



Representative's Report

By Thomas Drucker, UW-Whitewater

The 2022 Congress of the MAA began with an announcement of a new database, partly required by the move of the Association's offices to the new quarters. There was a description of the various new speaker series and new editors for various journals, as well as the search for new editors and directors of various programs. Attention was directed to the Dolciani Mathematics Enrichment Grants and TENSOR Summa programs for undergraduates. There will be a national REU program. In addition to outreach initiatives, there will be a continuation of virtual programming with various lectures available virtually. OPENMath is designed to help with virtual faculty development. The PIC Math program (preparation for industrial careers) will continue, with the recognition that it can involve a great deal of work for the faculty as well as the students. There will be an interdisciplinary data science workshop and Stat Prep for those teaching introductory stats. The goal is to help deal with students who are in danger of being marginalized by traditional instructional means.



On the financial side, the Association received quite a bit of money from the Federal PPP program and is not obliged to pay it back. That enabled the Association to move ten million dollars from the sale of the building into reserves. The membership numbers are down for 2022, but the hope is to recoup some of that via departmental memberships. The state of revenue has to drive thinking about programs. 'Non-profit' is a tax status, not a business model.

The impact report (available to all members) indicates just how much of a difference the Association has made in many areas. It is time to be putting together a new strategic plan, in view of the changes in the last five years since the previous one. The members will be receiving suggested amendments to the bylaws, to make it easier to change features that ought to be within the purview of particular parts of the Association.

At this year's MAA Congress, the section's representative talked with the representative of the Texas

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Library and New Website

You can now find archives of Section documents in the Wisconsin Section's [MAA Connect](#) Community Library.

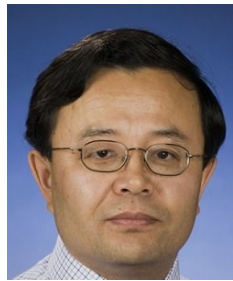
The Section's website is being upgraded. Look for more information coming soon! Send your comments to the Public Information Office Anthony van Groningen vangroningen@msoe.edu.

section about undergraduate participation in their annual conference. They attribute the extensive number of such speakers to their policy of assessing the undergraduate talks and awarding prizes to the best ones. This seemed like a good idea, especially when former section Chair Kseniya Fuhrman offered to be in charge of the assessment. The Executive

Chair's Report

By *Chunping Xie,*
Milwaukee School of Engineering

We are cautiously optimistic that we are getting to the end of the COVID 19 pandemic and the lifestyle and typical daily routines are gradually back but now we are concerned over rising inflation and interest rates. The 89th MAA Wisconsin Section meeting was held online via ZOOM on March 31-April 2. I am extremely appreciative to all whose help made this event a great success with their generous commitment of their time and efforts. My special thanks go to the former Chair **Ken Price** for his supports, suggestions, and advice and **Jonathan Kane**, the Secretary-Treasurer of the Section who coordinated all ZOOM activities of the meeting. We had three terrific guest speakers who presented remarkable talks in the meeting. Dr. **Sarah Greenwald**, MAA PÓLYA Lecturer from Appalachian State University spoke on "Popular Culture and Mathematics: Gender, Race, and Broader Implications" on Thursday night. On Friday following the social event, former MAA chair of the Congress, Dr. **Tim Chartier** from Davidson College presented "Get in the Game: Math and Sports Analytics". At the end of the meeting in the afternoon of Saturday, the 2020-2021 MAA-WI Section Distinguished Teaching Award recipient – Dr. **Holly Attenborough** from the University of Wisconsin, Platteville talked about "In Favor of Histo-



Committee agreed, although there are a few details still to be worked out. Our hope is that the additional recognition this will give to student speakers will encourage more of them to make the trip to Stout in April. More details will be provided with the registration forms in the next Newsletter.

ry Tidbits in Class and the Ideal Result of Fermat's Last Theorem". On Friday afternoon, **Bala Pandiyan**, from University of Wisconsin-Whitewater conducted student Quiz Contest. Thank you all for your insightful presentations and organizational effort that made the meeting a resourceful, informative, and enjoyable event for the participants.

