involved in the study of science education. The Research Committee is currently soliciting proposals for hosting the 2011 SRI. Details related to available funding, proposal requirements, submission information, and resources to support proposal development are available on the NARST website (<http://www.narst.org/>). Proposals to host the 2011 SRI should be submitted to Troy Sadler ([tsadler@coe.ufl.edu](mailto:tsadler@coe.ufl.edu)) by August 1, 2010.

At the 2010 NARST annual conference in Philadelphia, the Research Committee coordinated three pre-conference workshops. One workshop, conducted by NSF program officers, focused on competitive grant proposals; another workshop, led by the new JRST Editors, focused on developing high quality manuscript reviews; and the final workshop, hosted by scholars from Drexel University and the University of Pennsylvania,

focused on using e-portfolios in teacher education. All of these sessions were well attended, and the participants offered very positive feedback.

The Research Committee recently completed a survey of the NARST membership with the aim of collecting data regarding topics of interest for future pre-conference workshops. We would like to use this information to better meet the needs of the NARST community. The most commonly suggested topic for future workshops was research methods. Respondents suggested several quantitative methods as particular areas of interest including hierarchical linear modeling, Rasch analysis, and structural equation modeling. In addition to research methods, the survey data suggested strong interest in workshop topics related to grant writing and publishing with some suggestions to create workshop opportunities for scholars at different stages of their careers. For example, a workshop on grant writing could target individuals new to grant writing; another workshop could be designed to serve the needs of more experienced grant writers. (We extend a special thanks to Alan Oliveira and Toni Sondergeld for conducting the survey and analyzing the results.)

We present this information here as a means of encouraging NARST members with expertise in these areas to consider hosting workshops at future conferences. The call for pre-conference workshop proposals for the 2011 annual conference in Orlando, FL will come out this summer. We look forward to receiving proposals that address a wide variety of topics and hope that at least some of these proposals focus on the topics identified as specific areas of need.

# A MESSAGE FROM THE EXECUTIVE DIRECTOR

Bill Kyle

## A SUCCESSFUL CONFERENCE!

The 2010 Annual International Conference at the Philadelphia Marriott Downtown was a resounding success. For the second year in a row we had around 1200 conference attendees. Your feedback regarding the conference, facilities, program, meal functions, and hospitality of the conference staff has been overwhelmingly positive. First time conference attendees commented on the welcoming spirit of the NARST community. Many others have indicated the NARST conference is THE single conference they look most forward to attending each year! Such accolades speak highly of our Association and our commitment to foster collegial relationships.

There is a lot that happens behind the scenes to ensure a successful conference. It is an enormous task each year, with little time between the end of one conference and preparing for the next. I encourage all NARST members to review the front matter of the conference program and extend a hearty thanks to individuals you know who have contributed to the success of recent conferences. I also encourage you to volunteer to contribute to the Association, thereby ensuring the legacy of success. It is the collective Association's vibrancy, collegiality, and camaraderie that we have come to associate with the NARST Annual International Conference. Such is the hallmark of a true professional community.

### Conference Registration Fees: Past and Present

Longstanding NARST members will recall the original notion for establishing conference registration fees was to ensure a fiscally self-sufficient conference. Revenue generated from conference registration fees had to equal conference expenses. Realistically, there was no other option; there were no surplus funds to offset overages on expenses and the Board did not believe membership dues should cover conference expenses. Many associations still operate under such a premise. Many associations without a royalty generating professional journal may have conference registration fees in excess of \$400 or \$500!

Since the mid-1990s, the financial culture within NARST has changed. Royalties from our internationally acclaimed journal have increased over the years, allowing membership dues to remain unchanged and conference registration fees to increase slightly over the course of the past decade. This is in spite of the fact that conference costs have increased tremendously during the same time period. Your conference registration fee now covers about 80 - 85% of the total conference expenses. In an effort to continue to keep registration fees as low as possible, we have begun negotiating contracts with commissions, with obligations for both parties. In the past 2 years NARST has demonstrated being up for the challenge of meeting such obligations.

