

**The Project NExT Colloquium
at The Joint Mathematics Meetings
in San Diego
Wednesday, January 9 – Saturday, January 12, 2013**

Wednesday, January 9, 12:15 p.m. – Saturday, January 12, noon: The Project NExT Booth is #123, part of the MAA exhibit area in Exhibit Hall B1, Ground Level, San Diego Convention Center.

Wednesday, January 9 – Saturday, January 12: The Project NExT Session Room is Room 6D, San Diego Convention Center.

Project NExT Program Schedule

UNLESS OTHERWISE NOTED, ALL EVENTS ARE IN ROOM 6D, San Diego Convention Center.

Wednesday, January 9

9:00 a.m. – 11:00 a.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

2:15 p.m. – 3:15 p.m.: Session for consultants for the silver12 Project NExT Fellows

In this session, we invite consultants for the silver12 Project NExT Fellows (2012-13 Fellows) to share ideas about how to be effective consultants.

Organizers (Project NExT team):

Judith Covington, Louisiana State University Shreveport
Aparna W. Higgins, University of Dayton
Steve Schlicker, Grand Valley State University

Wednesday, January 9 (cont'd)

2:15 p.m. – 4:15 p.m.: Project NExT – Young Mathematicians' Network Poster Session

Exhibit Hall B2, Ground Level, San Diego Convention Center
(This session is open to everyone attending the meetings.)

Organizers: Michael Axtell, University of St. Thomas (gold dot, 2000-01 Project NExT Fellow)
Kim Roth, Juniata College (forest dot, 2002-03 Project NExT Fellow)

4:35 p.m. - 5:50 p.m.: Establishing Undergraduate Research Programs

Panel: Colin Adams, Williams College
Marianne Korten, Kansas State University
James Peirce, University of Wisconsin - La Crosse
Cynthia Wyels, California State University - Channel Islands

Establishing a successful undergraduate research program is a desirable, rewarding, and intimidating goal for many early-career mathematicians. This session seeks to provide practical advice for new faculty on establishing and developing such a program, with an emphasis on the expectations for undergraduate research found at a diverse range of institutions. Issues addressed will include finding, recruiting, organizing, and funding interested students who have an appropriate level of knowledge and experience. Panelists will also address other considerations in the initial weeks of a research program, such as selecting appropriate research questions, developing student research ability, managing differing levels of knowledge, and determining whether publication is an appropriate goal.

Organizers (silver12 dots – 2012-2013 Project NExT Fellows):

John Burke, Rhode Island College
David Clark, University of Minnesota
Courtney Davis, Pepperdine University
Azadeh Rafizadeh, William Jewell College

6:00 p.m. – 8:00 p.m.: The Legacy of R. L. Moore Project – Educational Advancement Foundation Reception

(In conjunction with Project NExT)
Presidio Room, San Diego Marriott Marquis & Marina,
Lobby Level

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.

Thursday, January 10

10:30 a.m. – 11:45 a.m.: Alternative Assessment Techniques

Panel: Jo Boaler, Stanford University
Bonnie Gold, Monmouth University
Theron Hitchman, University of Northern Iowa
Victor Odafe, Bowling Green State University – Firelands

Since classroom assessment is used to determine a student's level of mastery, how can we vary our methods of assessment to accurately reflect the diversity of ways that students learn and understand the material? Traditional methods of assessment, such as exams, quizzes, and homework, may not accurately and robustly measure some students' understanding. In this panel, we will propose alternative methods and discuss the following questions: What assessments exist besides the traditional ones and how can I use them for my course? How can I determine the validity of an alternative assessment? How can I develop my own alternative assessments? How can alternative assessments help me evaluate the effectiveness of a non-traditional classroom?

Organizers (silver12 dots – 2012-2013 Project NExT Fellows):

Jane Butterfield, University of Minnesota
Robert Campbell, College of St. Benedict and St. John's University
John Peter, Utica College
Cassie Williams, James Madison University

1:00 p.m. – 2:15 p.m.: Coaching Problem Solving Groups and Mathematics Competition Teams

Panel: Jessica Libertini, University of Rhode Island
Jim Morrow, University of Washington
Andrew Bernoff, Harvey Mudd College
Murphy Waggoner, Simpson College

Effectively coaching students for mathematical competition teams and problem solving groups involves many challenges. When coaching competition teams, it can be difficult to balance introducing students to specific tools that will help them succeed in a certain competition and exposing them to new mathematics in order to further their education and introduce them to research. However, students often have well defined goals when preparing for competitions, while general problem solving groups can lack tangible goals and concrete deadlines. This panel will explore the advantages and disadvantages of coaching students for mathematical competitions as well as in non-competitive problem solving groups. In addition, the panel will address practical issues such as finding good problems, recruiting and retaining students, reducing test anxiety and performance disappointment, and balancing coach guidance with student independence.

Organizers (silver12 dots – 2012-2013 Project NExT Fellows):

Erin Byrne, Harvey Mudd College/Olin College of Engineering
Steve Klee, Seattle University
Anna Little, Jacksonville University
Chad Vidden, University of Wisconsin - Platteville

Thursday, January 10 (cont'd)

3:00 p.m. – 4:00 p.m.: An Open Discussion on Flipped Classrooms and Course Management Software

A flipped classroom is one where instruction is delivered outside of class (typically online) and class time is used for homework and activities to illustrate concepts with guidance from the instructor. This session will be an open discussion with faculty interested in learning more and sharing their experiences with flipped classrooms along with the hardware and software they found helpful. If time permits we may also discuss course management systems used in flipped and/or traditional classrooms.

