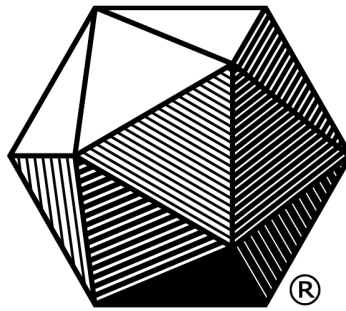# The Mathematical Association of America

Wisconsin Section

Newsletter
Fall 2011

Governor's Report

Following tradition, there was a Board of Governors meeting in August in conjunction with MathFest. As a new governor, I learned at that meeting how the MAA functions and how decisions are made. That is not to say that I was totally ignorant about these matters prior to attending that meeting. However at that meeting I attempted to master layer upon layer of detail about organizational structure, staff, officers, customs, assessment, budgeting, and so forth. There was as much information as anyone could possibly want and more. I am happy to report that what was clear is that the MAA is in very good hands and is a credit to our profession.

For 2012, budgeted income and expenses are both a little over $7 million. The MAA has a reserve of around $2.8 million. John Kenelly, then Treasurer, said at the meeting that the MAA is solvent, and reiterated this more than once. So do not expect any sudden paroxysms or sudden changes in leadership or staff. Everything is going well, and though there are many challenges, we have a staff in place that is coping creatively, moving forward, and doing so wisely.

In the Budget there are several items of particular interest.

- For the first time there will be federal money in the amount of $40,000 to support operating expenses of the AMC program.
- A new full-time development person has been hired, and donations have increased by more than 20%.
- An increase in postage and printing expenses is budgeted for 2012, in anticipation of greater emphasis on growing the membership. This seems prudent because dues income is projected to be down 5.12%.
- The three largest sources of revenue are dues ($2.1 million), Journals and books ($2.7 million), and math contest fees ($1.0 million).
- A 78% increase (to $101,000) in computer and IT expenses is in the budget. This is to support greater stability, backup and redundancy.

MAA Math contests are doing well under the direction of Steve Dunbar. Steve is on the management committee which runs the newly created International Mathematical Olympiad (IMO) Foundation. This was created to manage a rather large gift the IMO received earlier this year – one million Euros donated by Google. The first task of the management committee will be to channel money appropriately to the host countries over the next five years.

In another area, Steve was invited to participate in an NSF supported meeting, *System-level Professional Development: Articulating Research Ideas that Support the Implementation of the Professional Development Needed for Making the Common Core State Standards in mathematics a Reality for K-12 Teachers*, May 12-13, 2011. Steve presented results of a survey from the February 2011 AMC10/AMC12 contests showing that 80% of US teachers believe that AMC questions 1-15 are harder than their current curriculum, yet these same problems 1-15 can be directly connected to the Common Core State Standards. As Steve pointed out in his report, this demonstrates a disconnect between teacher beliefs and the content of the CCSS. Evidently Steve is fighting the good fight for us. Let us hope his voice is heard.

The White House Office of Science and Technology Policy has commissioned a study of mathematics competitions. It shows that the AMC program of the MAA is by far the largest with approximately 400,000 students in grades 6-12. The nearest bona fide competitor was MATHCOUNTS with 138,000 students participating. Math Leagues reports a high number of students, but is only in grades 4-10, and the competition is not well known, suggesting that estimated participation levels may be subject to error. Again we see that the MAA is effectively supporting mathematics and the mathematical sciences at all levels. On that happy note, I will end.

Andrew Matchett, UW-La Crosse

Chair's Report

Save the Date! The 80th Annual Spring Meeting of the Wisconsin Section of the MAA will be held April 13-14, 2012 at the Milwaukee School of Engineering. Chair-Elect James Swenson has already lined up a fabulous array of invited speakers. They are Frank Farris from Santa Clara University, Susanna Epp from DePaul University, and John Rogness from the University of Minnesota. Please consider contributing to the program with a presentation of your own and/or a presentation from one of your students. The contributed speaker application forms are in this newsletter and talks on mathematics, pedagogy, history, and applications are most welcome and appreciated. Also, consider bringing a team of students to compete in the Face Off competition.

The last Annual Spring Meeting at UW-Stout was a great success, with 49 contributed talks. Student speakers accounted for 13 of the talks. Many thanks to Laura Schmidt, Eileen Zito and many other UW–Stout staff and students for their work in making the meeting run efficiently, and also for creating such a warm and welcoming environment. Of course, many thanks to those who contributed talks or attended. You were an integral (pun intended) part of making the Meeting successful.