There was the room block challenge associated with the Garden Grove conference in 2009. We invested \$10,000 for a mixer/reception on the final evening to entice individuals to stay one more evening. By meeting our room block requirement, NARST received the \$40,000 commission check. On May 25, 2010 NARST received a commission check in the amount of \$31,892 from the Philadelphia conference for having met our contractual obligations. Thus, we should be able to continue budgeting registration fees at 80 - 85% of expenses with the understanding that attendees must be willing to support the Association by staying in the conference venue at the negotiated rate. This is a win-win situation for both attendees and our Association.

I have been asked: What is the alternative? Quite simply it is not having a contractual arrangement with a hotel/conference venue and that scenario would play out as follows: NARST would pay for conference space at a small scale convention center, attendees would pay going rates at any of several hotels within close proximity of the venue, and the overall expenses for both NARST and members attending the conference would be considerably higher, most likely resulting in a conference registration fee in the \$400 to \$500 range vs. the current \$220. Thus, you might save a few dollars each night, the registration fee would double, attendees would be scattered throughout a city, and the venue would not be as nice as what we have become accustomed to in recent years. In summary, we will continue to offer the very best conference experience possible and maintain reasonable registration fees with the anticipation you will continue to stay at the conference venue to ensure the Association accrues the commission.

### Friendly Reminders

NARST is a 501(c)(3) organization in the USA and in accordance with IRS Code section 170 is able to receive tax-deductible contributions. I encourage you to consider making a donation to NARST to support a variety of Association initiatives. I encourage you to share this information with philanthropists and agencies. And, if you - or anyone you know - might be interested in planned giving or estate planning, then please contact me at your earliest convenience.

The Board acts on your behalf in a variety of ways. Each year a budget is approved following the October Board Meeting. NARST operates on a budgeting process that has the right level of detail and clearly defines expectations for both revenues and expenses. The Board is attentive to approving fiscally responsible budgets which are reviewed each year. The Board pre-authorizes all contracts, which are executed by the Executive Director. No individual is authorized to enter into a contractual arrangement with another party under the auspices of NARST and NARST is not legally responsible for unauthorized contractual arrangements.

Please be mindful that the Publications Advisory Committee and the Board endorse all NARST publications, brochures, and media. Individuals are not authorized to create publications, print or electronic media that appear to be official publications/sites of and/or NARST sponsored.

Please do not hesitate to contact me if you have any recommendations related to NARST and your membership. Your efforts to enhance science teaching and learning through research are greatly appreciated.

# LSEP RESOURCE PERSONS ATTEND SOUTHERN AFRICAN RESEARCH SCHOOL

Peter Hewson, University of Wisconsin-Madison



*Group picture of the Research School*

The Linking Science Educators Program (LSEP) brought two NARST members – Julie Luft, (Arizona State University) and Eduardo Mortimer (Universidade Federal de Minas Gerais) – as Resource Persons to the Research School held June 7-11 at Haga Haga on South Africa’s Wild Coast. Hosted by the Southern African Association for Research in Science, Mathematics and Technology Education (SAARMSTE), the school was attended by about 40 doctoral and post-doctoral researchers in science, mathematics and technology education, drawn from some 10 universities in Southern Africa. The school’s faculty consisted of 10 members.

Research School sessions concentrated on various aspects of the research process such as theoretical frameworks, data analysis, writing for publication, and supervision. These provided opportunities for participants to learn new approaches, discuss issues in small groups, have one-on-one consultations with experienced researchers, and work individually on their writing. Julie and Eduardo brought a fresh perspective to common issues of science, mathematics, and technology education that illuminated the different contexts in which research in different parts of the world is conducted. Eduardo explored three related argumentation frameworks as examples of the critical role that theoretical frameworks play in illuminating different features in data, and Julie provided a conceptual overview of data analysis through the essential links between theoretical frameworks, research questions and empirical data. The value of their contributions is illustrated in the words of Audrey Msimanga, a doctoral student: “(Julie’s) session helped me to think again about how my theoretical framework is threading through my analysis and interpretation of my data. (Eduardo’s) sessions were a godsend because they used a theory that I am working with as an example of how to adapt and use theory in thinking through the research all the way to analysis.”

