### The Project NExT Colloquium at The Joint Mathematics Meetings in New Orleans Thursday, January 6 – Sunday, January 9, 2011

**Thursday, January 6, 12:15 p.m. – Sunday, January 9, noon:** Project NExT Booth, #906, part of the MAA exhibit area in the Exhibit Hall, Grand Ballroom, 3<sup>rd</sup> Floor, New Orleans Marriott.

**Thursday, January 6 – Sunday, January 9:** Project NExT Session Room, Grand Ballroom D, Sheraton New Orleans.

#### **Project NExT Program Schedule**

# UNLESS OTHERWISE NOTED, ALL EVENTS ARE IN Grand Ballroom D, Sheraton New Orleans

#### Thursday, January 6

#### 8:00 a.m. - 9:15 a.m.: Assessing Students' Understanding

Panel: Maria Fung, Worcester State University Gladis Kersaint, University of South Florida Jennifer Kosiak, University of Wisconsin-Lacrosse William McCallum, University of Arizona

The touchstone of teaching is our students' mathematical understanding. However, it is not always easy to determine what aspects of the content our students do and do not grasp. Panelists will share their experiences with both summative assessment (which helps a teacher to evaluate student learning and assign grades) and formative assessment (which allows a teacher to adapt to student needs and guides further instruction). From traditional exams to group projects to verbal questioning techniques, members of the panel will discuss tools you can use to more confidently assess your students' mathematical understanding.

Organizers: (blue10 dots – 2010-2011 Project NExT Fellows):

Sylvia Carlisle, Eastern Illinois University

Vincent Kieftenbeld, Southern Illinois University – Edwardsville

Erin Militzer, University of Arizona

Erin Moss, Millersville University

#### Thursday, January 6 (cont'd)

#### 9:30 a.m. - 10:45 a.m.: Developing Students' Mathematical Language Skills

Panel: Warren Esty, Montana State University

Erica Johnson, St. John Fisher College

Lew Ludwig, Denison University

Jennifer Franko Vasquez, University of Scranton

As students transition into more independent learners, it is essential that they grasp the subtleties and rigor of mathematical language. Members of this panel will speak on their effective practices for developing students' ability to (a) read and critically reflect upon mathematical texts, (b) verbally articulate questions and explanations of mathematical concepts with peers as well as instructors, and (c) recognize and use the key elements of precise written arguments. As these skills are broadly transferable, we invite discussion on how to encourage their development with a variety of audiences.

Organizers: (blue10 dots - 2010-2011 Project NExT Fellows):

Leigh Cobbs, Lebanon Valley College Nick Scoville, Ursinus College Jana Talley, Jackson State University Narayan Thapa, Minot State University

#### 2:00 p.m. – 4:00 p.m.: Mathematics Education Swap Session

In this session participants will discuss issues related to the mathematics education of future teachers. In particular, we will be discussing content courses for future teachers at all levels – elementary, middle school and high school. Participants are encouraged to come prepared to share ideas that have worked for them and questions that they have for other participants. It is likely that the session participants will break up into small groups to discuss issues of interest. Organizer (Project NExT team): Judith Covington, Louisiana State University – Shreveport

4:00 p.m. – 6:00 p.m.:	Project NExT – Young Mathematician's Network Poster
	Session
	Napoleon A1 – A3, 3 <sup>rd</sup> Floor, Sheraton New Orleans
	(This session is open to everyone attending the meetings.)
Organizers: Michael Axtell, University of St. Thomas (gold Dot, 2000)	
Kim Roth, Juniata College (forest Dot, 2002)	

#### 6:00 p.m. – 8:00 p.m.: The Legacy of R. L. Moore Project – Educational Advancement Foundation Reception (in conjunction with Project NExT)

(in conjunction with Project NExT)

Riverview Room, 41<sup>st</sup> Floor of New Orleans Marriott Meet other Project NExT Fellows and find out more about inquiry-based learning and the Legacy of R. L. Moore Project. Appetizers and refreshments will be served at this private reception.