This summer, Andy Matchett of UW-La Crosse took over the reins as governor of the section. As most of you know, Andy has donated his time and talents to the service of our Section in various capacities over the years and we welcome his return. Many thanks to our outgoing governor Jon Kane for his vital contributions to both the MAA and the MAA Wisconsin Section.

I have recently appointed Kirthi Premadasa of UW–Marathon County as successor to Irfan Ul-Haq as the Project NeXT Director. Many thanks to Irfan for his dedication in enriching this program for the past 6 years. Kirthi will bring much energy and his knowledge of SOTL to the Project Next participants.

At the annual Spring Business Meeting, we voted upon a much needed rewording of our bylaws. This was reviewed by the Board of Governors and they are willing to accept them with a minor change to language in one sentence. (See "Proposed Change to Bylaws", p. 5.) We will need to vote on this change at the annual Spring Business Meeting.

Lastly, please consider donating your time and talent in service to the Wisconsin Section of the MAA. (See "Openings on the Section Executive Committee, p. 4.) If interested in serving please e-mail clare.hemenway@uwc.edu.

Clare Hemenway, UW-Marathon County

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 2012 Wisconsin Section Distinguished Teaching Award are now being accepted. The nomination form and instructions are available for downloading as a pdf file on the MAA web site at http://www.maa.org/awards/teachingawards.htm or contact Mark R. Snavely Mathematics Department, Carthage College, Kenosha, WI 53140. Nominations should be submitted so as to arrive by November 6, 2011.

Contest Report

American Mathematics Competitions

The AMC 8 competition was held on November 16, 2010. A total of 1,599 Wisconsin students participated in the competition (up from 1,477 in 2009 and 1,571 in 2008). One student received a perfect score from Wisconsin. The average score for Wisconsin students was 8.55, compared with the national average score of 9.98. The gap has continued to increase from .85 in 2009 to 1.43 this year. The next AMC 8 will be given November 15, 2011.

The AMC 10 and 12 contests were held on February 8 and 23, 2011. A total of 780 Wisconsin students took the AMC 10, and this number is significantly less than the 938 in 2010 and 991 in 2009. A total of 1,254 took the AMC 12, and this number is also down from 1,502 in 2010 and 1,554 in 2009. Thus, a total of 2,034 students took the AMC 10/12, again significantly lower than last year's total of 2,440. Of the Wisconsin students, 45 scored well enough to be invited to take the American Invitational Mathematics Examination (AIME). This number is slightly lower than the 54 in 2010 and still lower than earlier years; 50 in 2009 and 56 in 2008. There were no perfect scores from Wisconsin this year. The average score for Wisconsin students compared to the national average scores are in the following table:

	10A	10B	12A	12B
Wisconsin	61.9	56.1	63.6	57.2
National	67.7	72.2	66.8	64.9

Two Wisconsin students qualified for the United States of America Junior Mathematical Olympiad; Sohil Shah, grade 10, and Christopher Xu, grade 6, both from James Madison Memorial High School. One Wisconsin student qualified for the United States of America Mathematical Olympiad; Hongkai Pan, grade 12, of Madison West High School.

The next AMC 10/12 will be given February 7 and 22, 2012.

MAA-Wisconsin Section High School Contest Examination

The Section contest examination was given on Thursday, December 9, 2010. There were 69 schools reporting scores this year for a total of 2,582 students. This is a decrease from 81 schools in 2009, but similar with 71 schools in 2008. We had participation from six new schools this year. The difficulty level of the exam was a little harder this year compared to 2009, and there was one perfect score. The cutoff for the top 1% was a score of 86 out of 120 this year.

Congratulations to Christopher Xu from James Madison Memorial High School who received a perfect score. The contest winners in combined state contest and AMC scores were Sohil Shah and Christopher Xu both from James Madison Memorial High School. Congratulations to Sohil and Christopher!

We give thanks to the UW-Stout faculty for coordinating these efforts and finishing their final year hosting the contest. Viterbo University in La Crosse is the new host under the leadership of Dr. Michael Wodzak. If anyone would like to volunteer to help the test committee please send an email to mawodzak@viterbo.edu.

