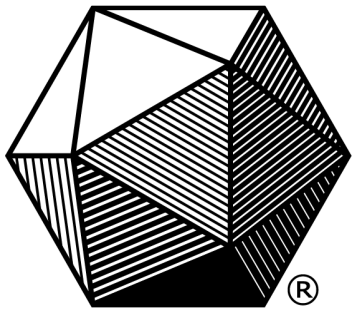
# The Mathematical Association of America



# Wisconsin Section

## Newsletter

## Fall 2012

# Governor's Report

The Board of Governors met in Madison on August 1, 2012, in conjunction with MathFest. If last year was the year of transition, as a new Executive Director, Michael Pearson and a new Treasurer, Jim Daniel, came on board, then this year is the year of building businesses inside the MAA. Treasurer Jim Daniel made the following very clear statement.

> "When 2012 concludes the MAA will have had 8 consecutive years of annual operating deficits with a total deficit probably exceeding 1,000,000 dollars over those eight years--leaving us with a free reserve of only around $700,000 at the end of 2012. This pattern must not continue."

He went on to say that his goal was to build up the free reserve to approximately 40% of the annual operating budget within 10 years after 2015. The annual operating budget is around $10,000,000. This information came in the first hour of the meeting and set the tone for much of the rest of the meeting. This year will mark the beginning of several business initiatives that have significant potential to revitalize MAA finances, but that also carry significant risk. We can take pride in the MAA officers, committee chairs, and staff. They are leading the organization courageously and intelligently.

Rick Cleary, Associate Treasurer from Bentley University arranged for four teams of Bentley business students to take a look at four business areas within the organization. Reports from these teams were filtered through the collective wisdom of MAA management. The result, as reported by Executive Director Michael Pearson was the following list of recommendations.

1. Develop course ancillaries for new and existing textbooks. These should incorporate WebWork if possible.
2. Math contest participation has been quite constant in recent years at 375,000 students per year. A worthy goal is to increase that number by 20%.
3. Institute a program of hosting e-textbooks and licensing them directly to students. This will require a $150,000 investment.
4. Restructure and consolidate customer service and fulfillment operations. The cost would be about $200,000 with about the same projected annual savings.
5. Invest $150,000 in the Second Century Campaign, with a goal of raising $5 million plus.

Just to focus on one detail, Steve Dunbar, Director of Competitions, reported on plans to create a cross listing of math contest problems with the common core math standards, showing which problems are related to which standards. This would seem to be an invaluable resource for school districts across the country, since published information about standards covered by specific textbooks is neither reliable nor complete. To see if I understood, I asked Steve if the MAA would then send copies of the cross listing to school districts for use by teachers. Steve answered that, no, the MAA would sell copies of the cross listing to school districts. The Board of Governors heard this with what was surely unanimous approval. The goal is to do good things and do them in a sustainable way.

There was one divisive issue at the meeting. It was on double blind reviewing of articles for the MAA mathematics journals. A motion in favor of the MAA adopting a policy of double blind reviewing of all articles submitted to MAA journals came to the Board of Governors from several committees. It was opposed by most of the associate editors of the Monthly (33 to 2 to 3). So this put the Board in a tough position. After a long discussion, the Board voted on the motion and it passed. I forget the exact vote.

So we can expect that, in the fullness of time, a policy of double-blind reviewing will be instituted for the Monthly, the College Mathematics Journal, and Mathematics Magazine. This means that the author's name will be covered up or deleted from an article when it is sent to a reviewer. An author who wishes to be known to a referee can circumvent the spirit of this policy, but one supposes that only a very rare sort of author will wish to do that. Likewise, if the author is well-known, one supposes that a reviewer will often with just a little effort be able to ascertain the author's identity. Again, one supposes that it would be a rare sort of reviewer who would waste the time to do that. I think that a number of governors who voted for the motion did so in the belief that the new policy will

not change the gender or ethnic composition of journal authors one iota, but that it is a policy that will send a good message to society and will serve our profession well.

As always, MathFest itself was great, full of interesting talks, posters, exhibits and interesting performances and competitions. The Wisconsin Section's own Ken Price and Steve Szydlik organized a session of Face-Off again, while Steve Dunbar and Jonathan Kane organized a Russian-style mathematics contest called a Math Wrangle. It was a wonderful meeting.

Andrew Matchett, UW-La Crosse

# Chair's Report

It was a pleasure to see so many of you at the Milwaukee School of Engineering last April, for our 2012 Spring Meeting! I hope that you had as much fun as I did hearing from Jonathan Rogness about the behind-the-scenes details of a viral math video on YouTube; learning from Frank Farris about the unexpected mathematical explanation of hidden symmetries in wallpaper; and thinking with Susanna Epp about the logical issues that cause many students to struggle with proof writing. I'd like to thank all of you who helped to make the meeting a success, whether by contributing talks, by bringing students, or simply by attending. The Wisconsin Section owes special thanks to Kseniya Fuhrman and the other excellent organizers at MSOE, who made us so welcome in Milwaukee, and who did the necessary work to ensure that everything would run so smoothly!