#### Friday, January 7

# 9:30 a.m. - 10:45 a.m.: Getting Involved in the Scholarship of Teaching and Learning

Panel: Thomas Banchoff, Brown University

Curtis Bennett, Loyola Marymount University

Jackie Dewar, Loyola Marymount University

Rebecca Schmitz, University of Minnesota

As graduate students, we spent most of our time thinking about our own research in pure or applied mathematics. However, as new faculty members, a significant portion of our jobs is devoted to teaching. We strive to become better teachers and increase the amount of learning that takes place in our classes, and many of us are interested in turning such efforts into scholarship that can be published. The aim of this session is twofold. First, it will serve to introduce scholarship of teaching and learning to new faculty members who know little about the subject. In addition, this session will address some of the specifics of carrying out and publishing scholarship of teaching and learning projects.

Organizers: (blue10 dots - 2010-2011 Project NExT Fellows):

Chad Awtrey, Elon University Judith E. Canner, California State University, Monterey Bay Chad Giusti, Willamette University Rebecca Swanson, Nebraska Wesleyan University

**11:00 a.m. – noon:** Session for consultants for the blue10 Project NExT Fellows In this session, we invite consultants for the blue10 Project NExT Fellows (2010-11 Fellows) to share ideas about how to be effective consultants. Organizers (Project NExT team):

Joseph A. Gallian, University of Minnesota-Duluth

Aparna W. Higgins, University of Dayton

## 2:30 p.m. - 3:45 p.m.: Interdisciplinary Collaborations for Research and Teaching

Panel: George Hart, Museum of Mathematics, NY

Rachel Levy, Harvey Mudd College, CA

Petronela Radu, University of Nebraska-Lincoln, NE

Padmanabhan Seshaiyer, George Mason University, VA

Interdisciplinary collaborations are valuable for both research and teaching purposes. The growth of fields such as mathematical biology and mathematical finance in the last two decades demonstrates the benefit of research collaborations. In addition to the traditional mathematical sciences, courses in social sciences and humanities can benefit from being taught by a mathematician and a non-mathematician working together. This panel will explore the ways in which interdisciplinary collaborations can promote professional development for ourselves and our non-mathematical colleagues.

Organizers: (blue10 dots - 2010-2011 Project NExT Fellows):

Janine M. Haugh, University of North Carolina, Asheville

Heidi Hulsizer, Hampden-Sydney College

Aminul Huq, University of Minnesota, Rochester

Nicholas Zoller, Southern Nazarene University

#### Friday, January 7 (cont'd)

4:25 p.m. – 5:25 p.m.:	Joint Prize Session Great Ballroom A-C, 5th Floor, Sheraton New Orleans (This session is open to everyone attending the meetings.)
5:30 p.m. – 6:30 p.m.:	Joint Prize Session Reception Armstrong Ballroom, 8th Floor, Sheraton New Orleans (This session is open to everyone attending the meetings.)

#### Saturday, January 8

#### 9:30 a.m. – 10:45 a.m.: Directing Undergraduate Research

Panel: Michael Dorff, Brigham Young University

Ruth Haas, Smith College

Keri Kornelson, University of Oklahoma

Darren Narayan, Rochester Institute of Technology

Undergraduate students are increasingly encouraged to conduct original mathematics research. Though it presents a wonderful opportunity for students, the prospect of mentoring undergraduate research can pose many challenges for mathematics faculty. This panel of experts will address many of the questions and concerns that faculty may have in mentoring undergraduate research such as how to prepare students for research and how to develop an accessible research project. Furthermore, there are many national and regional programs which support undergraduate mathematics research. The panel will identify many of these programs and discuss what resources are available for supporting research, presenting talks, and publishing papers.

Organizers: (blue10 dots - 2010-2011 Project NExT Fellows):

Dan Freeman, University of Texas at Austin Jobby Jacob, Rochester Institute of Technology Kristine Roinestad, Georgetown College Anne Yust, Birmingham Southern College

# 1:00 p.m. – 2:00 p.m.: Open Discussion with the Fellows' Department Chairs and Heads

The institutions where the Project NExT Fellows work make a substantial commitment to Project NExT by supporting the travel needed for the Fellows' participation in Project NExT. In addition to providing background information about Project NExT, this discussion between the leaders of Project NExT and the chairs and heads of departments of mathematics will address two questions: How can institutions get the most out of their investment in Project NExT, and how can Project NExT best help mathematics departments? Department chairs or heads for Fellows from all years are invited.

