# The Mathematical Association of America



# Wisconsin Section Newsletter Spring 2014

### **Governor's Report**

The MAA Board of Governors kicked off the new year with its annual January meeting right before JMM. That was on January 14, 2014 in Baltimore. The finances of the organization continue to be sound under the watchful eye of Treasurer Jim Daniel. The plan is to gradually replenish our reserve fund over the next few years. Consistent with this plan, the new dues structure is now in place, and over the next two or three years its functioning will be closely monitored.

The distinguishing feature of this meeting was the focus on curriculum. The Committee on the Undergraduate Program (CUPM) will be bringing out the 2014 curriculum guide, and Martha Siegal, Chair of CUPM, is soliciting feedback. So we met in small groups with CUPM members to discuss individual courses and discuss separately the four program areas, Secondary Education, Biomathematics, Engineering Mathematics, and Statistics.

There was a vote on a recommendation from the ASA/MAA Joint Committee on Undergraduate Statistics. The recommendation was that persons hired or selected to teach introductory statistics courses should have at least a master's degree with a strong concentration in statistics. If this is not possible, the person should at least have two statistical methods courses and some additional experience with data analysis. This recommendation produced a lively discussion. The recommendation was seen by some as being a little too restrictive for small mathematics departments. However, the vote was decisively in favor of the recommendation.

We learned that the Meetings Management Committee decided to discontinue offering short courses after JMM 2014. Apparently short courses use up a disproportionate amount of staff time considering the limited number of MAA members they serve. This decision is in line with the overall plan to think strategically about what level of service is sustainable. Some Board members do value short courses, and a rear guard effort was made to refer the short course question to the Professional Development Committee. That motion was soundly defeated. So it looks like there will not be any short courses next year. On the bright side, there was no suggestion to discontinue the mini courses that are a popular feature of the joint meetings.

Steve Dunbar will be retiring next year, and so the MAA is searching for a new Director of Mathematics Competitions. Steve has done a superb job and has used his considerable talents very effectively over the years. He will be missed. Fortunately his last year will overlap the first year of the new director. Another director who is retiring is Ivars Peterson. You may remember the beautiful talk he gave on the geometry of Mobius strips several years back at our Annual Spring Meeting. He too will be missed. The MAA is seeking a new Director of Publications who can begin in January, 2015.

As always, the MAA staff and officers are doing an excellent job of managing the diverse MAA programs and supporting college and university mathematics and mathematics teaching. My term as Governor will end this coming June. I want to thank the Wisconsin Section for having given me the opportunity to serve in this capacity. It has also been a great pleasure to be on the Executive Committee of our Section for the past three years. The MAA will conduct an election for a new Governor for the Wisconsin Section this spring.

Andrew Matchett, UW-La Crosse

### The History of the Wisconsin Section

As part of the preparation for the centennial of the MAA in 2015, a committee has been formed to write the history of the Wisconsin Section of the MAA. Much information was archived in the 1980s, but we are still missing some materials. Please contact Public Information Officer Benjamin V.C. Collins (collinbe@uwplatt.edu) if:

- You have copies of any newsletter from Fall 1991 to Spring 2006.
- You were an officer of the section (excluding Chair or Secretary-Treasurer) between 1990 and 2002.

# Chair's Report

I hope that 2014 is off to a great start for you!

I'm already looking forward to our 82nd Annual Spring Meeting, which is coming up on April 4-5. We thank UW-Whitewater for inviting us to their campus, and especially Thomas Drucker for taking the lead as both Site Organizer and Chair-Elect. Thomas is putting together another excellent program, highlighted by presentations by invited speakers Dan Kalman, of American University, Steve Stigler, of University of Chicago, and Francis Su, the MAA President-Elect.

Please consider taking part by contributing a talk of your own, and/or by encouraging your students to speak at the meeting. Talks on mathematics, pedagogy, history, SOTL, and applications of mathematics are welcome and appreciated. You can submit an abstract by clicking on "Speaker Registration Form" or "Student Speaker Registration Form" at http://sections.maa.org/wisconsin/meetings.shtml , or by submitting the paper forms elsewhere in this newsletter.

I especially encourage you to tell your students about Face Off, our section's very successful math game show. Thanks to Ken Price and Steve Szydlik, our Student Activities Coordinators, for their excellent work organizing Face Off and our other student programs. This year, there's a strong possibility that Face Off will occur at a slightly earlier time on Friday than in past years, so please be aware of that in planning your teams.