Laura Schmidt, UW-Stout

Project NExT-Wisconsin

The Fall Meeting of Project NExT-Wisconsin will be on October 22-23, 2011. Sr. Barbara Reynolds, SDS, of Cardinal Stritch University in Milwaukee will lead the workshop. The workshop will be hosted at University of Wisconsin-Eau Claire campus. Simei Tong, a mathematics faculty at the University of Wisconsin-Eau Claire, has been helping us to reserve a room for the workshop for the last few years.

It is also my pleasure to introduce Dr. Kirthi Premadasa as the new director of Project NExT-WI. He is currently at the University of Wisconsin-Marathon County. He taught in Sri Lanka before he moved to Wisconsin. Personally, I think he will be great for Project NExT-WI due to his energetic personality and interest in motivating students to learn mathematics. On a personal note, I thank all the Project NExT-Fellows (current and past) and MAA-Wisconsin section executive committee for their continued support. It was a great experience for me.

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. There is no membership fee to join Project NExT-WI. To apply, please contact me at ulhaqi@uwplatt.edu (application material is accessible at http://www.uwplatt.edu/nextwi/).

Irfan Ul-Haq UW-Platteville

Openings on the Section Executive Committee

The Wisconsin Section invites nominations for the following positions:

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.

Secretary/Treasurer. This position keeps the minutes of the official meetings of the section and of the Executive Committee, maintains the records of the section, and manages the financial matters of the Section, and files all required reports to the national MAA.

Send nominations to Section Clare Hemenway at clare.hemenway@uwc.edu . Self nominations are encouraged. Section officers must be members of the MAA.

Student Activities

The co-Coordinators, Ken Price and Steve Szydlik, hope you will encourage some of your students to attend conferences and possibly give talks. The quality and quantity of presentations continues to be impressive. The Pi Mu Epsilon Regional Undergraduate Math Conference is coming up soon, November 11-12 at St. Norbert College. This year's featured speaker is John Koker from the University of Wisconsin Oshkosh.

The spring 2012 section meeting will be held at the Milwaukee School of Engineering on April 13-14. The banquet cost for students will continue to be held at $5 per ticket. We will try to find low-cost housing options for students who wish to stay for both days. Thanks to the hard work by the organizers of the 2011 meeting, we were able to offer a popular student retreat room at UW-Stout, and plan to do so again in 2012.

The Wisconsin Mathematics Council's Annual Green Lake Conference is scheduled for May 2-4, 2012. Anyone interested in any level of mathematics education in Wisconsin is encouraged to attend.

Your favorite math game show "Face Off!" will return at both the Pi Mu Epsilon conference in November and also at the MAA section meeting in April. Students who have taken Calc I or above are eligible to compete for their department in teams of 2-4 players. With our "Slammer" buzzer system we can allow as many as ten teams to play. 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.

At the Spring 2011 meeting of the MAA-Wisconsin section, Carthage College (representing Lagrange) continued its recent string of success at "Face Off," winning the competition. UW-Eau Claire finished second as Hilbert, and host UW-Stout finished third. Appropriately, UW-Stout, representing the great number theorist Euler, earned the only perfect score in the "Final Face Off" question: *Given a prime p, a number is called p-smooth if none of its prime factors exceed p. In five minutes, find the largest p-smooth number less than 2000 for p=2, 3, 5, 7, 11, 13, 17, 19.*

Ken Price and Steve Szydlik, UW-Oshkosh

Proposed Change to Bylaws

The bylaws of the Wisconsin Section of the Mathematical Association of America, Inc., are available on-line at: http://www.uwplatt.edu/maawisc/const.html .

At that site, you'll find the current bylaws, a document showing all the changes, and the final version, after amendment. There are many stylistic changes, but the substantive changes are:

> Arcticle V, Section 1: The members at the annual meeting, or the Executive Committee at any of its meetings, may authorize the collection of ~~annual section dues and/or~~ registration fees for meetings.

CALL FOR SPEAKERS

80th Annual Meeting of MAA Wisconsin Section, April 13 – 14, 2012

Milwaukee School of Engineering

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 2, 2012, to James Swenson (swensonj@uwplatt.edu). Talks received after March 2 will be considered only as time and space permit.

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

(There is a separate form below for student speakers.) _____

Due date: March 2, 2012

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 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 _____

CALL FOR STUDENT SPEAKERS

Student Mathematics Conference

Milwaukee School of Engineering, April 13 – 14, 2012

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 2, 2012, to James Swenson (swensonj@uwplatt.edu). Talks received after March 2 will be considered only as time and space permit.

