PROJECT NExT

NEW EXPERIENCES IN TEACHING

2001-2002 FELLOWS, BURLINGTON, VT

a program of

THE MATHEMATICAL ASSOCIATION OF AMERICA

Major funding is provided by

THE EXXONMOBIL FOUNDATION

THE DOLCIANI-HALLORAN FOUNDATION

THE AMERICAN MATHEMATICAL SOCIETY

THE EDUCATIONAL ADVANCEMENT FOUNDATION

We gratefully acknowledge their support.
2001-2002 Project NExT Fellows  
Burlington Program, July-August 2002  

Except as noted, all sessions are in the Living/Learning Center on the University of Vermont campus. The Project NExT registration area is on the third floor of the Living/Learning Center.

TUESDAY, JULY 30

8:00 – 10:00 p.m.  Social Event for all Project NExT Fellows and invited guests  
Area outside Marsh Dining Hall

WEDNESDAY, JULY 31

7:00 – 8:00 a.m.  BREAKFAST

8:15 – 9:30 a.m.  TWO concurrent sessions

A.  **Capstone Courses for Mathematics - A Swap Session**  
CMS 315  
Panelists:  Sharon Crook, University of Maine  
David Dempsey, Jacksonville State University  
Kevin Dennis, Saint Mary's University of Minnesota  
A capstone course/seminar is one that ties an undergraduate's four years of college together. In this session, Sharon Crook, David Dempsey, any other willing participant, and the organizer will share their experiences with capstone courses. The discussion will focus on the structure of the course, what topics are included in the course, what went right, and what would be changed.  
Organizer:  Kevin Dennis, Saint Mary's University of Minnesota

B.  **Teaching Students to Write Proofs**  
CMS 216  
Panelists:  Jon Hodge, Grand Valley State University  
Patti Frazer Lock, St. Lawrence University  
John Meier, Lafayette College  
Tabitha Mingus, Western Michigan University  
Daniel Solow, Case Western Reserve University  
In recent years, an increased emphasis has been placed on the importance of writing in undergraduate mathematics courses, in particular the writing of proofs. The panelists for this session have conducted research and authored various works on this topic. Each panelist will give a short presentation, based on his or her research and personal experience, on teaching students to write proofs.  
Organizers:  Reza Akhtar, Miami University  
Linda Eroh, University of Wisconsin - Oshkosh  
Carmen Schabel, University of Portland
WEDNESDAY, JULY 31 (continued)

9:35 - 10:05 a.m. BREAK -- screened porch across from CMS 315

10:10 -- 11:25 am TWO concurrent sessions

A. *The Moore Method: An Introduction*

*B132*

Panelists: Robert Kauffman, University of Alabama - Birmingham  
W. Ted Mahavier, Lamar University  
Michael Starbird, University of Texas - Austin

In this session we will discuss the theory and practice of the Moore Method of teaching, which is a form of discovery learning. This session will be appropriate for people who are unfamiliar with this method. The panel will address the following questions: What is the Moore Method? How does one get started using it? What resources are available? What are the advantages/disadvantages of teaching a course using the Moore Method? The panel will also discuss variations of the Moore Method.

Organizers: Jennifer Firkins, Linfield College  
Michael Lang, University of Wisconsin - La Crosse  
Lew Ludwig, Denison University

B. *Assessment Ideas and Practices to Consider When Starting Your Teaching Career*

*CMS 216*

Panelists: Bonnie Gold, Monmouth University  
Tommy Ratliff, Wheaton College  
Sharon Cutler Ross, Georgia Perimeter College

How many times have you wondered, "Are my students getting any of this?" Have you ever found yourself writing an exam that you thought was easy, while your students took over an hour to complete? Have you ever spent days developing a really cool writing assignment, only to have your students turn in solutions ranging from three incomplete sentences to a slightly abridged version of *War and Peace*? If your answer to any of these questions is yes, than you cannot afford to miss this three-part session! Bonnie Gold will provide an overview of assessment in individual courses, the purpose of which is to find out how well your students are learning what you are trying to teach them. Sharon Ross will discuss assessment via traditional testing, and Tommy Ratliff will address assessment via mathematical writing.

