PROJECT NExT
NEW EXPERIENCES IN TEACHING
2010-2011 FELLOWS

Workshop held in Lexington, Kentucky
August, 2011

A program of
THE MATHEMATICAL ASSOCIATION OF AMERICA

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Project NExT: New Jobs, New Responsibilities, New Ideas
Program for the Workshop in Lexington, Kentucky
August 2011

Location: Hyatt Regency Lexington Hotel, with check-in at the Patterson Ballroom Suite

TUESDAY, AUGUST 2

8:00 - 10:00 pm Social Event for 2010-2011 and 2011-2012 Project NExT Fellows and presenters – Regency Ballroom 1

10:00 pm - ? INFORMAL SOCIALIZING

WEDNESDAY, AUGUST 3

8:15 - 9:30 am TWO concurrent sessions

A. The effect of online homework on student learning and retention
Hyatt Suites Woodford-Scott

Panelists: Robert Allen, University of Wisconsin-LaCrosse
          Andy Bennett, Kansas State University
          Gavin LaRose, University of Michigan
          Lisa Townsley, University of Georgia

In the push to use technology in academia, many are interested in using online homework in undergraduate mathematics courses. In this session, we will discuss the benefits and drawbacks of online homework, the various options in choosing an online homework system, and the issues that may arise when using this technology. Our panel of experts will discuss practical suggestions and techniques for using online homework effectively, balancing online and written assignments, getting students on-board with online assignments, and proper assessment of online work to ensure the best effect on student learning.

Organizers: Joanna Bieri, University of Redlands
           Katherine Heller, North Central College
           William Heuett, Marymount University
           Aminul Huq, University of Minnesota Rochester
B. **Spending your summers effectively and efficiently**  
**Kentucky**

Panelists:  
Art Benjamin, Harvey Mudd College  
Annalisa Crannell, Franklin and Marshall College  
Deanna Haunsperger, Carleton College  
Jeremy Nadolski, Benedictine University  

It is amazing how drastically our lives change when summer comes around. Many of us have greatly reduced professional responsibilities, and hence we have much more freedom, both personally and professionally. But, what is an effective way to spend that time? For example, since we'll most likely have more time to work on research, what are some research opportunities that we can take advantage of over summer that may not exist, or may not be feasible, during the academic year? Should we teach a summer class? Are there service or outreach opportunities we should be taking? How can we take advantage of other non-academic opportunities to earn income, such as consulting work? And, above all, how can we be professional and also give ourselves a much-needed break as well as take on potentially increased family responsibilities? This session and its panelists will aim to address these issues so that we can all have more productive, worthwhile, and hopefully fun summers!

Organizers:  
Anthony DeLegge, Benedictine University  
Melissa Desjarlais, Valparaiso University  
Daniel Galiffa, Penn State Erie  
Anne Yust, Birmingham-Southern College

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**A. Bridging the gap between high school and college: how to provide the skills necessary for under-prepared students to succeed**  
**Hyatt Suites Woodford-Scott**

Panelists:  
Ray Heitger, Bowling Green University  
Annela Kelly, Roger Williams University  
Pamela Richardson, Westminster College  
Michael Scott, California State University Monterey Bay

The American Association of Colleges and Universities (AAC&U) reports that "53% of students entering our colleges and universities are academically under-prepared, i.e., lacking basic skills in at least one of the three basic areas of reading, writing or mathematics" (Tritelli, 2003). As math educators, we find that our classrooms of precalculus, calculus and statistics students are comprised of those students who are well-prepared and those that are under-prepared. The question is, how do we effectively teach groups with drastically diverse backgrounds? We will identify some of the challenges facing both teachers and students in higher education today as well as offering suggestions for easing the transition, including: successful remediation programs, ways to incorporate remediation into the classroom directly, and helping students outside the classroom.

Organizers:  
Papiya Bhattacharjee, Penn State Erie  
Justin Brown, Olivet Nazarene University  
Judith Canner, California State University, Monterey Bay  
Kevin Murphy, St. Norbert College
WEDNESDAY, AUGUST 3 (cont’d)

10:10 - 11:25 am  B. Effective group projects
Kentucky
Panelists: Dan Callon, Franklin College
          Tim Chartier, Davidson College
          Tina Hartley, United States Military Academy
          Linda McGuire, Muhlenberg College
Group projects are an important tool in facilitating a dynamic, interactive
learning environment. By assigning well-designed projects, teachers not only
courage an active approach to learning, but also help students learn to
collaborate. In this session, panelists will share their experiences with designing,
facilitating, and assessing effective group projects.
Organizers: Mike Allocca, University of Scranton
            Brie Finegold, University of Arizona
            Heather Molle, Franklin College
            Eric Ruggieri, Duquesne University

11:30 am - 12:15 pm  Small Group Discussions with other Project NExT Fellows
[This session is organized geographically. Please attend the group that includes the MAA Section
– states/provinces indicated in parentheses – where your institution is located.]