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

Due date: March 2, 2012

Primary Speaker:

Name(s): _____

Institution: _____

Address: _____ Phone: _____

_____ Email: _____

Second Speaker: (If more than two speakers, 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 _____

Know Your Wisconsin Mathematician

Interview with Professor John Koker, UW-Oshkosh, by Kenneth Price.

Where did you grow up?

Kenosha, WI

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

While in high school, I remember noticing number patterns that I found interesting (such as the sum of the first n odds is n^2). When I went to college, I enjoyed taking math classes so I took as many as I could. Before I knew it I was in graduate school and became a mathematician.

Where did you go to undergraduate school and graduate school?

I got my B.A. from St. Norbert College, my M.S. from Purdue University, and my Ph.D. from the University of Wisconsin Milwaukee.

What was the influence of your family on your education?

I was the youngest of four children, and the first one in my family to go on to college. I was always supported by my family as I continued on through school. Although, I do remember a time that my Dad asked me (being a little annoyed I was in school so long), "How much math is there?"

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

Certainly the department members at St. Norbert including Rick Poss, David Pankratz, Larry Thorsen, Gene Deboth, Kathy Muhs, Bonnie Berkin and John Frohliger.

How did you end up at UW Oshkosh?

I was teaching at SUNY - Potsdam College in Potsdam, NY. While I was happy there, we missed Wisconsin. One year I sent applications to Wisconsin schools that had openings and was offered the job. Oshkosh has a great faculty. I made the right choice to come to UW Oshkosh.

How has your position as a college dean affected your career in mathematics?

While I have been trying to teach regularly, my research and professional work in mathematics has suffered. My wife recently told me she doesn't notice many junk mail envelopes filled with my scribbling lying around anymore.

How were you involved with the MAA over the years?

I regularly attended meetings and then directed the WI – MAA High School Math Contest for many years. I did a term as chair and one as governor of the WI Section.

What courses do you like to teach?

I can't think of a math course I haven't liked teaching. Specifically, I like teaching the general education math course for non-math/science related majors (Problem Based Inquiry Seminar) and the mathematics courses for future elementary and middle school teachers. For majors, I enjoy Number Theory, Abstract Algebra, Linear Algebra and our capstone course on problem solving. I enjoy teaching the courses in our graduate program too.

Students have been a big part of your career. Can you please talk about what students have meant to you as a teacher and mathematician?

Without students, there is no need for teachers. I really enjoy the student/teacher relationship – especially if I am successful with someone who claimed to be anti-math. I always tell my students that I will learn something new along with them (it may be something different) as they

struggle and work to learn something new. That has had a great effect on my growth as a mathematician.

You have done a lot of acting on stage. Do your interests in mathematics and theater interconnect?

Sometimes directly, as I once played the aging mathematician in Proof. Always indirectly, as I see these both as creative activities. You have to create an idea or moment and then communicate what you have discovered.

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

I don't need any expensive equipment. Do I sound like a dean?

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

I think I have changed as a teacher. I now see more myself more as a reflective practitioner. I have learned to approach teaching as a problem – one that I will never fully solve. But, as I work on this problem, I will become a better teacher.

What was the worst part of teaching mathematics?

When I didn't get students involved. I now wonder. Why did I ever think students would want to come and watch me do math for an hour?

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

I usually talk about patterns and categories. We like to predict, sort and classify things. I try to give a few simple examples.

What is your advice to college students and new teachers?

Students – go to class and get involved. Teachers – make students want to come to class and get them involved.

Are You On-line?

Look for the Wisconsin Section on
- Facebook: http://on.fb.me/oRQZbs
- Twitter: http://twitter.com/MAAWisconsin

Campus News

Beloit College *submitted by Ben Newton*

Darrah Chavey was in Portugal at the Bridges (between Math and the Arts) conference, presenting an Ethnomathematics paper on "Symmetry Orbits: When Artists and Mathematicians Disagree". While he was there, he also played the part of Einstein in the play "The Physicists", presented on Theater/Poetry/Movie night at the conference.

Ranjan Roy's book, *Sources in the Development of Mathematics: Infinite Series and Products from the Fifteenth to the Twenty-first Century*, was published by Cambridge University Press this summer. This work contains 41 chapters, dealing with topics such as the calculus, the theory of finite differences, elementary number theory, symmetric functions, solutions of algebraic equations, and combinatorics, as they were conceived of and presented by their originators. Much of the material in this book could be useful to supplement undergraduate class readings in these areas.