It is already time to start thinking about the 81st annual Spring Meeting of the Wisconsin Section of the MAA, which will be held on April 5-6, 2013, at the University of Wisconsin – Marshfield. As Chair-Elect of the section, Ken Jewell has arranged for an excellent slate of invited speakers: Diane Benjamin, of Edgewood College; Robert Devaney, of Boston University; and Walter Stromquist, the editor of *Mathematics Magazine*. This is a fantastic start to the program! Please consider joining in the fun, by contributing a talk of your own, and/or by encouraging your students to give presentations. I certainly hope that you will also help your students to form a Face Off team. I always look forward to this event, but it can't happen without the students!

In fact, it's not too soon to start planning for spring meetings beyond 2013. The Wisconsin Section has traditionally tried to alternate between locations in the eastern and western parts of the state. Presently, 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!

Please join me in thanking Mark Snavely, of Carthage College, for many years of service to the Wisconsin Section in the office of Secretary/Treasurer. In April, Mark handed over these duties to Jonathan Kane: I'm grateful to Jon, too, for stepping forward once again to serve the MAA in a new way. I hope that you, too, will consider donating your time and talent in service to the Wisconsin Section. See the box below for an opportunity.

Finally, I'd like to thank you for giving me the chance to serve as Section Chair. Please don't hesitate to contact me at swensonj@uwplatt.edu with questions, concerns or suggestions. I look forward to seeing you this April at UW-Marshfield!

James Swenson, UW-Platteville

## Opening 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. Send nominations to Section Chair James Swenson at swensonj@uwplatt.edu . Self nominations are encouraged. Section officers must be members of the MAA.

# Contest Report

### American Mathematics Competitions

The AMC 8 competition was held on November 15, 2011. A total of 1,465 Wisconsin students participated in the competition (down from 1,599 in 2010 and 1,477 in 2009). No students received a perfect score from Wisconsin. The average score for Wisconsin students was 9.70, compared with the national average score of 10.76. The gap has narrowed some to 1.06 compared to 1.43 from last year; however it is still higher than earlier years. The next AMC 8 competition will be held on November 13th, 2012.

The AMC 10 and 12 contests were held on February 7 and 22, 2012. A total of 756 Wisconsin students took the AMC 10, similar to the 780 in 2011 but significantly less than the 938 in 2010 and 991 in 2009. A total of 1,152 took the AMC 12, this number is also down from 1,254 in 2011, and 1,502 in 2010. Thus, a total of 1,908 students took the AMC 10/12, again lower than last year's total of 2,034. Of the Wisconsin students, 28 scored well enough to be invited to take the American Invitational Mathematics Examination (AIME). This number is significantly lower than the 45 in 2011 and 54 in 2010. As you can see the downward trend of participation has continued this year. 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 | 70.43 | 68.30 | 59.39 | 64.32 |
| National | 72.51 | 76.59 | 64.62 | 70.08 |

One Wisconsin student qualified for the United States of America Junior Mathematical Olympiad; Brian Luo, grade 9, from James Madison Memorial High School. There were no students who qualified for the United States of America Mathematical Olympiad. The next AMC 10/12 will be given February 5 and 20, 2013.

### MAA-Wisconsin Section High School Contest Examination

The Section contest examination was given on Thursday, December 1, 2011. There were 47 schools reporting scores this year for a total of 1,990 students. This is a significant decrease from 69 schools in 2010 and 81 schools in 2009. The difficulty level of the exam was similar compared to 2010, and there was one perfect score. The cutoff for the top 1% was a score of 85 out of 120 this year.

Congratulations to Peter Yang, a 7th grader from Madison Memorial High School, who received a perfect score. The contest winners in combined state contest and AMC scores were Peter Yang and Brian Luo both from James Madison Memorial High School. Congratulations to Peter and Brian!

Many thanks to Dr. Michael Wodzak, Viterbo University, 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 mawodzak@viterbo.edu.

Laura Schmidt, UW-Stout

## Project NExT-Wisconsin

At the fall workshop of NeXT, we will be providing two days of hands-on training to NeXT members on a number of Instructional Technology related topics. The fall workshop will be held at the University of Wisconsin Baraboo-Sauk City campus on October 13 and 14.

The first day of the workshop will be conducted by Dr. Eric Hofacker, a well-known Instructional technology resource person and one of our very own Wisconsin mathematicians from UW-River Falls. The theme for Saturday's session will be "**Integrating Emerging Technologies".** Dr Hofacker's session will deal with the exciting new technologies and applications that were developed over the past two years which may be utilized in undergraduate mathematics courses. There is certainly a challenge for faculty is to learn about these new resources and technologies and have an opportunity to develop appropriate and meaningful uses for them in their mathematics courses. Saturday's workshop will look at a variety of these different technologies and discuss ways to integrate them into teaching. During this workshop, faculty will learn about the flipped classroom model of teaching. Dr Hofacker will also explore various libraries of screencasts that could be used in their classes. Participants will have an opportunity to develop their own screencasts using digital pens and tablets. The session will also explore different hardware, applications, and teaching techniques that can be used to promote communication and active learning during class as well as outside of class. Participants will be encouraged to bring laptops, tablets, or smartphones to participate in the presentation.