Due to lack of the eligible nomination, unfortunately we were not able to select a recipient for 2021-2022 MAA-WI Section Distinguished Teaching Award. I cordially encourage everyone of you to nominate your colleagues for the next year's MAA-WI Section Distinguished Teaching Award. With a few easy steps, this is a great opportunity to recognize an outstanding teacher you believe deserve the honor.

The 2023 annual meeting will be held at the University of Wisconsin-Stout on April 28-29. Chair-elect **Petre Nelu Ghenciu** of University of Wisconsin-Stout will lead the planning of the event. The Vice president of MAA, Dr. **Adriana Salerno** from Bates College, AWM speaker, Dr. **Anastasia Chavez** from Saint Mary's College, and MAA Journal Math Horizons Editor Dr. **Tom Edgar** from Pacific Lutheran University have graciously accepted our invitation to be the guest speakers of our next meeting. In addition, we welcome presentations of various topics from every institution in the section. Everyone who is here today, please consider giving a talk at our next meeting. And please help us spread the word among your colleagues and students as well.

Lastly, please let us know if you are willing to serve on a position on the Executive Committee of the sec-

tion. We would love to see new faces; we would appreciate the new ideas, knowledge and expertise brought by you to the committee.

Again, thank you all for your continuous support. I am

looking forward to seeing you all at the spring meeting at UW-Stout!

Contests Report

by Gabriella Pinter, UW-Milwaukee

American Mathematics Competitions

The AMC competitions were offered on a new schedule in 2021-2022.

The AMC 8 was held January 18-24, 2022. All competitions were offered in online and in-person options. In 2022-2023 the AMC 10/12 is again in November, while the AMC 8 is scheduled for January 2023. The competition will be in-person only. Detailed data on Wisconsin participants in the AMC 8 could not be obtained from AMC



headquarters. There were five students from Wisconsin on the Distinguished Honor Roll (top 1% of participants: 927 students with scores 22-25). Twelve Wisconsin students made the Honor Roll that has the top 5% scorers (2288 students with scores 19-21). Nine students are on Achievement Roll (6th grade or lower with scores 15-25) from Wisconsin.

MAA-WI Section High School Contest Examination

Preparations for the Wisconsin High School contest are proceeding on schedule. The contest will be offered in December. This is our host's (UW-Platteville) last year of directing the contest, so a search for a new host must be conducted this year.

Section NExT-Wisconsin Report

by Niles Armstrong,
Milwaukee School of Engineering

2022 Spring Panel

Our Spring 2022 virtual panel was held on Saturday, March 5, 2022, with a theme of "A Teaching Toolbox." Jonathan Cox (MSOE), Wesley Hough (UW-Whitewater), and Amy Parrott (UW-Oshkosh) served as panelists. Jonathan discussed his experience with inquiry-based learning, Wesley spoke on utilizing tactile and hybrid activities for calculus, and Amy spoke on how to make time for active learning in the classroom. After the panel discussions we included additional time for attendees to ask questions and share their own teaching ideas and experiences. Five



Section NExT members attended the panel, bringing the total participation to eight people. We look forward to the possibility of an in-person panel/workshop at the end of Spring 2023 MAA-Wisconsin annual meeting.

2022 Fall Conference

The Section NExT – Wisconsin annual fall conference will be held virtually through Zoom on Saturday, October 15, 2022. We are pleased to have Robert Talbert from Grand Valley State University as our keynote speaker. Professor Talbert will discuss flipped learning, and his title and abstract appear below.

"Productive Sabotage: My journey with flipped learning": Twelve years ago, I taught a class using flipped learning for the first time. Flipped learning a teaching model where lecture on basic topics is moved from the class meeting to students' individual spaces, al-

lowing the class meeting to be entirely focused on active learning tasks. I had high hopes for flipped learning; but the reality fell well short. In fact, it nearly ruined my career. Rather than give up, I went on a journey of learning about my students, my boss, my boss' boss, and myself that went way beyond academic research about teaching and learning. This talk is about that journey. I will talk about what to expect when adopting a teaching innovation, and how to navigate the knowns and the unknowns in your own careers. Committing to teaching innovation can be difficult

and often dangerous. But when doing it wholeheartedly and for the right reasons, it's well worth it for you and your students.