Carthage College *submitted by Mark Snavely*

Carthage College is pleased to welcome Dr. **Mike Nicholas** to the Mathematics Department faculty. Mike received his PhD in Applied Mathematics from Duke University, and recently completed a postdoctoral position at Tulane University. Please join us in welcoming Mike to the Wisconsin Section.

Madison College *submitted by J. Sriskandarajah*

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

- **Lecture #106, Friday, September 23, 2011**, Professor Robert Farinelli, Dean of Academic Affairs, Community College of Allegheny County and President American Mathematical Association of Two Year Colleges
  "*Doing Non-Routine Problems with Routine Mathematics*"
- **Lecture #107, Friday, September 30, 2011**, Professor Paul Zorn, St. Olaf College, MN and President of the Mathematical Association of America
  "*To Infinity and Beyond*"
- **Lecture # 108, Friday, November 18, 2011**, 3:30 PM, Room 142AB Professor John Beam, UW-Oshkosh
  "Moviemaking Magic and Mishaps"
- **Lecture # 109, Friday, December 2, 2011**, 3:30 PM, Room 122/133 Professor John Koker, Dean of Arts and Sciences, UW-Oshkosh
  "Super-quadratics and Heroic Ideas Concerning Polynomial Equations."

St. Norbert College *submitted by Katherine Muhs*

Student news:

The Mathematics discipline of St. Norbert College made a strong showing at the 2011 MathFest held in Lexington, KY, during the first week of August. Five St. Norbert College mathematics students and four mathematics faculty participated in the event.

All five of the students presented papers in the PME portion of the conference. The speakers and the titles of their presentations are: **Hanqin "Caesar" Cai ('12)**: "Fractals and Their Dimension"; **Ryan Hallberg ('13)**: "Mathematics Involved in the Game *Shut Box*"; **Nicole Harp ('12)**: "An Extension of the Hiring Problem"; **Brian Pietsch ('12)**: "Parameterizing the Koch Curve"; and **Abby Wendricks ('13)**: "Assessing the Risk of an Oil Spill in the Arctic."

Caesar, Nicole, and Brian did their research as part of the St. Norbert College Summer Undergraduate Research Program in Mathematics.

Brian's presentation was judged one of the best PME student talks. In recognition of this, he received a $150 prize provided by the American Mathematical Society and the American Statistical Association. The St. Norbert College team also finished second in the national Math Jeopardy competition. Mathematics Students from St. Norbert College have presented papers at every summer national meeting since 1985. No other college or university can make that claim.

Faculty news:

Teena Carroll traveled to two conferences this past summer. One was the annual reunion conference for the Summer Mathematics Program for Women at Carleton College and the other was a special meeting of the MAA held in Washington,DC, on the topic of Inquiry Based Learning. There she gave a talk about her experiences offering an inquiry-based version of MATH 250 in Spring 2010. Teena and **Haoqi Chen ('12)** received a St. Norbert Student/Faculty research grant to continue their work from the previous summer's SNC Mathematics Undergraduate program. They are working on the connections between how Ancient Egyptians wrote fractions and a geometric figure that interested the Ancient Greeks.

John Frohliger has been elected to the position of National Councillor for Pi Mu Epsilon. He and **Rick Poss** helped judge PME student papers at MathFest.

Terry Jo Leiterman has established a Fluid Dynamics Lab in JMS at St. Norbert College. This lab will enable her and her students to study and measure a number of real-world problems, including the effects of sedimentation and wave action. She also received a grant through the Faculty Development Summer Research Program to model the population dynamics of phytoplankton in freshwater, inland ecosystems, through theoretical and experimental means, with an emphasis on the process of sedimentation as it relates to particle size, shape, and concentration. At this year's MathFest, in Lexington, KY, she judged MAA student papers and gave the presentation "Settling Velocity and Sedimentation in Low Reynolds Number Fluid Systems." To top off her year, she received the Leonard Ledvina Prize for **outstanding teacher**, one of two awardees this year from all of St. Norbert College. Terry Jo has also received a $500 travel grant to attend the American Physical Society Division of Fluid Dynamics meeting in November 2011 to present results of summer research.

Katherine Muhs gave a presentation at the United States Department of Education Regional Conference in San Francisco in March. The title of the talk was "Northeast Wisconsin Math Partnership Overview, Successes, and Challenges" and had the formal heading of "Providing Professional Development to In-Service Teachers Via Graduate Programs". Katherine and retired math professor **Bonnie Berken** have been working with elementary and middle school teachers in the Green Bay and Wausaukee School Districts for three years with the goal of improving the mathematical skills and comfort level of the teachers and thus their students. This work was funded by a Math/Science Partnership grant awarded through the US Department of Education.