At the Spring Meeting, on Saturday morning, we'll hold our annual business meeting. Among other things, we will hold the election of our new Chair-Elect. The nominating committee has selected, Kavita Bhatia, of UW-Marshfield/Wood County, as its nominee for this position. A short biography describing Kavita's background appears elsewhere this newsletter. I'm happy to thank Kavita for her willingness to serve the Section in this role.

At the business meeting, we'll also want to discuss locations for future annual meetings. The Wisconsin Section has traditionally tried to alternate between locations in the eastern and western parts of the state. Recently, though, more schools in eastern Wisconsin have expressed interest in hosting the meetings. If your location is in the west, and you'd like to see future meetings scheduled closer to you, please do think about volunteering to host an upcoming meeting!

There will be a number of new (and/or returning) faces on the Executive Committee this coming year. I would like to thank Eric Eagan, of UW-LaCrosse, for agreeing to join the Executive Committee as Co-Director of Project NExT-Wisconsin with Kirthi Premadasa, who will be stepping down this spring. Our Student Activities Coordinators, Ken Price and Steve Szydlik, are looking to step down from those positions after serving three 3-year terms, but are interested in continuing their running of the Face Off competitions. If you are interested in joining the Executive Committee in this capacity, please let me know. At the same time, James Swenson will finish his term as Immediate Past Chair. This is also Andy Matchett's last semester as our Section Governor. You should be contacted soon by the national MAA to vote for our new Section Governor. Look for it in your email inbox. The Executive Committee nominated three excellent candidates to the national MAA: Mohammad Ahmadi, Clare Hemenway, and Mark Snavely. We wish them all well. So, please join me in congratulating Andy, James, Kirthi, Ken and Steve, and thanking them for their years of service on the Section's Executive Committee.

I look forward to seeing you at UW-Whitewater in April!

Ken Jewell, Edgewood College

# Are You On-line?

Look for the Wisconsin Section on Facebook: http://on.fb.me/oRQZbs

# **Contest Report**

#### **American Mathematics Competitions**

The AMC 8 competition was held on November 19, 2013. A total of 1,373 Wisconsin students participated in the competition (close to 1,390 in 2012, down from 1,465 in 2011, 1,599 in 2010 and 1,477 in 2009). Two students received a perfect score from Wisconsin. Congratulations to L. Ma, an 8<sup>th</sup> grader from Jefferson Middle School in Madison and Z. Rossman, a 7<sup>th</sup> grader from Velma Hamilton Middle School in Madison. The average score for Wisconsin students was 9.62, compared with the national U.S. average score of 10.14. The gap has narrowed to .52 compared to .79, 1.06 and 1.43 the three previous years. This is a great trend for our Wisconsin students.

The AMC 10 and 12 contests will be held on February 4 and 19, 2014. Data will be reported at the Spring Meeting.

#### MAA-Wisconsin Section High School Contest Examination

The Section contest examination was given on Thursday, December 5, 2013. There were 46 schools reporting scores this year for a total of 1,873 students. This is a significant increase from 29 schools in 2012, (47 schools in 2011, 69 schools in 2010 and 81 schools in 2009). The cutoff for the top 1% was a score of 60 out of 120 this year.

There were no perfect scores this year.

Dr. Jay Beder, from University of Wisconsin - Milwaukee, directed the contest this year for their first year as hosts. Many thanks to him, University of Wisconsin - Milwaukee, and the test committee for all their hard work. If anyone would like to volunteer to help the test committee please send an email to <u>beder@uwm.edu</u>.

Laura Schmidt, UW-Stout

### **Openings on the Section Executive Committee**

**Chair-Elect**. This is a three-year position. The Chair-Elect organizes the spring meeting. The following year, the Chair-Elect becomes chair, and presides at each meeting of the Section and of the Executive Committee of the Section, as well as appointing committees and Executive Committee members as needed. The final year, the Immediate Past Chair continues to sit on the Executive Committee, and oversees the selection of the Distinguished Teaching Award recipient.

**Student Activities Coordinator**. This is a three-year position, with the possibility of renewal. The Student Activities Coordinator promotes the involvement of students in activities of the section, encourages student presentations at the annual meetings, and acts as a source of information for various student programs and other activities.

Send nominations to Section Chair Ken Jewell at jewell@edgewood.edu . Self nominations are encouraged. Section officers must be members of the MAA.

# **Student Activities**

The Student Activities Co-Coordinators, Ken Price and Steve Szydlik, are pleased to report on opportunities for Wisconsin's undergraduate math students. We especially look forward to this year's section meeting at UW-Whitewater on April 4-5. Faculty, please continue to encourage your students to attend.