Organizer (silver12 dots – 2012-2013 Project NExT Fellow):

Krista Maxson, Shawnee State University

4:25 p.m. – 5:25 p.m.: Joint Prize Session

Room 6AB, Upper Level, San Diego Convention Center

(This session is open to everyone attending the meetings.)

5:30 p.m. – 6:30 p.m.: Joint Prize Session Reception

Lobby outside Room 6AB, Upper Level, San Diego Convention Center

(This session is open to everyone attending the meetings.)

Friday, January 11

9:30 a.m. – 10:45 a.m.: Mathematics for Social Justice

Panel: Carlos Castillo Chavez, Arizona State University

Deanna Haunsperger, Carleton College

Lily Khadjavi, Loyola Marymount University

Rob Root, Lafayette College

Mathematics can be used to address a variety of questions in social justice, including voting and civic decision-making, city planning, and environmental science. Social justice techniques can also be used to address inequalities in math education, such as racial and gender imbalances. In this panel, we address both Mathematics for Social Justice and Social Justice for Mathematics.

This means first that the panel will discuss methods for improving students' quantitative reasoning skills, for engaging students with their community, and for helping make them more informed world citizens by exploring social justice in the classroom. And second, the panel will speak to strategies to improve inclusion and success for underrepresented groups in mathematics.

Organizers (silver12 dots – 2012-2013 Project NExT Fellows):

Abra Brisbin, University of Wisconsin-Eau Claire

Sam Coskey, Boise State University

Pamela Harris, United States Military Academy

Branden Stone, Bard College/BPI

Friday, January 11 (cont'd)

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 and lodging 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):

Julie Barnes, Western Carolina University

Matt DeLong, Taylor University

Aparna Higgins, University of Dayton

2:30 p.m. – 3:20 p.m.: Presentations by MAA Teaching Award Recipients
Room 6C, Upper Level, San Diego Convention Center
(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. Francis Su, Harvey Mudd College, is a blue dot (1996-1997 Project NExT Fellow). Margaret Robinson, Mount Holyoke College, has been a presenter for Project NExT and is a consultant to a few groups of Project NExT Fellows. Matthias Beck, San Francisco State University, is a cardinal dot (2001-2002 Project NExT Fellow), who will not present a talk this year. The number of Haimo Award winners who are also Project NExT Fellows will be five after this Joint Mathematics Meetings.

8:30 p.m. – 10:00 p.m.: Project NExT Reception
Marina Ballroom F, San Diego Marriott Marquis & Marina
(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.

Saturday, January 12

**8:00 a.m. – 9:15 a.m.: Applications for Mathematics Classes from Outside STEM
(Science, Technology, Engineering and Mathematics) Fields**

Panel: Tim Chartier, Davidson College
Loren Cobb, University of Colorado - Denver
Christine von Renesse, Westfield State University
Lisa Yocco, Georgia Southern University

In many undergraduate courses, students attempting to relate the mathematics being studied in the course to the world they see around them will ask, "How is this useful?" For many mathematicians, it is natural to suggest applications that stem from STEM (Science, Technology, Engineering and Mathematics) but more difficult to find motivating applications to other fields of study. The goal of this session is to discuss application problems outside of the STEM fields, focusing on calculus courses and below where many students are not STEM majors. The panel members will discuss how these nontraditional applications can enrich a classroom regardless of major or course. In addition to integrating new topics into classroom discussion, this session will provide strategies on how more involved, non-STEM applications could develop into group projects.

Organizers (silver12 dots – 2012-2013 Project NExT Fellows):

Nick Boros, Olivet Nazarene University
Lindsey Bosko-Dunbar, Spring Hill College
Ellen Goldstein, Northwestern University
Keith Wojciechowski, University of Wisconsin – Stout

9:30 a.m. - 10:45 a.m.: The Scholarship of Teaching and Learning

Panel: Matt Boelkins, Grand Valley State University
Pam Crawford, Jacksonville University
Jacqueline Dewar, Loyola Marymount University
Tevian Dray, Oregon State University

The Scholarship of Teaching and Learning is a way for a mathematician to turn his or her passion for teaching and student learning into a scholarly activity. What counts? Where is it published? What are the opportunities? How do you design your teaching methodology and what are your objectives? How do you best organize the implementation? Are there standard learning outcomes or assessment tools available? What are the Institutional Review Board (IRB) requirements? What are sources of funding available? We will hear from a variety of panelists on how they turned their teaching innovations into scholarly activities.

Organizers (silver12 dots – 2012-2013 Project NExT Fellows):

Emily Braley, Duke University
Carrie Diaz Eaton, Unity College
Corban Harwood, George Fox University
Annette LaRussa, New Mexico Institute of Mining and Technology

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 Dolciani P. 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 2010-11(blue10) Project NExT Fellows, the 2011-12(peach11) Project NExT Fellows, the American Institute of Mathematics, the Association for Symbolic Logic, the Illinois Section of the MAA, the Indiana Section of the MAA, The MD/DC/VA section of the MAA, the Nebraska-SE South Dakota section of the MAA, the Southeastern section of the MAA, John Wiley & sons, the W.H. Freeman Publishing Company, and the Mathematical Association of America. The ExxonMobil Foundation was a founding sponsor (from 1994 to 2011).

More information about Project NExT can be found at <http://archives.math.utk.edu/projnext/>.

We thank silver12 Project NExT Fellows Brian Jennings, Westfield State University, and Sarah Marsh, Oklahoma Baptist University, for coordinating the planning of the silver12 (2012-2013) Project NExT Fellows' sessions. We also thank silver12 Project NExT Fellows Eric Bancroft, Grove City College, and Rebecca Jayne, Washington College, for organizing the staffing of the Project NExT booth.

The 2012-13 Fellows are the 19th group of Project NExT Fellows.