The atmosphere Eduardo found in this research school surprised him. “Everybody was deeply involved in listening, speaking and understanding. The students spent each day discussing themes related to their theses – theoretical frameworks, data analysis, writing procedures – and in sitting



*Julie Luft in action*

with them at dinner you could hear the echo of these discussions through their elaborations. The school’s organization worked very well: it provided students with time and space for discussion, and a mixture of challenge and cooperation that engaged them. Everybody, including the facilitators, learned a lot and had a memorable experience. Southern Africa is a culturally diverse region. Seeing the mixture of different people working hard in the sessions, trying to get the best for their PhD, was great.”

This was a rare professional opportunity for Julie who “knew that I was supposed to attend the Winter Research School as a science educator from the NARST community. In this role, I would discuss various aspects of research with the students. This role was broadly conceived, with few parameters articulated. But the professional opportunity did not reside in this task. Instead, it arose from the unplanned interactions with the students, the moments that I needed to listen to the concerns of students, and the sessions that I had to work with my co-facilitators. It was during these instances and hours that we all became ‘one,’ working together to study and understand the learning and teaching in science and mathematics education. Academic positions were blurred, and together we contemplated pressing problems and various approaches to educational research. In this setting, we all learned about the importance of colleagues when pursuing important problems in science and mathematics education. This was the rare professional opportunity.”

The Research School Organizing Committee and SAARMSTE are very grateful to NARST and particularly the International Committee chaired by Mei-Hung Chiu for the LSEP grant. Peter Hewson, Marissa Rollnick and Tulsi Morar wrote the grant proposal.

# CALL FOR 2011 AWARD NOMINATIONS

Nominees are invited for the following NARST 2011 awards which will be presented at the awards luncheon at the 2011 NARST Annual International Conference in Orlando.

## NARST 2011 Distinguished Contribution through Research Award Nominees

The National Association for Research in Science Teaching seeks to improve science education through research. To this end, the Association desires to recognize and reward individuals who have made significant contributions to science education through research. Contributions may be of several types-including, but not limited to empirical, philosophical or historical research, evaluative studies, policy-related research, and studies reflecting new techniques to be applied in research.

The recipient of the Award should have contributed over a period of at least 20 years since the award of his or her doctorate and should be at the pinnacle of his/her career. This award is the highest recognition NARST can bestow for contributions to science education through exemplary, high quality research.

Nominations are due not later than August 30, 2010 to the address below.

All members are encouraged to consider nominating a colleague for this award. Self nominations are not permitted.

Please note that the award will be made to an individual who over a period of at least 20 years has:

- a) made a continuing contribution to science education through research;
- b) provided notable leadership in science education through research; and
- c) had substantial impact on science education through research.

All that is necessary to start the nomination process is for a NARST member to send a name or names with no more than a one-page letter supporting the nomination of the person.

**Please send the names of nominees to:**

**Peter Hewson (co-chair with Jonathan Osborne) at [pwhewson@wisc.edu](mailto:pwhewson@wisc.edu).**

## NARST 2011 Early Career Research Award

The NARST Early Career Research Award acknowledges contributions to science education through research by individuals during the five years immediately following receipt of the doctoral degree. To qualify for the award this year, the nominee must have received the doctoral degree on or after January 1, 2005. All NARST members are encouraged to consider nominating an eligible and deserving early career member.

Nominations for the award must be accompanied by the following supporting material:

- a) A letter of nomination which discusses the nominee's impact on the field;
- b) The nominee's vita;
- c) A two-page summary of the nominee's research interests, prepared by the nominee;
- d) Three of the nominee's best papers; and
- e) Two additional letters of support to be sent separately. The supporting letters need to discuss the context and significance of the nominee's scholarship so that the accomplishments shown on the nominee's vita may be better understood.