The Wisconsin section meeting has a lot to offer student attendees. Whenever possible, we try to find low-cost housing options for students who wish to stay for both days. There will be numerous talks for and by students. There will be a "student retreat room" where students can enjoy snacks and meet with each other in a relaxed, friendly environment. The banquet cost for students will continue to be held at \$5 per ticket.

The Wisconsin Mathematics Council's Annual Green Lake Conference is scheduled for April 30-May 2, 2014. Anyone interested in any level of mathematics education in Wisconsin is encouraged to attend.

The fast-paced math game show "Face Off!" continues to be a popular student event in the section, and it will again return to the MAA section meeting this spring. With our "Slammer" buzzer system we can allow as many as ten teams to play. Students who have taken Calc I or above are eligible to compete for their department in teams of 2-4 players. Contact Ken (pricek@uwosh.edu) or Steve (szydliks@uwosh.edu) for details on the event or to register your team. More information is available on the web site at http://www.uwosh.edu/faculty\_staff/szydliks/faceoff.htm. You can also view pictures from previous years on Facebook: see http://tinyurl.com/faceoffgame.

Our current three-year term as Student Activities Coordinator expires this spring, and while we very much enjoy serving the section in this capacity, it's time for someone else to have this opportunity. The Student Activities Coordinator promotes the involvement of students in activities of the section, encourages student presentations at the annual meetings, and acts as a source of information for various student programs and other activities. If you are interested in the position, or if you know someone who is, please contact the section chair Ken Jewell at jewell@edgewood.edu. Let's continue to make MAA-WI a student-friendly section!

Ken Price and Steve Szydlik, UW-Oshkosh

### Vote for Section Governor

You should have received email from the MAA about the vote for Section Governor. Welcome to the 2014 MAA Election for Section Governors. The Section Governors elected in this election will serve from 2014 to 2017. This is a green election. There are no paper ballots. All voting is done electronically.

The election is now open. To vote, :

- 1. Go to the MAA website and log in using your MAA username and password.
- 2. Click on the 'Vote Now' button and follow the voting instructions.

The election closes at 11:59 pm PST, on March 12, 2014.

If you have any questions about the election, please contact the <u>skennedy@maa.org</u>. If you have technical difficulty voting, please contact <u>Help+MAA@election-america.com</u>.

# Project NExT-Wisconsin

Project NExT-WI would like to welcome its incoming director Dr. Eric Eager of UW-La Crosse. Dr. Eager will bring a wealth of new ideas and projects for exciting future times in Project NExT-WI.

At the spring meeting of the MAA Wisconsin section, Project NExT-WI will have lunch on Saturday, April 5, followed by a workshop for Project NExT-WI fellows.

It is commonly believed that one of the best ways for college professors to get introduced to the art of Scholarship of Teaching and Learning is through lesson study and our current membership is excited to get started on this lively intervention. As such, the topic for this spring's workshop is: "Doing a Mathematics Lesson Study: A Hands-On Experience". During the first hour of the workshop three lesson study teams with significant experience in conducting lesson study in WI will present short presentations on mathematics lesson studies they have done. The teams which will be represented are: The UW-Whitewater Team (Fe Evangelista, Geetha Samarnayake and Julie Letellier), the UW-Stout Team (Led by Laura Schmidt) and the UW-Colleges Team (Kavita Bhatia and Kirthi Premadasa).

In the second hour of the workshop, members will start planning their own lesson studies in groups created by campus or by region. They will start discussing the first design of a lesson study (broad objective, unit goal, lesson goal etc.) and will make presentations. It is our plan and vision that the groups will continue designing these lessons and deliver them to their classes during the fall semester.

At the end of the workshop, the members will get an opportunity to discuss questions related to their professional lives as new mathematics faculty in Wisconsin, in areas such as teaching, professional development, service, retention and tenure.

We will try to finish by 3:00 pm.

Project NExT-WI also holds an annual Fall Workshop which is open to all current NExT-WI members. The workshop typically takes place during the last week of September or first week of October in Baraboo. Further details will be posted on the Project NExT-WI website http://sections.maa.org/wisconsin/NExt/default.html along with updates to all the NExT-WI members. We are always looking for new members. There is no deadline to apply for the membership. One can apply any time during the academic year.