Organizers (Project NExT team):

Julia Barnes, Western Carolina University Aparna Higgins, University of Dayton P. Gavin LaRose, University of Michigan

#### Saturday, January 8 (cont'd)

# 2:15 p.m. – 3:15 p.m.: Informat

## Information Swap Session for Middle Dots: What role could Project NExT play for "middle dots" (that is, Fellows 4-10 years past their Fellowship year)?

We invite dots from years 2000-2005 to join us for a discussion to provide input for future planning. We would like to hear your thoughts on what your connections with Project NExT should look like now. Historically the Project NExT team has facilitated the organization, by Fellows, of JMM panel discussions aimed at this group of Fellows. Our discussion will explore whether this is what Fellows would like to see; ideas regarding the relationship between Project NExT and Fellows who are a few years past their Fellowship year; and in general what activities Project NExT should be involved with for these Fellows (at national meetings, or elsewhere). Possible additional topics include, but are not limited to, the ideas of "swap sessions" at national meetings in which Fellows could discuss topics of interest to them, additional panel discussions or similar sessions, and some sort of on-line network or community. Organizers (Project NExT Team):

Julia Barnes, Western Carolina University Judith Covington, Louisiana State University Shreveport Gavin LaRose, University of Michigan

# 3:20 p.m. – 4:40 p.m.:

# MAA Presentations by Teaching Awards Recipients Mardi Gras EFGH, 3rd Floor, New Orleans Marriott

(This session is open to everyone attending the meetings.) This session consists of presentations by recipients of this year's Haimo Award for Distinguished College or University Teaching. Two of this year's awardees, Erica Flapan (Pomona College) and Karen Rhea (University of Michigan), have served as presenters and consultants for various groups of Project NExT Fellows.

8:30 p.m. – 10:30 p.m.: Project NExT Reception Gallery Ballroom, 1<sup>st</sup> Floor, Sheraton New Orleans

(This event is open to everyone attending the meetings.) Enjoy meeting Project NExT Fellows, Section NExT Fellows, consultants, and other friends of

Project NExT. There will be complimentary desserts and a cash bar.

#### Sunday, January 9

### 9:30 a.m. – 10: 45 a.m.: Forming Research Collaborations

Panel: Michael Bolt, Calvin College

Jeff Hirst, Appalachian State University Suzanne Lenhart, University of Tennessee Irina Mitrea, Institute for Mathematics and its Applications, University of Minnesota Hien Tran, North Carolina State University

The benefits of approaching problems when one is not alone are numerous. Having additional perspectives can make research an extremely rewarding and productive experience. Panelists will give tips for finding collaborators. Panelists will also address determining what makes a good collaborative experience, strategies for getting a collaboration off the ground, resources that can help young faculty find collaborators, and how to manage a collaboration when one has little time during the semester.

Organizers: (blue10 dots - 2010-2011 Project NExT Fellows):

Alex Capaldi, Valparaiso University Yun Kang, Arizona State University Laurel Miller-Sims, Smith College Melanie Pivarski, Roosevelt University

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Project NExT (New Experiences in Teaching) is a professional development program for new or recent Ph.D.s in the mathematical sciences who are interested in improving the teaching and learning of undergraduate mathematics. It addresses the full range of faculty responsibilities in teaching, research, and service. Project NExT is a program of the Mathematical Association of America with major funding from the ExxonMobil Foundation and the Dolciani-Halloran Foundation, and additional funding from the Educational Advancement Foundation, the American Mathematical Society, the American Statistical Association, the National Council of Teachers of Mathematics, the American Institute of Mathematics, the Association for Symbolic Logic, the Association of Mathematics Teacher Educators, the Illinois Section of the MAA, the Maryland-DC-Virginia Section of the MAA, the Metro New York Section of the MAA, the Michigan Section of the MAA, the Southeastern Section of the MAA, The W. H. Freeman Publishing Company, John Wiley & Sons, and the MAA. More information about Project NExT can be found at http://archives.math.utk.edu/projnext/. The 2010-11 Fellows are the 17th group of Project NExT Fellows.

We thank blue10 Project NExT Fellows Joel Kilty, Centre College, and Elizabeth Thoren, University of California Santa Barbara, for coordinating the planning of the blue10 (2010-11) Fellows' sessions, and blue10 Project NExT Fellows Silvia Saccon and Emily Ronshausen, both of the University of Arizona, for organizing the staffing of the Project NExT booth.