Group A - Kentucky
   Sections: Intermountain, Northern
            California/Nevada/Hawaii and Southern
            California/Nevada, and Pacific Northwest
            (AB, AK, CA, HI, ID, MT (except zips 59715-59717), NV, OR, UT, WA).
Group B – Kentucky
   Sections: Kansas, Nebraska, North
            Central, and Rocky Mountain (CO, KS, MB, MN, MT (zips 59715-59717), ND, NE, SD, WY)
Group C - Patterson Ballroom E
   Sections: Louisiana/Mississippi,
            Oklahoma/Arkansas, Southwestern, Texas
            (AR, AZ, LA, MS, NM, OK, TX)
Group D - Patterson Ballroom F
   Sections: Illinois, Iowa, Missouri (IL, IA, MO)
Group E - Patterson Ballroom G
   Sections: Indiana, Michigan, Wisconsin
            (IN, MI, WI)
Group F - Hyatt Suites Franklin
   Sections: Allegheny Mountain, Kentucky,
            Ohio (KY, OH, PA (zips 15000-16899), WV)
Group G - Hyatt Suites Woodford-Scott
   Sections: Florida, Southeastern (AL, FL,
            GA, NC, PR, SC, TN, VI)
Group H - Hyatt Suites Jessamine
   Sections: EPaDel,
            Maryland/DC/Virginia, New Jersey (DC, DE, MD, NJ, PA (zips 16900-19699), VA)
Group I - Patterson Ballroom A
   Sections: Metro New York,
            Northeastern, Seaway (CT, MA, ME, NF, NH, NS, NY, ON, QC, RI, VT)

12:15 - 1:30 pm  LUNCH – Regency Ballroom 1
WEDNESDAY, AUGUST 3 (cont’d)

1:35 - 2:50 pm  TWO concurrent sessions

A. Math students: You know you want them, but how do you get them and keep them around?

   Hyatt Suites Woodford-Scott  
   Panelists:  Joyati Debnath, Winona State University  
              Sandy Ganzell, St. Mary’s College of Maryland  
              William Vélez, University of Arizona  
              Holly Zullo, Carroll College

We all love math, and we want to help students discover this passion and develop a desire to take more mathematics courses and to major in the subject. This session will focus on effective ways to encourage students to take more mathematics at various levels, including methods and activities for recruiting math majors, ideas for encouraging non-majors to take more mathematics courses beyond the base requirements, and ways in which we can reach out to pre-college students to make them aware of the possibilities that come with studying mathematics.

   Organizers:  Daniel Daly, Southeast Missouri State University  
                 Katie Quertermous, James Madison University  
                 Kristine Roinestad, Georgetown College  
                 Huiya Yan, University of Wisconsin-La Crosse

B. Getting ready for tenure

   Kentucky  
   Panelists:  Sheldon Axler, San Francisco State University  
              Alissa Crans, Loyola Marymount University  
              Jim Lewis, University of Nebraska - Lincoln  
              Roland Minton, Roanoke College

One of the major concerns for junior faculty members is the tenure process. Earning tenure can be a daunting process, sometimes filled with uncertainty and distress. In this panel, junior faculty who have recently received tenure and colleagues who have made tenure decisions will share their diverse experiences and personal insights regarding the tenure process. In particular, our panelists will offer advice and tips on preparing a tenure dossier, talk about effective ways to document success in the three areas of research, teaching and service, and discuss how to address items in need of improvement.

   Organizers:  Jeff Boerner, Westminster College  
                 Geoff Goehle, Western Carolina University  
                 Silvia Saccon, University of Arizona  
                 Karin Saoub, Roanoke College

3:25 - 3:55 pm  BREAK – Regency Ballroom 1

3:55 - 5:25 pm  Closing Session – Patterson Ballroom B-C-D

   Recognition of 2010-2011 Fellows  
   Presentation: Finding Your Niche in the Profession  
                 Joseph Gallian, University of Minnesota Duluth
WEDNESDAY, AUGUST 3 (cont’d)

6:00 – 7:30 pm Mathfest Opening Reception (cash bar) – **East, Lexington Center**
7:30 - 9:00 pm Mathfest Opening Banquet – **Grand Kentucky Ballroom, Hilton Hotel**
9:00 pm - ? INFORMAL SOCIALIZING

THURSDAY AND FRIDAY, AUGUST 4 AND 5

**Project NExT Courses During the Mathfest:** Four-hour courses meeting in the Hyatt Regency Lexington Hotel on Thursday and Friday, August 4 and 5.

A. *When Life is Linear: Applications of Linear Algebra* – Tim Chartier, Davidson College, 1-3 p.m., **Patterson Ballroom B**
B. *Teaching Math Content for Future K-8 Teachers* – Judith Covington, Louisiana State University, Shreveport, 1-3 p.m., **Patterson Ballroom C**
C. *Undergraduate Research—How to Make It Work* – Aparna Higgins, University of Dayton, 1-3 p.m., **Patterson Ballroom D**
D. *Cooperative Learning for Undergraduate Mathematics* – Bill Fenton, Bellarmine University, 3:15-5:15 p.m., **Patterson Ballroom C**
E. *Mathematical Biology in the Mathematics Curriculum* – Raina Robeva, Sweet Briar College, 3:15-5:15 p.m., **Patterson Ballroom B**
F1. *Applying for Grants from the National Science Foundation*, Dean Evasius, National Science Foundation, Thursday; *Getting Your Research Off to a Good Start*, Joe Gallian, University of Minnesota, Duluth, Friday; both days 3:15-5:15 p.m., **Patterson Ballroom D**
F2. *Getting Your Research Off to a Good Start*, Joe Gallian, University of Minnesota, Duluth, Thursday; *Applying for Grants from the National Science Foundation*, Dean Evasius, National Science Foundation, Friday; both days 3:15-5:15 p.m., **Patterson Ballroom G**

We thank blue10 Project NExT Fellows Andrea Bruder, Colorado College, and Christopher Drupieski, University of Georgia, for coordinating the planning of the blue10 (2010-11) Fellows’ sessions.

Project NExT (New Experiences in Teaching) is a professional development program of the Mathematical Association of America 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.