Project NExT-Wisconsin is open to all full-time faculty members in mathematics departments in the Wisconsin Section who are within their first four years of undergraduate teaching. You may also be eligible if you have more teaching experience, but are new to the Wisconsin Section. To apply, contact kirthi.premadasa@uwc.edu or eeager@uwlax.edu

Kirthi Premadasa, UW-Baraboo

## **Nominee for Chair-Elect**

### Kavita Bhatia, UW-Marshfield/Wood County

Kavita Bhatia is a Professor and Chair of the Mathematics Department of the University of Wisconsin Colleges. She obtained her Bachelor of Science in Mathematics from Poona University in India in 1985, her Master's from Indiana University in 1990 and her PhD from the University of Oklahoma in 1997. She has been teaching at the University of Wisconsin-Marshfield/Wood County for the last seventeen years. Her research interests are in pedagogy and the Scholarship of Teaching and Learning. She has conducted several pedagogical investigations such as lesson studies and think-aloud protocols to understand and tackle student's difficulties with mathematics. She is a past Wisconsin Teaching Scholar.

# **Spring Meeting**

### Invited Speakers:

Dan Kalman (American University), Minute Math

Steve Stigler (University of Chicago), Great Probabilists Publish Posthumously

Francis Su (Harvey Mudd College, MAA President-Elect), Combinatorial Fixed Point Theorems

### Map and Directions:

http://www.uww.edu/campus-info/map-and-directions

### Parking

All the sessions will be held either in Timothy Hyland Hall or in the James Connor University Center. After noon on Friday, parking is permitted in any university lot.

### Lodging Information

Blocks of rooms have been reserved by the organizers for April 4<sup>th</sup> at two hotels under the group name "Wisconsin MAA". All rooms are being held until March 15<sup>th</sup>.

- Super 8 of Whitewater (1.5 miles from campus): 917 E. Milwaukee St., Whitewater, WI 53190. Phone: 262-472-0400.
- http://www.super8.com/hotels/wisconsin/whitewater/super-8-whitewater-wi/hotel-overview
- Baymont Inn and Suites Whitewater (6 blocks from campus): 1355 West Main St., Whitewater, WI 53190. Phone: 262-472-9400. <u>http://www.baymontinns.com/hotels/wisconsin/whitewater/baymont-inn-and-suites-whitewater/hotel-overview</u>
- Holiday Inn Express Hotel & Suites Fort Atkinson (9 miles from campus): 1680 Madison Ave., Fort Atkinson, WI 53538. Phone: 920-563-3600.
   <u>http://www.ihg.com/holidayinnexpress/hotels/us/en/fort-atkinson/atkwi/hoteldetail</u>

### Additional Lodging Option for Students

Students may be able to room on campus in Goodhue Hall. These rooms are much cheaper than the hotels, but they come without some of the standard amenities (like linens, which require an extra payment). Payment must be made by check or money order–Goodhue is not able to accept cash or credit cards. Students who are interested in this option should call the desk at Goodhue Hall directly (262-472-4200) to make a reservation for Friday night the 4th. Look at the details on the university's Web site.

# MAA Book Sales at the Spring Meeting

Starting last year, the MAA instituted a new procedure for buying MAA books at section meetings. There are no longer copies available for attendees to take away from the meeting. There will be sample copies available, and all orders will be done on-line. We will have a computer available to place orders, or orders can be placed on-line for approximately a two-week period right around the meeting.

Right around the time of the meeting, MAA departmental liaisons will be provided with a code that provides a 35% discount below the list price to meeting attendees. The code will also be available at the meeting, or by contacting Public Information Officer Ben Collins (collinbe@uwplatt.edu).

The Wisconsin Section earns a small percentage of all sales made through the meeting. So if you are looking for an MAA book (and who isn't?), wait and order through the meeting. You get a discount, the section gets some money, and everyone is happy.

### **Call for Nominations**

The Wisconsin Section Distinguished Teaching Award was established in 1991. It stands as a concrete statement that mathematicians at the college and universities in Wisconsin place high importance on teaching. The Wisconsin Section is proud of its growing list of award recipients. These men and women of mathematics who have been recognized for their excellent work as teachers represent the commitment to teaching that exists among mathematicians throughout the state.

Nominations for the 2014 Wisconsin Section Distinguished Teaching Award are now being accepted. The nomination form and instructions are available on the MAA-Wisconsin web site at <u>http://sections.maa.org/wisconsin/award.shtml</u>

# CALL FOR SPEAKERS

Annual Meeting of MAA Wisconsin Section, April 4 - 5, 2014

University of Wisconsin - Whitewater

Talks of all kinds are welcome, particularly ones that are accessible to students, and we encourage talks by students. If you wish to present a talk, please complete the form below and send by March 1, 2014, to Tom Drucker (druckert@uww.edu). Talks received after March 1 will be considered only as time and space permit.