Also at MathFest, **Kevin Murphy** participated in Project NExT (a program for young faculty that is sponsored primarily by the MAA and the ExxonMobil Foundation), was a judge in the Student Problem-Solving Competition, and presented the talk "Derivation of the Kinetic Component of the Gluon Four Momentum Operator."

UW-Eau Claire   *submitted by Simei Tong*

The Department of Mathematics at UW-Eau Claire welcomed seven new tenure track faculty this Fall semester. **Herschel Day**, a Fellow of the Society of Actuaries, brings additional expertise to our actuarial science program. **Ryan** and **Jennifer Harrison** are in mathematics education. **Jon Armel**, **Dandrielle Lewis**, **Carolyn Otto**, and **Ursula Whitcher** will enhance our liberal arts mathematics program. In addition, the department had four retirements: **Bill** and **Gwen Applebaugh**, **John Drost**, and **Nick Passell**.

The UW-Eau Claire's NSF funded Summer Undergraduate Research Program in Pure and Applied Mathematics hosted fourteen undergraduate researchers from the University of North Dakota, University of Virginia, University of Wisconsin – Marathon County, Carnegie Mellon University, Princeton University, St Olaf College, University of St Thomas, University of Chicago, University of Michigan, Allegheny College, University of Florida and UW-Eau Claire. The students worked with faculty mentors **Mohamed Elgindi**, **Michael Howe**, **Chris Ahrendt**, and **Manda Riehl** on topics in Invariant Theory, Time Scale Calculus, Fluid Flow, Numerical Determination of Eigenvalues and generating functions for word embeddings.

Four UWEC Math Majors who graduated in the spring of 2011 were accepted by graduate schools in University of Michigan (Financial Mathematics), University of Minnesota (Economics), University of Wisconsin-Madison (Statistics), and University of Iowa (Pure Mathematics).

UW-Madison   *submitted by Bob Wilson*

There were six new tenure-track faculty this year: **Scott Armstrong**, **Tullia Dymarz**, **Brian Street**, **Melanie Matchett Wood**, **Philip Matchett Wood**, and **Jun Yin**, and six new postdocs, **Matthew Ballard**,

Mingzhong Cai, **Gerardo Hernandez-Duenas**, **Zev Klagsbrun**, **Jeri Lebl**, and **Ruifang Song**. We have 17 new graduate students, from all around North America and the world.

Mathfest will be in Madison next summer, and we are planning now how our department can best participate. We would like to encourage many of our students to take part.

Immediate Past President of The Association for Women in Mathematics, Emeritus Professor **Georgia Benkart**, was an organizer of a conference September 17-18, celebrating the 40th anniversary of AWM, "40 Years and Counting: AWM's Celebration of Women in Mathematics," at the new NSF-sponsored Institute for Computational and Experimental Mathematics (ICERM) at Brown University. The meeting featured 4 plenary talks and 18 special sessions on a wide range of topics in pure and applied mathematics, and Wisconsin mathematicians were well represented among the 300 participants: New UW-Madison faculty member **Melanie Matchett Wood** spoke in the Number Theory Special Session, and **Ursula Whitcher**, a new Assistant Professor at UW-Eau Claire, and graduate students **Diane Holcomb** and **Joanna Nelson** from UW-Madison and **Pamela Harris** from UW-Milwaukee presented poster sessions.

UW-Milwaukee
submitted by Jay H. Beder

The students in the UWM and NSF supported program **Integrated Undergraduate Research in Aquatic Biology and Mathematical Sciences** (UBM) have been very active during the spring and the summer. Students from our first cohort presented their research findings at the UBM meeting in Fort Collins, CO, at the NCUR conference in Ithaca, NY, and the Wisconsin MAA conference at UW-Stout. Meanwhile a group from our second cohort of ten students won second prize at the UWM Undergraduate Research Symposium with their poster investigating the dynamics of the nuisance algae, *Cladophora*, in Lake Michigan. In the summer the students in our second cohort worked intensively on three research projects in laboratories at the Department of Biological Sciences, and at the Great Lakes WATER Institute. Currently they are integrating their mathematical models and the data collected in the summer, and are getting ready to present their results at the Undergraduate Research Conference at the Interface of Biology and Mathematics in Knoxville, TN in October. Our UBM activities are expanding this year with a new institutional UBM grant from the NSF that will fund our program for five more years. We are planning to introduce an interdisciplinary certificate program in Quantitative Biology, as well as a new track in biomathematics under our mathematics major. Students will also have the opportunity to participate in a Living and Learning Community program at UWM, and get their first experiences in data analysis and modeling while collecting various data on the green roof of Sandburg Residence Hall.