**Nomination materials should be received by the Committee Chair, Anita Roychoudhury at [aroychou@purdue.edu](mailto:aroychou@purdue.edu) no later than November 15, 2010.**

All nomination packages and materials should be sent electronically in PDF format.

## NARST 2011 Outstanding Doctoral Research Award

The NARST Outstanding Doctoral Research Award Selection Committee invites all current NARST members who completed a dissertation within the 15 months prior to September 15, 2010 to submit an expanded ten-page abstract (in PDF format) to the committee for consideration for the 2011 NARST Outstanding Doctoral Research Award. Submissions are sought from as wide a field of candidates as possible, inclusive of gender, age, and ethnicity.

Judging will occur in two rounds. The first round of judging will be based on the ten-page abstract. From these, a small group of applicants will be asked to submit one copy (in PDF format) of the complete dissertation. The final decision of the committee will be based on the complete dissertation. All applicants will be notified of their status after the first round of judging is completed in early November.

The committee welcomes doctoral dissertations from all research perspectives. The ten-page abstract should be structured to describe clearly the following: (1) purpose or objectives of the study; (2) conceptual/theoretical framework; (3) research approach/methods; (4) data sources and methods of analysis; (5) findings or results; (6) conclusions and implications; and (7) significance of the study. It is suggested that nominees model their abstracts after conference proposals submitted for NARST: Abstracts should foreground rationale, methods, and results.

Judging in both rounds (for abstracts and dissertations) will be based on the following three central questions: (1) Is the research question(s) being asked of importance to the community of science educators? (2) Is the research approach and its implementation thorough and appropriate for the research question(s) asked? And (3) Are the results and conclusions appropriate for the context of the study? Specific criteria considered in relation to these questions include: The significance of the research problem/area; conceptual/theoretical background; thoroughness of the research approach and methods; identification of conclusions/outcomes and their implications for science education; clarity and coherence of communication; and overall originality or creativity. In the past successful applicants have been those who were able to make a case for the significance of their study to the science education community as a whole and/or who convinced the reviewers of the originality of the questions asked or methods employed.

### Submission Procedure:

An all-electronic submission process will be used. Persons wishing to be considered for the award should submit an e-mail with the following three attachments (**in PDF format**): (1) one file containing a ten-page, double-spaced abstract (margins limited to one inch all around using 12 cpi font); (2) one file containing a five-page abbreviated bibliography; (3) one file containing a cover sheet which includes the author's name, address where they can be reached through December 2010, e-mail address, telephone and fax numbers, title of the study, the name and address of the institution where the dissertation was completed, a list of the members of the dissertation committee, and the date the dissertation was passed. This cover sheet should be signed by the major advisor/professor/supervisor or chair of the dissertation committee. An electronic signature is acceptable.

Alternatively, the dissertation supervisor/director can send an e-mail to the Chair of the Outstanding Doctoral Research Award Selection Committee endorsing the application and attesting to the accuracy of the information provided in the application. (Note: The title of the study should appear on the first page of the abstract, but the author's name and other identifying information should appear **ONLY** on the cover sheet.)

An e-mail with all three attachments must be received by: **Lynn Dierking at [dierkinl@science.oregonstate.edu](mailto:dierkinl@science.oregonstate.edu) no later than September 15, 2010.** We regret that the committee will be unable to consider incomplete or late applications.

Questions regarding this award should be e-mailed to the Chair of the Committee:  
Lynn Dierking at [dierkinl@science.oregonstate.edu](mailto:dierkinl@science.oregonstate.edu)

### SUBMISSION DEADLINES:

#### Distinguished Contribution Through Research

August 30, 2010

To: [pwhewson@wisc.edu](mailto:pwhewson@wisc.edu)

#### Early Career Research

November 15, 2010

To: [aroychou@purdue.edu](mailto:aroychou@purdue.edu)

#### Outstanding Doctoral Research

September 15, 2010

To: [dierkinl@science.oregonstate.edu](mailto:dierkinl@science.oregonstate.edu)