An on-line version of this form is available at: <u>http://sections.maa.org/wisconsin/meetings.shtml</u>

(There is a separate form below for student speakers.)
Due date: March 1, 2014
Name:
Institution:
Phone: Email:
Title of talk:
Length of talk: 25 minutes or 50 minutes
Abstract: (Suggested length, 250 words or less.)

Check here if your talk is appropriate for undergraduate students:

All rooms have a whiteboard, an opaque projector, and projector with a connection for a laptop computer. If you have other equipment needs, please describe them, and we will try to accommodate you.

Time preference:	Friday afternoon is	Imperative	Preferred
	Saturday morning is	Imperative	Preferred
	Either time is acceptable		

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# CALL FOR STUDENT SPEAKERS

Annual Meeting of MAA Wisconsin Section, April 4 - 5, 2014

University of Wisconsin - Whitewater

The Wisconsin Section of the MAA encourages undergraduate students who have done research in mathematics to give a 25-minute presentation about their work at the Spring Meeting. Each presenting student receives free meeting registration. If you wish to present a talk, please complete the form below and send by March 1, 2014, to Tom Drucker (druckert@uww.edu). Talks received after March 1 will be considered only as time and space permit.

An on-line version of this form is available at: <u>http://sections.maa.org/wisconsin/meetings.shtml</u>

Due date: March 1, 2014	
Primary Speaker:	
Name(s):	
Institution:	
Address:	Phone:
	Email:
Second Speaker: (If more than two spea	ikers, please include the appropriate information.)
Name(s):	
Institution:	
Address:	Phone:
	Email:
Faculty Sponsor:	
Title of presentation:	
Brief description of presentation: (	Suggested length, 250 words or less.)

All rooms have a whiteboard, an opaque projector, and projector with a connection for a laptop computer. If you have other equipment needs, please describe them, and we will try to accommodate you.

Time preference:	Friday afternoon is	Imperative	Preferred
	Saturday morning is	Imperative	Preferred
	Either time is acceptable		

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### **Know Your Wisconsin Mathematician**

Interview with Professor Andrew Matchett, by Benjamin V.C. Collins

#### Where did you grow up?

I grew up on the south side of Chicago in the neighborhood known as Hyde Park and attended public schools there for grades 1 through 12.

# Was there a time in your life when you discovered that mathematics was what you wanted to do?

I developed a love for mathematics in high school.

#### Where did you go to undergraduate school?

My undergraduate school was the University of Chicago.

#### And what about graduate school?

My graduate work was at University of Illinois at Urbana-Champaign. My thesis advisor, Steve Ullom, was all that an advisor should be, and I was fortunate that he took me as a student. My thesis was in algebraic K-theory.

#### What was the influence of your family on your education?

My mother was a mathematician. She earned a Ph.D. under Emil Artin in algebraic number theory at Indiana University in 1946. Growing up, I knew that I did not want to be a mathematician, because I assumed that math was for girls. When I was in third or fourth grade, I devised a proof that the sum of two odd numbers is always even. I knew that the sum of two or more even numbers was even. I reasoned that every odd number was some even number plus one. Then I saw it. The sum of two odd numbers would be the sum of two even numbers plus one plus one, and one plus one is even. I did not write anything down and at that age did not even have the idea to use letters to represent numbers. Several weeks after I devised this proof, I shared it with my mother, because I thought she might like it. She did, and fairly gushed about how nice it was. I was taken aback at her enthusiasm and resolved not to share any further little mathematical insights with her. I did not want her to get her hopes up that I was going to be a mathematician like her.

#### Are there any teachers who had influenced you to become a mathematician?

My first real math teacher was a tall, lean, charismatic African American man by the name of Milton Bins. This was in Hyde Park High School, a racially integrated public high school in Chicago. I was lucky to have Mr. Bins for two full years. He obviously loved teaching math and did so enthusiastically. The courses I had with him were Algebra and Intermediate Algebra & Trigonometry. By the end of that second course, I knew that mathematics would always be a part of my life. In my junior year I was in the math club. The teacher in charge of the club, Hilda Mason, told us one day that the area underneath the curve y=1/x was related to some kind of logarithm. We could even estimate log(t) by counting tiny squares under that curve. I could not believe it and wondered when I would ever learn enough mathematics to understand such strange things. The next year I took AP Calculus. We used the classic book by Thomas. In the middle of the course we came to the chapter on the natural logarithm. Thomas defined ln(t) as an integral and then deduced elegantly the properties that showed that it was truly a logarithm function. I was star-struck at how beautiful that was. The power of the method was breath-taking to me. From that experience, I have always preferred late transcendentals to early when teaching calculus.