Sunday's theme will be titled "Computing for Free" and will cover a number of free mathematical software options available for faculty. The first part of Sunday's presentation will be conducted by Dr. Gregory Bard of UW-Stout. Dr. Bard will introduce faculty to the free python-based math software named SAGE. He will provide a hands-on training session where faculty will learn how to install SAGE and use it effectively in their teaching and research. Dr. Bard's presentation will be followed by a presentation where the participants will also learn about two other free mathematical software named DPGraph and the Microsoft Math Add-in. The rationale of this session is to expose new faculty to the free math software options so that they as well as their students can use these software in a cost effective manner for optimal teaching, learning and research.

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. This year we had seven new faculty members join NeXT. To apply, contact me at kirthi.premadasa@uwc.edu. Please do visit the NeXT website at http://sections.maa.org/wisconsin/NExt/default.html

Kirthi Premadasa, UW-Baraboo

## *Are You On-line?*

Look for the Wisconsin Section on

- Facebook: http://on.fb.me/oRQZbs
- Twitter: http://twitter.com/MAAWisconsin

## Student Activities

Undergraduate students around the state continue to be strongly represented at regional and national conferences. The quality and quantity of presentations is impressive. There are a number of upcoming conferences that offer student involvement opportunities for those interested in attending or possibly speaking.

The Pi Mu Epsilon Regional Undergraduate Math Conference is coming up quickly. The event is scheduled on November 2-3 at St. Norbert College. This year's featured speaker is David Bressoud from Macalester College.

The Spring 2013 MAA-Wisconsin section meeting will be held at UW-Marshfield on April 5-6. 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 support from the local hosts at MSOE, we were able to offer a popular student retreat room at the spring meeting, and plan to do so again in 2013.

The Wisconsin Mathematics Council's Annual Green Lake Conference is scheduled for May 1-3, 2013. Anyone interested in any level of mathematics education in Wisconsin is encouraged to attend. See http://www.wismath.org/annual-conference/ for information.

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.shtml. You can also view pictures from previous years on Facebook.

"Face Off!" made its national debut at the MAA MathFest in Madison. Students from at least 10 different states participated and we were delighted to include Wisconsin's own St. Norbert College in that mix. First place went to a "Franken"-team of students from the University of Utah, Westminster College (MO), Southwestern University (TX) and the University of Richmond (VA). They played as Lagrange and scored 440 points. The Grand Valley State (MI) REU program, playing as Poincare, finished second with 310 points and earned the distinction of scoring the most points on the "Final Face Off" question: *Find as many ways as you can to write 801 as the sum of two or more consecutive integers.*

We very much appreciate the enthusiasm that students bring section events. Please let us know if you have ideas of ways to make the section more student-friendly. We're always looking for suggestions!

Ken Price and Steve Szydlik, UW-Oshkosh

## 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 2013 Wisconsin Section Distinguished Teaching Award are now being accepted. The nomination form and instructions are available on the MAA-Wisconsin web site at http://sections.maa.org/wisconsin/award.shtml

# CALL FOR SPEAKERS

Annual Meeting of MAA Wisconsin Section, April 5 – 6, 2013

University of Wisconsin – Marshfield

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, 2013, to Ken Jewell (jewell@edgewood.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/meetings.shtml

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

---

Due date: March 2, 2013

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 _____

# CALL FOR STUDENT SPEAKERS

Annual Meeting of MAA Wisconsin Section, April 5 – 6, 2013

University of Wisconsin – Marshfield

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, 2013, to Ken Jewell (jewell@edgewood.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/meetings.shtml

---

Due date: March 2, 2013

**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 J. Sriskandarajah, by Benjamin V.C. Collins

**Where did you grow up?**
Colombo, which is the capital of Sri Lanka

**Was there a time in your life when you discovered that mathematics was what you wanted to do?**
In fact, it was my father who influenced me to pursue a degree in mathematics. I was the first in our family to attend college.

**Where did you go to undergraduate school?**
University of Sri Lanka, Colombo.

**And what about graduate school?**
First, I completed a postgraduate diploma in statistics and a M.S. in mathematics in Sri Lanka, and then another M.S. in applied statistics at the University of Delaware. I also took some graduate courses in Operations Research at the University of Rome, Italy and at, Case Western Reserve University in Cleveland, OH.

**What was the influence of your family on your education?**
My parents valued higher education. My father particularly stressed the importance of mathematics, science and English to excel in life.

**Are there any teachers who had influenced you to become a mathematician?**
I will give credit to some dedicated teachers in my high school who taught me both basic and advanced math and definitely that had an impact on me.