As per usual, we will offer 25-minute presentation slots for Section NExT members after the keynote address. Abstract submissions are due by October 6, 2022 but interested attendees may register through October 14, 2021.

Student Activities Report

By Balamurugan Pandiyan, UW-Whitewater

At the virtual Spring Section meeting, there were six students talks, representing six institutions although 18 students attended the conference. In addition, an online quiz contests were held on Friday, April 1, 2022, between 4:00 – 4:45 pm via Zoom. Sadly, only one undergraduate student from UW-Stevens Point participated in



the quiz contest. His name is **Kyle Pulvermacher**. To increase awareness about the online student activity, the flyers were posted on the MAA section website. If you have any ideas to improve student activities during section meeting, I encourage you to send them to me or any member in the executive committee. And please encourage your students to attend whether or not they are able to give talks.

Wisconsin Math Council Representative's Report

By Erick Hofacker, UW-River Falls

As the liaison between two of our state mathematics organizations, Wisconsin Mathematics Council (WMC) and the Wisconsin Mathematical Association of America (MAA), I have some great things to report from the world of PK-16 Mathematics Education.



As I reported last spring, the 2021 revised Wisconsin Standards for Mathematics continues to be a focus for K-12 math teachers across our state. Teachers are in the process of identifying changes in the new

document and implementing them in their classrooms.

On May 3-5, 2023 the WMC 55th annual conference will return to Green Lake, WI. The theme for this year's conference is *One Community: Infinite Strengths*. Some of the featured keynote speakers at this year's conference will be representatives from *Math Medic* as well as a team from *Desmos*. The conference organizers are soliciting proposals by December 1st, 2022 for additional 60 and 90 minute talks related to PK-16 Mathematics Education. Please encourage faculty, teachers, and our students to consider submitting a proposal. More information is available at <http://www.wismath.org/>

If you have students at your institution that you think would be interested in starting a mathematics educa-

tion club, please encourage them to do so and become affiliated with WMC. We currently have a couple of clubs across the state, and it would be great to increase this number. It provides our future teachers an opportunity to become part of a state organization before they start their professions and in the past we have had co-promoted events by two clubs. We can provide information on the process for starting a club, how to apply for affiliation, and have current clubs share with you the types of experiences they have engaged in. If you would like more information on this, please contact me at:

Erick.B.Hofacker@uwrf.edu

In addition to our work with student clubs, we would also like to build more synergy between WMC and MAA. I'm looking for members from across the state to join in helping to develop events we could co-

promote and conduct across our state either in a virtual environment or in person. One thing we are looking to develop is a co-promoted event between our two organizations which would highlight both mathematics and mathematics education. We are looking to conduct 30-60 minute webinars as part of a series that would be accessible to our state communities and involve two speakers each time. One of the speakers would focus on sharing their work related to an area of mathematics they are currently focused on or conducting research. The other speaker would share their current focus or research related to a topic in the math classroom or mathematics education. The idea is bringing together speakers and audiences from our two organizations to better learn from each other. If you are interested in participating or learning more about this, please email me.

Announcements

High-School Competition Host Search

The MAA-WI section is looking for a new host to direct its annual high school competition. The competition has a long tradition in Wisconsin and upward of 800 students participate each year across the state. Institutions direct the contest for five years. Tasks include sending out a mailing to invite schools to participate, keeping track of registrations, preparing and sending out the contest (18 multiple choice questions) electronically, recording results sent in by schools and sending out certificates and prizes. Our recent hosts were UW-Stout, UW-Milwaukee and currently, UW-Platteville. Detailed instructions, timeline and sample mailings are available to facilitate the transition. Please contact Gabriella Pinter (gapinter@uwm.edu) if interested in this opportunity or to get more information.

Distinguished Teaching Award

Nominations for the **Wisconsin Section Distinguished Teaching Award** are now being accepted. The deadline for consideration for this year's award is **March 14th, 2023**. The nomination form and instructions are available on the MAA-Wisconsin web site at <http://section.maa.org/wisconsin/award.html>

Save the Date!

2023 Spring Meeting of the MAA Wisconsin Section will be held **April 28-29th, 2023** on the campus of the University of Wisconsin--Stout! We look forward to seeing you in-person again!