One day Mr. Bins asked me how calculus was going. I said how much I liked it and how it seemed to draw so many things together. Mr. Bins understood exactly and said, "Wait until you take Galois theory. That really draws things together." I inherited from my mother an idea of what a good proof should look like. However, Mr. Bins was the teacher who showed me by example what a joy it is to teach mathematics. He is the person who made me want to be a mathematician.

#### How did you end up at UW-La Crosse?

In 1982 I was looking for a job and got several offers. I accepted the one from UW-La Crosse. The mathematics department there was a vibrant place supportive of teaching and research, and La Crosse, with a fine public school system, looked like a good place for my wife and me to raise our three children.

#### What courses do you like to teach?

I have always liked teaching calculus, linear algebra, and the upper level analysis and algebra courses. When I arrived at UW-L, I cultivated an interest in statistics and have taught elementary statistics, nonparametric statistics, and mathematical statistics. I like all of these courses very much.

#### Over the years, did you find that teaching of mathematics changed?

Mathematics teaching has gradually changed in the past 30 years, but not as much as it sometimes looked like it would. In the 1980's there was a big push to re-center the curriculum around discrete mathematics. That never happened, though many schools did modify or augment their discrete math courses. Then there was calculus reform, which promised to do away with heavy encyclopedic calculus textbooks. That did not happen. The calculus textbook we use at UW-L has over 1000 pages, not counting the appendices. Where there has been real change is in the amount of undergraduate research at colleges and universities. At the annual Wisconsin Section Spring Meeting, we regularly now have large student paper sessions. Such a level of student participation was unheard of in the 1980's.

#### What do you think is the future of mathematics education?

The use of mathematical software in calculus courses is here to stay. It does not free us from hand calculations, but by teaching our students some programming skills, we make that software into an additional portal into mathematics for them. I think there will be some gradual evolution of the calculus courses to incorporate more and more of this in the future. Also we will be seeing more interdisciplinary courses, like mathematical biology and applied statistics.

#### How were you involved with the MAA over the years?

I have been on the Executive Committee of the Wisconsin Section of the MAA for all but two of the last 29 years. I was elected Secretary-Treasurer at the annual spring meeting in 1985, and, showing an unusual lack of imagination, served six more consecutive three-year terms in that capacity. I was Chair-Elect, Chair, and Past Chair of the Section in 2007-2010, and was elected Governor in 2011. My term as governor ends in June, 2014. I have greatly enjoyed being involved with the MAA, because of the opportunity it gave me to know and work with such a wide array of really great people. Every mathematician who teaches college level mathematics should be a member of the MAA!

#### What do you think is the best part of being a mathematician?

Learning and teaching go together. Whenever I learn a new theorem or proof, I imagine how I would explain it to someone. We are in the business of creating mathematical knowledge. The joyful nature of this splendid enterprise is the best part of being a mathematician.

#### What is the worst part of teaching mathematics?

The worst part of teaching is grading papers.

# How would you describe what you did when you were talking to somebody outside of mathematics?

It is hard to explain what a mathematician does, but I always say that we are as much artist as scientist.

#### What of your work do you like the best? What are you most proud of?

In the Wisconsin Section, one of the accomplishments I am very happy about is Project NExT Wisconsin. This was launched in 1998 with a grant from the MAA, which in turn had money to give us thanks to a grant from Exxon-Mobile Corporation. I cannot take much credit for this, but, as Secretary-Treasurer, I did support the program in an administrative way. It has been a great pleasure to work with all the young energetic mathematicians who have served so creatively and skillfully as directors of Project NExT Wisconsin over the years.

#### What is your advice to college students and new teachers?

My advice to college students is that learning math or statistics requires unremitting effort. We often have to fight for understanding, but it is worth it. It is the teacher's job to encourage this hard work and to be attentive to it. Part of a teacher's job is to give his or her students the gift of attention in return for the student's honest effort.

#### What do you like to do besides mathematics?

Other interests of mine are cross country skiing, backpacking, canoeing, and downhill skiing. I have skied in the annual American Birkebeiner Ski Race for about twelve years.

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#### Do you have any other comments?

I have a son and daughter-in-law who are mathematicians. They are Philip Matchett Wood and Melanie Matchett Wood. They are both on the faculty in the Mathematics Department at University of Wisconsin (Madison). [Ed. note: Melanie Matchett Wood was the subject of the Spring 2013 Know Your Wisconsin Mathematician interview.]