**How did you end up at Madison College?**
I came to WI in 1985 to teach at UW-Richland. Our oldest son was impressed with the curriculum offered in the Madison high schools and that was one of the things that brought me to Madison in 2000.

**The Madison College Math Club is amazingly active. What's your secret?**
The success of this 12 year old club is the result of supportive faculty, interested students and the generosity of our sponsors. Not to mention, speakers who are willing to come year after year to talk to our students, faculty and the community. This is another reason.

**What courses do you like to teach?**
When I was in Richland Center, I enjoyed teaching differential equations and special topics during winter sessions. At Madison College, I'm happy to teach calculus and statistics.

**Over the years, did you find that teaching of mathematics changed?**
Yes. As you know, the use of technology has tremendously changed the way we teach mathematics. In addition, there are plenty of websites in mathematics that offer an abundance of information to faculty and students free of charge.

**Where do you think mathematics is going?**
The application of mathematics is everywhere from breaking secret codes or DNA sequencing to neuroscience. One cannot think of any scientific area which doesn't have the influence of basic to advanced mathematics.

**How were you involved with the MAA over the years?**
In the mid 80's I was introduced to the MAA and math competitions and math journals by Professor Norbert Kuenzi of UW-Oshkosh. I have served in the Question Selection Committee of the MAA-Wisconsin high school math competitions and as the site coordinator of the annual section meeting, once in Richland Center (1990) and again at the Madison College (2008). I have also served as its Chair in 2005. I take this opportunity to thank Professor Andrew Matchett

of UW-La Crosse who has served as a mentor. I continue to serve as the State Director of the American Mathematics Competitions since 1998.

**You've also been active with AMATYC. What is that like?**
As the leading math organization for two year colleges, AMNATYC emphasizes teaching. I am a regular contributor to their monthly publication.

**What do you think is the best part of being a mathematician?**
I take pride in helping students achieve their goals. It was also rewarding to see when students from all over the state attended and excelled in our math competitions such as "Who Wants To Be A Mathematician" sponsored by the AMS and our own "Who Wants To Be A Sudoku Master" or the "Face Off" for the middle school students sponsored by the UW-Oshkosh math faculty.

**What was the worst part of teaching mathematics?**
It is challenging to teach a group of under-prepared, uninterested, unmotivated students.

**How would you describe what you did when you were talking to somebody outside of mathematics?**
Well, I like to talk about the applications of mathematics, the history of mathematics and other branches of basic mathematics, such as the recreational mathematics, which not many students have heard of. I like to make an impression among non-mathematicians, that mathematics is not boring but could be entertaining and fun.

**What of your work do you like the best?**
In addition to teaching, I enjoy organizing math lectures, math competitions etc., which you will find on our math club web site: http://clubs.madisoncollege.edu/mathclub/

**What are you most proud of?**
Serving the mathematical community and the growth of our math club.

In its first 12 years, since its inception in 2000, our math club has hosted more than 100 monthly presentations by leading mathematicians from all over the nation, including some of the former Presidents of the MAA. In addition to several math competitions at high school and middle school levels as mentioned before, Pi day celebrations, birth anniversary of Euler, we have also organized two Math Musicals from area high schools.

I like to add, that I have received the Certificate of Meritorious Service award from the MAA at its joint conference with AMS held in Baltimore, MD in 1998. At Madison College, I have received the Outstanding Employee of the year 2004 and the Distinguished Teacher of the year 2005 award. I am also proud to mention that one of my former students placed ninth in the nation in the Student Math League 1990, sponsored by the AMATYC.

**What is your advice to college students and new teachers?**
Sometimes, it takes a little longer than expected to reach a certain goal, but do not get discouraged, nor frustrated, but keep working and you will be successful. To new teachers, in addition to discussing topics in the course and the use of technology, mention some history of mathematics, current advancement in the areas of mathematics, humor and some "mathemagics" to make the class interesting and entertaining.

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

# Campus News

### Alverno College

*submitted by James D. Factor*

The National Science Foundation has awarded a grant of $164,235 to Alverno College for support of the project entitled "Transforming Linear Algebra Education with GeoGebra Applet". The award number is DUE-1141045. The project is under the direction of **James Factor** (PI) and **Susan F. Pustejovsky** (Co-PI). This award is effective September 1, 2012 and continues through August 31, 2015.

This project will develop and disseminate interactive 2D and 3D animation applets, with instructional support, that will help students visualize linear algebra operations and concepts. The goal is to improve the students' intuitive understanding of linear algebra by facilitating a deeper geometric understanding. By using these interactive visual tools, students will gain a deeper understanding of mathematical concepts including vectors, vector spaces, linear transformations, eigenvalues, eigenvectors, determinants, orthogonality, etc.

Alverno College will present this NSF TUES project at the Poster Session sponsored by the MAA and NSF at the San Diego Joint Mathematics Meetings from 2:00 pm - 4:00 pm on Thursday, January 10, 2013. The presenter will be **James D. Factor**.