Assistant Professor **Clark Evans** joined the Department in August 2011 after a two-year postdoctoral fellowship at the National Center for Atmospheric Research in Boulder, CO. He received his Ph.D. at Florida State University in 2009. His specialization is in the area of atmospheric science, particularly as it relates to the study of tropical cyclones and severe storms. His research utilizes output from numerical weather forecast models alongside theory and, where available, observations to study how tropical storms and related phenomena develop and evolve.

Professors **Vytaras Brazauskas** and **Chris Hruska** have been promoted, Brazauskas to Professor and Hruska to Associate Professor with tenure. Professor Brazauskas specializes in actuarial science and statistics, while Hruska's research is in geometric group theory and topology.

Professor **Ian Musson** has been awarded a two-year grant from the National Security Agency for a project entitled "Enveloping algebras and differential operators." Assistant Professor **Chao Zhu** has been awarded a three-year NSF grant for his project, "Complex Stochastic Systems: Analysis, Control and Applications."

UW-Oshkosh
submitted by John Beam

We are pleased to welcome three new teachers to our academic staff this year: **Jennifer Childress**, **Alexander Lavrentiev**, and **Barton Pritzl**.

We begin news about our faculty by announcing that **Eric Kuennen** has received tenure, and **David Penniston** was promoted to Associate Professor.

In May 2011, a group of UW Oshkosh mathematics education students traveled to China to study mathematics teaching practices in Chinese schools. **Eric Kuennen** was the organizer and principal faculty leader of this program; he was assisted by **John Beam**, **Jen Szydlik**, and **Steve Szydlik**. For this work as well as previous work he has done with our students in Peru, **Eric Kuennen** received the Global Educator Award from the College of Letters and Science this fall.

We are also pleased to announce that, for his outstanding teaching and dedicated service to the teaching profession, **Steve Szydlik** has won the Edward M. Penson Distinguished Teaching Award this year.

UW-Platteville   *submitted by Ben Collins*

We have added five new teaching academic staff this fall: **Lauren Bingham**, **Terry DesJarlais**, **Florence Obielodan**, **Amy Schollmeier**, and **Susan Weiner**.

Congratulations to **James Swenson and Irfan Ul-Haq**, who have been awarded tenure.

Barb Barnet has been named chair of the department. We thank **Julie McDonald** for her years of service.

UW-Stout   *submitted by Steve Deckelman*

Eileen Zito and **Dennis Mikkelson** have retired from the department. **Jeanne Foley** and **Nelu Ghenciu** are taking year sabbaticals. The department hired three new faculty members. **Greg Bard**, who did his PhD work in mathematics at Maryland, joins us after a four year stint at Fordham University. **Keith Wojciechowki** recently completed his PhD in mathematics at the University of Denver. **Wesley Kerr** joins us in computer science. Wes recently completed his PhD in computer science at Arizona. **Theresa Butori**, **Shing Lee**, **John Neiderhauser** and **Mark Pedersen** have been hired as academic staff. **Vi Kokil** has also rejoined the department after a brief hiatus.

Matt Horak was granted tenure. During the summer Matt assisted Michael Dorff at BYU's mathematics REU. Matt, along with **Alex Basyrov** are the PIs for a new NSF funded math REU to be run at UW-Stout beginning in summer 2012. Affiliated faculty include **Seth Dutter**, **Amitava Karmaker** and **Steve Deckelman**. UW-Stout student **Justin Halvorson** attended the MathFest in Lexington, KY, and won an award for his talk on the REU research he did with **Matt Horak** at BYU. The talk was entitled "Dead end depth in Thompson's group F".

Laura Schmidt is the department's new program director for the Applied Mathematics and Computer Science program. She takes over succeeding **Joy Becker** who has moved to Wartburg College . Laura is a member of an eight person team investigating "Closing the Gap Between Learners' and Instructors' Expectations". This is a multi-year grant demonstrating results affecting students' engagement, motivation, metacognition, and their understanding of the roles and responsibilities of the instructors and themselves as students. It is supported by an OPID UTLG grant.