Who is a Wisconsin Mathematician that you would like to know? Send suggestions for the next KYWM to Ben Collins, <u>collinbe@uwplatt.edu</u>.

### **Campus News**

#### Beloit College

#### submitted by Paul J. Campbell

**Dave Ellis** is on sabbatical. **Parimah Kazemi** has joined us for the year and is offering a course in Scientific Computation. **Bruce Atwood**, **Darrah Chavey**, and **student Cullen McDonald** gave talks at the Joint Mathematics Meetings in Baltimore. Colloquium speakers this term include **Andrea Young** (Ripon), **Fernando Miranda-Mendoza** (Platteville), and **Paul Isihara** (Wheaton, IL).

#### **Madison College**

submitted by J. Sriskandarajah

The Madison College Math Club continues to be active. Lectures in the spring semester:

- Lecture # 133, Friday, January 31, 2014, 3:30 PM, Room A2021, Professor Michael Ferris, UW-Madison; "Some things to know about Mathematical Optimization"
- Lecture # 134, Friday, February 28, 2014, 3:30 PM, Room A2021, Professor Benedek Valko
- Lecture # 135, Friday, March 7, 2014, 3:30 PM, Room A2021, Professor John Koker, Dean A&S, UW-O; "The Check's in the Mail"
- Lecture # 136, Friday, April 4, 2014, 3:30 PM, Room A2021, Professor Dan Kalman, American University; "*Minute Math*"
- Lecture # 137, Friday, May 2, 2014, 3:30 PM, Room A2021, Professor Ben Collins and son Quinn Collins; "*Mathemagic*!!!"

http://clubs.madisoncollege.edu/mathclub/

#### Milwaukee School of Engineering

MSOE hosted Girls Exploring Math day on January 31st, 2014. This program was sponsored by the MAA – Tensor Women and Mathematics Grant. **Kseniya Fuhrman** was the principal investigator. Twenty young women in grades 9-11 attended the program. They learned about careers in actuarial science, operations research, cryptography and engineering by participating in hands-on workshops. Our goal was to empower the girls by helping them envision a pathway from their high school courses to the many career possibilities an education in mathematics makes possible. The day concluded with a keynote address given by a professional actuary who shared information about her career and inspired the girls to consider the field of mathematics. STEM faculty will be following up with the participants to answer more questions and offer any additional advice.

#### **UW-Eau Claire**

At the annual Joint Mathematics Meeting in Baltimore, MD, seven UW-Eau Claire students presented posters on topics that stemmed from four different student/faculty research collaborations. The following are the posters that were presented at the MAA Undergraduate Poster Session:

- Austin Riedl and Mitchell Lemons presented "Algebra associated with the Hasse graph of the *n*-dimensional semi-hypercube," which was completed with faculty advisor Colleen Duffy.
- Michael Loper and Bryan Picchiottino presented "The Moduli Space of Z2-graded 4|1-Dimensional Non Nilpotent Complex Associative Algebras and their Deformations," which completed with faculty advisor Michael Penkava.

#### submitted by Kseniya Fuhrman

submitted by Chris Ahrendt

- Alexander Lasiuk presented "Detecting Associations Between Rare Genetic Variants and Quantitative Traits," which was completed with faculty advisor Abra Brisbin.
- Alexa Syryczuk and Christopher Magyar presented "Constructing 4 dimensional tops and analyzing Fano polygons," which was completed with faculty advisor Ursula Whitcher.

Two faculty members also gave presentations in contributed paper sessions at the JMM:

- Colleen Duffy presented "Engaging liberal arts students in mathematics".
- **Carolyn Otto** presented "Successive Quotients of Filtrations of the String Link Concordance Group".

Mathematics majors **Michael Loper** and **Bryan Picchiottino** presented "The Moduli Space of 4|1-Dimensional Complex Associative Algebras" at the Seven Rivers Undergraduate Research Symposium at Viterbo University. Their faculty mentor was **Michael Penkava**.

**Ursula Whitcher** is organizing a weeklong "summer school" for undergraduates on research problems in math and physics. For more information about the PIMS Undergraduate Workshop in Supersymmetry, or to apply, check out the website at https://people.uwec.edu/whitchua/supersymmetry/.

UW-Eau Claire will be hosting the Fall 2014 sectional meeting of the American Mathematical Society.

Three faculty members in the department retired at the end of the fall semester: **Shyam Chadha**, **Veena Chadha**, and **Scott Gaulke**.