### Madison College

*submitted by J. Sriskandarajah*

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

- **Lecture # 117, Friday, September 28, 2012**, 3:30 PM, Room 142A/B Dr. Karl Schaffer, De Anza College, CA *"Dancing with Mathematics"*
- **Lecture # 118, Friday, October 12, 2012**, 3:30 PM, Room 209 Professor James Swenson, UW-Platteville, *"The Weird and Wonderful Chemistry of Audioactive Decay"*
- **Lecture # 119, Friday, November 2, 2012**, 3:30 PM, Room 209 Ursula Whitcher, assistant professor - University of Wisconsin *"Mirror, Mirror: String Theory and Pairs of Polyhedra"*
- **Lecture # 120, Friday, December 7, 2012**, 3:30 PM, Room 209 Dave Ebert, Oregon HS www.oregonsd.org/webpages/debert *"The Mathematics of the Simpsons"*

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

### St. Norbert College

*submitted by Katherine Muhs*

The St. Norbert College Pi Mu Epsilon Regional Undergraduate Mathematics Conference will be held on November 2 - 3, 2012. The featured speaker this year will be David Bressoud, the DeWitt Wallace Professor of Mathematics at Macalester College in Minnesota and a former president of the Mathematical Association of America.

Student news:

The Mathematics discipline of St. Norbert College made a strong showing at the 2012 MathFest held in Madison during the first week of August. Eight St. Norbert College mathematics students and six mathematics faculty participated in the event.

Five of the students presented papers. The speakers and the titles of their presentations are: **Hanqin "Caesar" Cai ('12),** "Neither Rain, Nor Sleet, Nor Snow. What About the Internet?"; **Sarah Stiemke ('15),** "A Scale, Some Coins, A Problem"; **Jacalyn Kulow ('13),** "Evaporation Investigation"; **Erik Miller ('13),** "From Golf Balls to Airplanes; What are the Powers of Dimples?"; **Jeff LaJeunesse ('13),** "Modeling the Population Dynamics of Phytoplankton in Freshwater Ecosystems". Sarah and Jacalyn presented on behalf of themselves and their research partners, who also attended Mathfest.

Jacalyn, **Laura Sommerfeld('13)**, and Jeff did their research as part of the St. Norbert College Summer Undergraduate Research Program in Mathematics. Sarah and **Brad Blank ('15)** did their research as part of the Freshmen Fellows Program at St. Norbert College. **Russell Pulvermacher ('14)** attended as a delegate.

Erik's presentation was judged one of the best student talks. In recognition of this, he received a $150 prize provided by the American Mathematical Society and the American Statistical Association.

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:

**Rick Poss** retired in May after teaching at St. Norbert for 42 years. He is spending more time with his grandchildren, doing some traveling, and plans again to spend the winter in Fort Myers, Florida which he has done for the past few years.

We have two new faculty members:

**Seth Meyer** completed his PhD at the University of Wisconsin – Madison in spring in combinatorics. Seth is a 2012-13 Project NExT fellow.

**Anders Hendrikson** completed his PhD at the University of Wisconsin – Madison in group theory four years ago. He has been a faculty member at Concordia University in Moorhead, Minnesota for the past four years.

Anders had a paper accepted which will appear in the journal "Communications in Algebra." The title is "Upper and lower semimodularity of the supercharacter theory lattices of cyclic groups". It's joint work with Samuel Benidt and Will Hall, who were undergraduates at Concordia College at the time they did the research.

### UW-Eau Claire

*submitted by Chris Ahrendt*

The Department of Mathematics is pleased to welcome two new colleagues this fall:

**Abra Brisbin** joined our faculty this fall after working at Mayo Clinic as a research fellow, while also teaching Biostatistics for the Mayo Graduate School. She received her Ph.D. from Cornell University in Applied Mathematics, and her research specialty is developing statistical methods to analyze genetic data. She will be teaching a variety of courses related to statistics, and will be doing research with undergraduates.

**Mohammad Aziz** has also moved to Eau Claire and joined our faculty starting this fall. He completed his Ph.D. at Bowling Green State University in 2011 with dissertation titled “Unified Multivariate Skew Normal Distributions with Applications in Finance and Actuarial Science.” His current mathematical interests lie in Applied Statistics and Biostatistics, and he will be teaching several statistics courses.

**Dandrielle Lewis** and **Carolyn Otto** received funding from AWM to host a Sonia Kovalevsky High School Math Day.

**Manda Riehl** received grant funding to stimulate interest in mathematics among Hmong high school students: OOMPH!

**Richard Spindler** organized the first monthly Chippewa Valley Math Teacher's Circle, which met on Monday evening, September 10th, investigating the mathematics of the game of Set. Everyone was excited and pleased to meet as a community and to explore mathematics together. The next meeting is October 8th.

UWEC will be hosting Fall 2014 Sectional meeting of the American Mathematical Society.