Seth Dutter, **Alex Basyrov**, **Benjamin Jones**, **Matt Horak**, **Laura Schmidt** and **Chris Bendel** received a UW-System "Closing the Achievement Gap" Diversity Grant with title "Improving Mathematics Success Through Enhanced Support Services."

Wan Bae was awarded the University's Outstanding Emerging Researcher award.

UW-Whitewater   *submitted by Mohammad Ahmadi*

Bennett Harris, Janet Ley, and **Ruth Whitmore** retired after many years of service to the Department of Mathematical and Computer Sciences.

Hien Nguyen was granted tenure and promotion to Associate Professor.

The Department hired five new instructional academic staff**: Teri Alder**, **Corey Bruns**, **Huckleberry Rahr**, **Inessa Sedegho**, and **Ama Wanniarachchi.**

Choon Ho Lee of South Korea joined our department as a visiting researcher.

The Purple Comet! Math Meet, the free, annual, international, on-line, team mathematics competition designed for middle and high school students run from UW-Whitewater April 4 to April 13, 2011 attracted 2200 teams from 39 countries.

Ki-Bong Nam gave a talk at the Academic Conference on Group Theory 2011, Sponsored by Chinese Math. Society and Dalian Univ. of Technology, June 5-8, 2011. He also gave a seminar talk at the Choongnam University, and another at the Choongju Educational Univ. July, 2011.

Ki-Bong published two papers:

- JongWoo Lee and Ki-Bong Nam,
  "New simple algebras containing the matrix ring," Algebra Colloquium, (2011) 775-784.

- Jongwoo Lee, Xueqing Chen, Seul Hee Choi, and
  Ki-Bong Nam, "Automorphism groups of some stable Lie algebras,"
  Journal of Lie Theory, Heldermann Verlag, Vol. 21, 2011, 457-468.

Xueqing Chen gave four conference presentations:

- The XXIIIrd Meeting on Representation Theory of algebras, Bishop's University, Sherbrooke, Canada. September 16-17, 2011.

- Southeastern Lie Theory Workshop "Finite and Algebraic Groups", University of Virginia, USA. June 1-4, 2011.

- Infinite Dimensional Lie Theory and its Applications Institute for Researches in Fundamental Sciences (IPM), Tehran, Iran. May 10-17, 2011.

- AMS 2011 Spring Central Section Meeting "Special Session on Representations of Algebras". University of Iowa, Iowa City, IA. USA. March18-20, 2011.

Xueqing published the following paper.

- J. Lee, X. Chen, S. Choi, K. Nam, Automorphism Groups of Some Stable Lie Algebras. Journal of Lie Theory. vol. 21, no.2, 2011, 457-468.

Zhengnan (Charles) Shi is currently a reviewer for the journal *Information Processing Letters*. He also was invited by Joel Rodrigues, the chief editor of RPTELC, to be a guest editor for a special issue of the new journal *Recent Patents on Telecommunications*. **Charles** published the following paper this past summer:

- Zhengnan Shi, An Updated Self-stabilizing Algorithm to Maximal 2-packing and A Linear Variation under Synchronous Daemon, in the Proceedings of the 2011 International Conference on Parallel and Distributed Processing Techniques and Applications (PDPTA'11), Las Vegas, Nevada, USA, 2011, (I), p. 262-267

Thomas Drucker gave four conference presentations:

- Talk to the Special Session on History of Mathematics at the AMS meeting in Iowa City in March on 'Artificial and Universal Languages in Mathematics and Logic'

- Talk to the Special Session on History and Philosophy of Mathematics at the AMS meeting in Worcester, Massachusetts, in April on 'Mathematics in the Works of W.S. Gilbert'

- Talk to the International Festival of Gilbert and Sullivan in Gettysburg, Pennsylvania, in June on 'Many Cheerful Facts about Matters Mathematical'

- Talk to the Contributed Papers session on History of Mathematics at MathFest in Lexington, Kentucky, in August on 'Organizing a History of Mathematics Course Around Infinity'

Viterbo University   *submitted by Rich Maresh*

Mark Saegrove retired last spring after 36 years at Viterbo, and we now have a new member of the department, **Brian Merkey**, who has a Ph.D. from Northwestern University.

We will also be hosting the MAA High School Math Competition the next few years.

Executive Committee 2011 – 2012

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