#### **UW-Milwaukee**

#### submitted by Jay H. Beder

The 2014 Marden Lecture will be given by **Jordan Ellenberg** of UW-Madison on Monday, March 31, at 4:00 pm, followed by a reception. The lecture is free and open to the public. The title and the location of the talk are to be announced, and will be posted at

http://www4.uwm.edu/letsci/math/newsevents/events/marden.cfm. Ellenberg will also give a departmental colloquium at 2:00 pm.

Under the leadership of the new department chair, Kyle Swanson, and with the support of campus administration, the Department of Mathematical Sciences is undertaking a complete redesign of the developmental mathematics program. With the help of the campus-wide remedial education steering committee (comprised of administrators, faculty, staff, and students) and the appointment of an interim developmental math coordinator (Kelly Kohlmetz), UWM is looking at all aspects of the pre-college math experience, from improving the skills of incoming first-year students through its Panther Math Prep summer bridge program, to helping those already on campus through an extensive redesign of the developmental math curriculum. Beginning in Fall 2014, students who enter UWM will only be required to complete one semester of remedial mathematics, allowing them to complete a college-level math course within their first year. The two current developmental mathematics courses (Basic Math and Essentials of Algebra) are being discontinued. Instead, students who need more intensive remediation will take Preparation for College Mathematics, a six semester-hour course taught using a flipped classroom model (based on the work being done at UW-Colleges) that allows modular learning through class discussions and application problems. Students who only need three semester hours of developmental mathematics will have a choice of one of the following two-semester pathways: Math Literacy, intended primarily for non-STEM majors, and Algebraic Literacy, for STEM majors. Completion of either of these pathways satisfies UWM's quantitative literacy-A general education requirement. This redesign is intended to improve the first-year math experience at UWM, and is part of a larger effort to facilitate the transition from highschool to college-level mathematics. It represents an initial, but important step in a larger cooperative effort involving the Milwaukee Public Schools and the Milwaukee Area Technical College to improve access (and success) for more Milwaukee area students.

#### UW-Oshkosh

#### submitted by John Beam

**Hosien Moghadam** will present a paper at the 45th Southeastern International Conference on Combinatorics, Graph Theory, and Computing at Florida Atlantic University, March 3-7.

We look forward to a visit by **Dan Kalman** of American University, who will be giving a talk in Oshkosh on April 3.

Ten math department instructors took part in a pilot program to use the online homework system WeBWorK in their classes during the Fall 2013 semester. Funding through the College's Gateway Initiatives program, intended to increase the success of students in lower-level courses, supported the WeBWorK. This spring, the software has been installed on campus servers, with the goal of making it available to all interested instructors by Fall 2014.

#### **UW-Platteville**

#### submitted by Ben Collins

**Jodean Grunow**, Senior Lecturer in the Department of Mathematics, was awarded the Academic Staff Excellence in Teaching Award., given to those who "demonstrate excellence in teaching and a commitment to the department, college, and University."

#### **UW-River Falls**

#### submitted by Stephen List

**Kathryn Ernie** and **Erick Hofacker** (along with **Sherrie Serros** from UWEC) are in the second year of conducting a Math Partnership, "Math Transition into the Common Core Era", with middle school and high school math teachers from 15 different school districts in western Wisconsin.

**Ioana Ghenciu** is on sabbatical this spring semester. Her research in functional analysis involves the study of the Dunford-Pettis properties and complemented spaces of operators.

Finally, after working in the UWRF math department for 33 years, our colleague **Dave Yurchak** has retired. He will be sorely missed.

#### UW-Stout

#### submitted by Steven Deckelman

**Greg Bard**, **Steven Deckelman**, **Andre Ghenciu**, **Jay Heuman** and **Laura Schmidt** attended the JMM in Baltimore. **Terry Mason** is out on sabbatical for the spring. **Nelu Ghenciu** is chairing the campus search and screen committee for a new chancellor and **Chris Bendel** is serving on the STEM Dean Search and Screen Committee.

#### **UW-Whitewater**

#### submitted by Mohammad Ahmadi

**Tom Drucker** attended the Joint Annual Meeting of AMS/MAA in Baltimore. Tom spoke in a session on themes in courses in history of mathematics. The title of his was "Return to Infinity", and he compared the chronological and thematic approaches based on his experiences in the classroom. Also, as of the Joint Meetings, he became Chair-Elect of the Philosophy of Mathematics Special Interest Group of the MAA after having previously been Program Director. Congratulations to Tom for being the first recipient of the CARE Award from UW-Whitewater for working with non-traditional students.

Executive Committee 2013 - 2014

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