### UW-Green Bay

*submitted by Gregory Davis*

We are happy to welcome **Enayetur Raheem** as an Assistant Professor in Natural & Applied Science. Enayetur obtained his PhD degree in statistics from University of Windsor, Windsor, Ontario Canada. Enayet taught statistics at the University of Windsor and worked as a Data Analyst at the Windsor-Essex County Health unit for two years. Prior to coming to Canada, he was a Lecturer of Applied Statistics at the Institute of Statistical Research and Training under University of Dhaka, Dhaka, Bangladesh. He is from Bogra, Bangladesh.

### UW-Milwaukee

*submitted by Jay H. Beder*

**Tom O’Bryan** retired in June as an Associate Dean in the College of Letters and Science. He got his doctoral degree from Michigan State University in empirical Bayes decision theory. One of the longest-serving members of our faculty, he joined the department in 1972 and was promoted to Associate Professor in 1979. He served as department chair for about 7 years, and became Associate Dean in 1995. Widely respected for his teaching at all levels, he led in the creation of the course Contemporary Applications of Mathematics, which provides a college-level survey of mathematical topics. He put the course online in 2002.

**Albert Milani** retired in June after 25 years in the department, having been promoted to Full Professor in 1992. An international expert in differential equations, he received his PhD from the University of Turin and his Habilitation from the University Division of the Ministry of Education in Rome, and is the author of over 60 research papers and several books, including most recently *Linear and Quasi-linear Evolution Equations in Hilbert Spaces* with Pascal Cherrier (Graduate Studies in Mathematics, v. 135, Amer. Math. Soc., 2012). He has been the recipient of numerous international grants, including Humboldt, Fulbright, and Mercator, and has lectured extensively both in the US and abroad. He directed four PhD dissertations at UWM (as well as one at Turin), along with several masters theses and undergraduate capstone projects, and developed a number of graduate courses. He has a strong interest in the history of mathematics, and has also lectured on the history of the Holocaust in Italy and the work of Primo Levi.

**Mark Colarusso** has joined the department as a Visiting Assistant Professor. His research interests lie in Lie theory and Poisson geometry. He uses techniques from the theory of integrable systems and algebraic geometry to study the geometry of Lie groups and algebras and pursue questions in geometric representation theory. He received his PhD from UC San Diego in 2007 under the supervision of Nolan Wallach, and has held positions at Notre Dame, Université Laval, and Idaho State University before joining UWM.

**Runhuan Feng** is leaving the department at the end of the year for a position with the Department of Mathematics at the University of Illinois at Urbana-Champaign. He received his doctorate in actuarial science from the University of Waterloo in 2008, joining the department that fall. An Associate of the Society of Actuaries and a Chartered Enterprise Risk Analyst of CERA Global Association, he is the author or co-author of ten papers in risk theory and related topics, and has given numerous talks nationally and internationally. He directed a number of masters theses in the department and helped develop three graduate actuarial courses, in Risk Theory, Financial Economics and Life Contingencies. .

**Jeb Willenbring** (Mathematical Sciences) has been accepted as a Fellow of the American Mathematical Society in their inaugural class, an honor limited to just 5% of the Society's membership. He has been a member of the department since 2000 and an Associate Professor since 2008.

**Ian Musson** has published *Lie Superalgebras and Enveloping Algebras* (Graduate Studies in Mathematics, v. 131, Amer. Math. Soc., 2012).

The department has received a new 3-year Graduate Assistance in Areas of National Need (GAANN) Fellowship grant to support graduate students who are pursuing a PhD. Recipients of the fellowships have all expenses paid while a fellow. The grant is expected to support 4 fellows each year. The department has had GAANN funding since the early 1990s.

Students in the NSF supported UBM-Institutional: Integrated Undergraduate Research in Biology and Mathematical Sciences were very active during the spring and the summer. Students from our 2010-2012 cohort presented their research findings at the National Council on Undergraduate Research (NCUR) conference in Ogden, UT, and at the MAA Wisconsin Section meeting at MSOE. Eighteen students in the UBM program participated in the UWM Undergraduate Research Symposium with six posters. In the summer the students in our 2011-2013 cohort worked intensively on three research projects: Patterns of Bat Emergence in a South Eastern Wisconsin Hibernaculum; Impact of *Dreissena bugensis* (Quagga Mussel) on the light field in Lake Michigan; The Importance of Spatial Scale in the Study of Biodiversity. Currently the students are analyzing the data collected in the summer, and are building their mathematical models. They will present their results at the NIMBioS Undergraduate Research Conference at the Interface of Biology and Mathematics in Knoxville, TN in November.

The UWM Math Circle program continues this fall. Students in grades 6-12 and faculty from the Department of Mathematical Sciences meet weekly for fun, open-ended problem solving activities. For more information on the program contact **Gabriella Pinter** (gapinter@uwm.edu).

Three graduate students, **Lauren Williams**, **Sami Cheong** and **Lauren Sample** gave presentations on their research at MathFest in Madison in August.

### UW-Oshkosh

*submitted by John Beam*

We are pleased to welcome **Martha Barhouse** to our academic staff, and to announce that **Mike Skowronski** has been promoted to Senior Lecturer.