Organizers: Mike Ackerman, Bellarmine University  
Lisa Marano, West Chester University
WEDNESDAY, JULY 31 (continued)

11:30 – 12:30 p.m.  Small group discussions with other Project NExT Fellows.
[For these sessions we will be splitting geographically. Please attend the group that
includes the state or province where your institution is located.]
Group A - AB, AK, AZ, CA, HI, ID, MT, NM, NV, OR, UT, WA, CMS 216
Group B - CO, IA, MN, ND, NE, SD, WY, A102
Group C - AR, KS, LA, MO, MS, OK, TX, A162
Group D - IL, WI, B102
Group E - IN, MI, OH, B101
Group F - DE, KY, PA, WV, CMS 302
Group G - AL, FL, GA, NC, SC, TN, VI, A101
Group H - DC, MD, Metropolitan NYC (ZIP codes 10000-11999 and 12400-
12799), NJ, VA, B132
Group I - CT, MA, ME, NF, NH, NS, NY (ZIP Codes 12000-12399 and 12800-
14999), RI, VT, A161

12:30 – 1:45 p.m.  LUNCH

2:00 – 3:15 p.m.  TWO concurrent sessions

A. Making In-class Groups Work
   CMS 216
   Presenters:  Jack Bookman, Duke University
                Priscilla S. Bremser, Middlebury College
   Jack Bookman and Priscilla Bremser will each lead a 30-minute demonstration of
   an in-class group work activity for a mathematics course. Throughout the
demonstration, the presenters will comment on various issues that arise in making
groups work effectively in the classroom. This includes issues relevant to group
work activities in both small and moderately sized classes. The session will
conclude with questions from the participants.
   Organizers:  Hema Gopalakrishnan, Sacred Heart University
                Joy Moore, University of Cincinnati
                Amber Puha, California State University - San Marcos

B. Attracting and retaining mathematics majors
   CMS 315
   Panelists:  Colin Adams, Williams College
              Pat Kenschaft, Montclair State University
              Jim Parks, State University of New York - Potsdam
              Harriet Pollatsek, Mount Holyoke College
   The panelists will discuss how to attract more mathematics majors by making
mathematics appealing to undeclared first- and second-year students, and how to
encourage those in calculus to continue taking mathematics courses. A question-
and-answer session will follow the panel discussion.
   Organizer:  Christopher Simons, Rowan University
WEDNESDAY, JULY 31 (continued)

3:15 – 3:55 p.m.  BREAK - adjacent to Marsh Life Sciences Building

3:55 – 5:45 p.m.  Closing Session
                  Benedict Auditorium (Room 235), Marsh Life Sciences Building
                  Recognition of 2001-02 Fellows
                  Presentation: Finding your Niche in the Profession
                  Joseph A. Gallian, University of Minnesota, Duluth
                  Second Vice President, The Mathematical Association of America

7:30 – 9:30 p.m.  Mathfest Opening Banquet
                  Emerald Grand Ballroom, Sheraton Hotel
                  Master of Ceremonies: Underwood Dudley, DePauw University
                  Presentation: Who is the Greatest Hitter in the History of Baseball?
                  Joseph Gallian, University of Minnesota, Duluth

Project NExT Courses during the Mathfest

Four-hour courses meeting 4:10 - 6:00 p.m. on Thursday and Friday, August 1 and 2.
See information for assignments.

A. Making Liberal Arts Mathematics Meaningful, Edward Burger, Williams
   College, and Michael Starbird, University of Texas, Austin.
   Room B132

B. Cooperative Learning in Undergraduate Mathematics, William Fenton, Bellarmine University
   Room A102

C. Planning and Teaching Mathematics Courses for Teachers, Ann Farrell, Wright State University
   Room A162

D. Teaching an Introductory Statistics Course, Robin Lock, Saint Lawrence University
   Room B102

E. Getting Your Research off to a Good Start/Applying for Research and Education Grants, Joseph
   Gallian, University of Minnesota, Duluth, and Lloyd Douglas, National Science Foundation
   Rooms A101, A161

F. Undergraduate Research -- How to Make It Work, Aparna Higgins, University of Dayton
   Room B132