2009 Schedule — April 2 & 3, 2009
Central Washington University — Ellensburg, WA

Thursday, April 2, 2009

2:00 p.m. Hike
6:00 p.m. Informal Gathering
Dinner and/or Conversation - Road House www.theroadhousegrill.net

Friday, April 3, 2009 Grupe Center http://www.cwu.edu/newmap.html

8:00 a.m.	Registration/Coffee
8:10 a.m.	Greeting and Introduction of New Fellows
8:15 a.m.	Session 1: Panel: Teaching Proofs
9:15 a.m.	Session 2: Panel: Probability and Statistics for Non-Majors - Topics,
10:15 a.m.	Coffee Social
10:45 a.m.	Session 3: Panel: Me and You, You and Me
11:15 a.m.	Session 4: Talk: Teaching as an Art
11:45 a.m.	Lunch: Kiku-Chan or Gingko Tree
12:45 p.m.	Session 5: The Role of Technology in the Teaching of Mathematics.
1:50 p.m.	Session 6: Presentation: What's new in the MAA
2:20 p.m.	Project NExT Meeting Adjourns. (MAA Minicourses begin at 2:30 p.m.)

6:00 p.m. Dinner - Ellensburg Pasta Company www.ellensburgpasta.com

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Abstracts

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Session 1
Panel Discussion: Introduction to Proofs Class: Content and Effectiveness
Organizer: Klay Kruczek (Western Oregon University)

In this panel discussion, panelists will explain what material they feel is appropriate for an introduction to proofs class and how effective they feel such a course is for mathematics majors. Panelists will also discuss surveys they have conducted and have come across about both the content and effectiveness of these courses.

Panelists: Brian Blitz (University of Alaska Southeast),Vesta Coufal (Gonzaga University), Mike Ward (Western Oregon University)

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Session 2
Panel Discussion: Probability and Statistics for Non-Majors - Topics, Techniques, and Tips
Organizers: Scott Beaver (Western Oregon University), Cheryl Beaver (Western Oregon University)

General Education Probability and Statistics, and Probability and Statistics for Elementary and Middle School Teachers, and lower-division Finite Math possess several unique distinctions. Though the concepts can be quite abstract to students, the arithmetic used is often not terribly difficult; real-world examples of the material abound, and perhaps most importantly, surprising results are scattered throughout. Surprises always get students' attention. In this session, we'll consider a few of those surprises and real-world examples, as well as a variety of pedagogical issues.

Panelists: Brian Gill (Seattle Pacific University), Yvonne Chueh (Central Washington University), Andria Villines (Bellevue Community College)

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Session 3
Panel Discussion: Me and You and You and Me
Organizer: Mark Fitch (U Alaska - Anchorage)

Have you ever wished that your students were more prepared when they enter your classroom each day? Have you ever wished that it were easier to handle students who need varying amounts of help in and out of class? There are many techniques and methods for teaching which motivate students to put in the necessary time for their

learning.

Ideas from the modified Moore method, discovery learning, writing/reading across the curriculum, and distance education can all be used to engage students enabling maximum success. Most of these techniques involve construction of assignments and presentations which students do before a class. We will discuss what is needed to design these assignments, how to manage our time, and how to motivate the students to participate and enjoy the process as much as possible. Application of these ideas to distance education is also possible.

When successful all of these methods cause students to see learning as an active task of their own with faculty as respected advisers in the process. The students also often report enjoying the process much more.

Panelists: Hilary Davies (University of Alaska Anchorage), Gail Johnston (University of Alaska Anchorage), Cristina Negoita (Oregon Institute of Technology)

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Session 4
Talk: Teaching as an Art
Speaker: George Andrews (Pennsylvania State University)

The title of this talk is one of those platitudes that few would contest. However, many believe that there is (or, at least, should be) a substantial science of teaching that fosters and directs teachers as they practice their art. In the words of the former president of the National Academy of Sciences, Bruce Alberts, "It is poignantly clear that research has not had the kind of impact on education that is visible in medical practice, space exploration, energy, and many other fields..."

In this lecture, I will begin by discussing what an art actually is. I will defend two propositions:
(1) Teaching is an art and not a science;
(2) Just because teaching is an art does not mean it lacks standards or is purely subjective. The thoughts of Michael Polanyi ("We know more than we can say.") and E.F. Schumacher ("Education is a divergent problem.")
will be examined in this context. These ideas will then be contrasted with the ideas of mathematics education scientists.

I will conclude with a concrete discussion of what really goes on in the art of teaching mathematics.

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Session 5
Panel Discussion: The Role of Technology in the Teaching of Mathematics.
Organizer: Nancy Ann Neudauer (Pacific University)

We consider the use of technology in mathematics courses at all levels, from high school through graduate school. Does using technology allow us to illustrate subtleties instead of getting bogged down in drawn-out computations? Do students have a better sense of the shapes of curves, behaviour of functions, error estimates, iterative approaches than before computer algebra systems and graphing calculators? What are the benefits and drawbacks of numeric versus symbolic approaches to problems, and what happens when our technology can solve our symbolic problems too? Does this open one door and close another? Have students become so dependent on technology that they are not developing basic skills? On the other hand, are students prepared for the technology we expect them to use?

Panelists: Hans Nordstrom (University of Portland), William Stein (University of Washington), Stan Wagon (Macalester College), Jane Whitmire (Central Washington University)

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Session 6
Talk: You and the MAA in a Flat World
Speaker: Michael Pearson (MAA Associate Executive Director)

The many ways that we communicate with each other has fundamentally altered the relationships between individuals and associations. The MAA must adapt to this new reality. Ultimately it will be up to the members to define the Association in a way that will empower the community to meet our mission: "to advance mathematics, especially at the collegiate level."

Starting with an overview of current initiatives, I hope to spur a dialogue of the ways that early-career faculty view the MAA now, and share ideas for building towards the future that will better serve the needs of the mathematical sciences community.