**Edward Clemons** received the university's 2012 Outstanding Service Award.

Associate Professor **David Penniston** has received tenure. **Eric Kuennen** is on sabbatical in Germany to compare international approaches to mathematics education.

*Face Off*, the math quiz show game developed by **Ken Price** and **Steve Szydlik**, was featured this August at the MAA MathFest in Madison.

Ken and Steve also published a puzzle in the October/November Issue of Focus Magazine, titled "Take Aim at an Arrowgram", and Ken gave a talk on the subject at the 2012 Joint Meetings in Boston. Undergraduate student **John Dewitt** worked with Ken to create several arrowgram puzzles that were included in the session.

Other conference presentations include invited presentations by **Linda Eroh** (AMS Spring Southeastern Section Meeting) and **K. L. D. Gunawardena** (International Statistics Conference, Sri Lanka), as well as presentations by **Hong Zhang** (International Conference on Integral-Differential Equations and Applications, Nanning, China), **Jason Belnap** and **Jen Szydlik** (SIGMAA on RUME Conference, Portland, OR), **Ken Price** (Dennison Mathematics Conference, Columbus, OH), and **Ed Clemons**, **Jen Szydlik**, **Steve Szydlik**, and **Ken Price** (MAA Wisconsin Section Annual Meeting, Milwaukee).

### UW-Platteville

*submitted by Ben Collins*

The department welcomes to the faculty **Chad Vidden**, a recent Ph.D. from Iowa State University. Chad studied numerical analysis under the direction of Jue Yan. In addition, we welcome David Ai as Teaching Academic Staff. David a doctoral candidate at the Indiana University in Bloomington, where he is studying algebra under the direction of Michael Larsen.

Congratulations to **James Swenson and Irfan Ul-Haq**, who have been awarded tenure. **Ahyoung Kim** has been promoted to Associate Professor.

Congratulations to **Kevin Haertzen** for being UW-Platteville's first honorary member of the Order of the Engineer. The Order of the Engineer was initiated in the United States in 1970 to foster a spirit of pride, individual integrity and responsibility in the engineering profession, to bridge the gap between education and practice and to present to the public a visible symbol identifying the engineer.

### UW-Stout

*submitted by Chris Bendel*

The department welcomes one new faculty member. **Seth Berrier** joins us after completing his Ph.D. in computer science at the University of Minnesota. **George Brown**, **Brian Knaeble**, **Olga Lopukhova**, **Mikhail Letavin**, and **Nham Ngo** have been hired as academic staff. We welcome **Jeanne Foley** and **Petre (Nelu) Ghenciu** back from sabbatical. **Steve Deckelman** is on sabbatical during the Fall 2012 semester visiting the University of California Berkeley.

**Terry Mason** was granted tenure. **Jeanne Foley** was promoted to the rank of Professor. **Wan Bae** was promoted to the rank of Associate Professor.

**Keith Wojciechowski** (beginning his second year on the faculty) was selected as a Project NExT Fellow for 2012-2013. Keith was also chosen as one of two Outstanding Instructors for 2011-2012 from the College of Science, Technology, Engineering and Mathematics.

The department hosted its first ever NSF sponsored REU site in mathematics this past summer. Eight students participated under the guidance of mentors **Alex Basyrov**, **Steve Deckelman**, **Seth Dutter**, and **Matt Horak**, with computational consulting provided by **Amitava Karmaker**. **Camilo Montoya** (Florida International University) and **Lukas Owens** (Whitman College), both working under the supervision of Basyrov, gave an award winning presentation on their work at MathFest. **Ariel Setniker** (Western Oregon University), working under Dutter, also presented on her research at MathFest.

**Laura Schmidt** has a forthcoming publication: "Revelations of Motivation in a Mathematics Class." Academic Exchange Quarterly, Volume 16, Issue 3, Fall 2012.

**Alex Basyrov**, **Chris Bendel**, **Seth Dutter**, and **Benjamin Jones** (now employed at Galois) presented on "Improving Mathematics Success Through Enhanced Support Services" at the 2012 ASQ Advancing the

STEM Agenda in Education, the Workplace and Society Conference. An extended abstract of their presentation appeared in the Conference Proceedings.

**UW-Whitewater** *submitted by Mohammad Ahmadi*

**Jonathan Kane** retired after many years of distinguish service to the Department of Mathematical and Computer Sciences.

**Athula Gunawardena** was named as the Department coordinator for Computer Science program.

**Tamas Szabo** was granted tenure and promotion to Associate Professor.

**Jia-Zhen Zhou** joined the department as a new tenure track faculty in Computer Science.

Eight new instructional academic staff joined our department. They are **Lori Grady**, **Gary Kindwall**, **Richard Pierson**, **Brenda Volk**, **Cheng Thao**, **John Reilly**, **Balamurugan (Bala) Pandiyan**, **Kathy Halvorson**.

**Xiang Han** - a Chinese mathematician - joined us as a visiting researcher working with **Ki-Bong Nam** for 2012-2013 academic year.

**Athula Gunawardena** published the following paper.

Athula Gunawardena, Robert R. Meyer, William L. Dougan, Patrick E. '*Monoghan and Choton Basu, Optimal Selection of an Independent Set of Cliques in a Market Graph*', International Proceedings of Economics Development and Research, Vol. 29, 2012.

**Athula** presented his joint paper '*Portfolio Optimization Based on Independent Sets of Market Cliques, Robert Meyer*' at The Society of Industrial and Applied Mathematics (SIAM) Conference on Financial Mathematics and Engineering, Minnesota, July 9-11, 2012.

**Ki-Bong Nam** had the following papers published.

1. Choi, Seul Hee; Chen, Xueqing; Nam, Ki-Bong, "*Automorphism groups of some stable Lie algebras with exponential functions I*", Proceedings of the International Conference on Algebra 2010, World Sci. Publ., Hackensack, NJ, 2012.

2. Seul Hee Choi and Ki-Bong Nam, '*Notes on new (antisymmetrized) algebras*', Rocky Mountain Journal of Mathematics, Vol. 42, Number 2, 2012.

**Ki-Bong** published the book '*Introductory Linear Algebra'*, 1st Edition, Ki-Bong Nam, Xueqing Chen, In Suk Ma, Moon-Ok, Wang, and Ki-Suk Lee, Kyungmoon-Sa, Korea, July, 2012, ISBN: 978-89-6105-423-2. For more information or receiving a sample copy of the book, please contact Ki-Bong Nam.

**Ki-Bong** was an invited speaker for 2012 Honam Math International conference in Jeju, Korea, 2012. He gave one hour lecture on '*Automorphism group of a general Lie algebra and Jacobian Conjecture I* '. He also presented the paper '*Note on stable algebras'* at the MAA Wisconsin Section Meeting, April 14, 2012. **Nam** is a new member of the editorial board of the journal 'Algebra', http://www.hindawi.com/journals/algebra/

**Aaron T. Kooping** (Ki-Bong's student) gave a talk on '*Radical Extension Ring of a Finite Ring II'* Undergraduate Research, MAA meeting, Milwaukee, April 14, 2012.

**Xueqing Chen** published two papers:

1) '*Automorphism groups of some stable Lie algebras with exponential functions I'*, S. Choi, X. Chen, K. Nam, Proceedings of the International Conference on Algebra 2010, 119–133, World Sci. Publ., Hackensack, NJ, 2012.
2) *'Bar-invariant Bases of the Quantum Cluster Algebra of Type A_2^{(2)}'*, X. Chen, M. Ding, J. Sheng, Czechoslovak Mathematical Journal. 61 (136) 2011, 1077--1090.

**Chen** presented the following papers:

1. CMS (Canadian Mathematical Society) Winter Meeting 2011, Toronto. Dec 10–12, 2011. Ontario. Canada. *"Integral Bases of Quantum Cluster Algebras for Affine Valued Quivers"*

2. The XXIIIrd Meeting on Representation Theory of Algebras. Bishop's University Sherbrooke. Sept 16–17, 2011. Quìebec. Canada. "*Hall Type Algebras and Periodic Triangulated Categories*"

**Thomas Drucker** spoke at the annual meeting of the Canadian Society for the History and Philosophy of Mathematics at the University of Waterloo in May. His title was 'Le reve de Turing, ce n'est qu'un cauchemar de Leibniz' ['Turing's Dream was only a nightmare of Leibniz'].

**Justin Brockmann** (student) gave a talk at 2012 MathFest in the sessions organized by Pi Mu Epsilon. His title was '*The Mathematical Legacy of Wonderland'* and he spoke about the role of mathematics in Lewis Carroll's Alice books.

Executive Committee 2012 – 2013

| | | |
|---|---|---|
| Governor | Andrew Matchett, UW-La Crosse | amatchett@uwlax.edu |
| Chair | James Swenson, UW-Platteville | swensonj@uwplatt.edu |
| Secretary-Treasurer | Jonathan Kane, UW-Whitewater | kanej@uww.edu |
| Chair-Elect | Kenneth Jewell | jewell@edgewood.edu |
| Immediate Past Chair | Clare Hemenway, UW-Marathon County | clare.hemenway@uwc.edu |
| Math Contest Coordinator | Laura Schmidt, UW-Stout | schmidtlaur@uwstout.edu |
| Student Activities | Ken Price, UW-Oshkosh | pricek@uwosh.edu |
| | Steve Szydlik, UW-Oshkosh | szydliks@uwosh.edu |
| MAA Representative to the Wisconsin Math Council | Jennifer Kosiak. UW-La Crosse | kosiak.jenn@uwlax.edu |
| Project NExT Director | Kirthi Premadasa, UW-Baraboo | kirthi.premadasa@uwc.edu |
| Public Information Officer | Benjamin Collins, UW-Platteville | collinbe@uwplatt.edu |