Volunteers Needed

The Section is looking for volunteers to fill positions on the Executive Committee.

Chair-Elect

The Section continually seeks nominations for Chair-Elect. This is a three-year, elected 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 Chair becomes Immediate Past Chair, continues to sit on the Executive Committee, and oversees the selection of the Distinguished Teaching award recipient. Send nominations to Section Chair Chunping Xie at (xie@msoe.edu). Self-nominations are encouraged. Section officers must be members of the MAA. For more information on the duties of the MAA-Wisconsin Executive Committee, see the [Executive Committee Handbook](#).

Student Activities Coordinator

The Section is seeking a new Student Activities Coordinator. The Coordinator is responsible for Section activities directed toward the student members of the Wisconsin Section of the MAA, including finding and implementing appropriate activities for students at the annual section meeting as well as possible year-round activities. If you would like to learn more, contact the current coordinator Balamurugan Pandiyan (pandiyab@uww.edu). Send nominations to Section Chair Chunping Xie at xie@msoe.edu.

Section Representative to the MAA Congress

The Section is seeking nominations for a new representative to the MAA Congress. While not an officer of the Section, the representative is a member of the Section's executive committee and assumes the following responsibilities: 1. make every effort to attend all MAA Congress meetings, 2. represent the needs and interests of their constituencies, 3. communicate decisions of the MAA Board to their constituencies, and 4. stay abreast of issues facing the MAA and to serve as ambassadors for mathematics and the MAA. The elected Section Representative will serve a 3-year term on the MAA Congress. Send nominations to Nominating Committee Chair Jonathan Cox at cox@msoe.edu.

MAA-Wisconsin Executive Committee

Representative to the MAA Congress: Tom Drucker, UW-Whitewater

Chair: Chunping Xie, Milwaukee School of Engineering

Secretary-Treasurer: Jonathan Kane, UW-Madison

Chair-Elect: Petre Nelu Ghenciu, UW-Stout

Immediate Past Chair: Ken Price, UW-Oshkosh

Math Contest Coordinator: Gabriella Pinter, UW-Milwaukee

Coordinator of Student Activities: Balamurugan Pandiyan, UW-Whitewater

Representative to the Wisconsin Math Council: Erick Hofacker, UW-River Falls

Section NEXt Director: Niles Armstrong, Milwaukee School of Engineering

Public Information Officer: Anthony van Groningen, Milwaukee School of Engineering

Know Your Wisconsin Mathematician

Kevin B. McLeod

UW-Milwaukee

Interviewed by Anthony van Groningen

Describe your journey that led to working at UW-Milwaukee.

I was born in Oxford (England) of Scottish parents. If asked, I say I am British. My father was a Professor of Mathematics at the University of Oxford, who had two sabbatical leaves in Madison while I was growing up. I spent 2nd grade in Shorewood Hills Elementary School and 9th grade in Madison West High School, so I felt very comfortable choosing to come to the US to do my graduate work. It was difficult to be a seven-year-old boy in Wisconsin in 1964-5 and not become a Green Bay Packer fan; I tell people it took me over 20 years, but I finally (in 1987) worked my way back to Packer country. Ironically, I have now had multiple sabbaticals myself, in New Zealand, and would probably now count myself as more of a New Zealand All Blacks (rugby) fan than the Packers. (But I am still very happy when the Packers win!) I did my undergraduate work at Imperial College, London; when I did come to the US as a graduate student, I went to the University of Minnesota.

How did you decide that mathematics was what you wanted to do with your life?

Since my father was a mathematician, I always knew that was a possible career option, even if I didn't know exactly what it was that a mathematician did. (One thing I did know was that my father seemed to be rather better at helping me with my maths homework than were the parents of most of my classmates.) I flirted with the idea of becoming a professional musician, but it was clear I wasn't really good enough to make a success of that, so it was either maths or physics. (I had a brother and sister who were both far better musicians than I was, and both of them did make a career of it, in different ways:

my brother works in music theatre and my sister became a school music teacher, and later head teacher.) When I asked my father, he said that if I was interested in both maths and physics I should study maths, because if I did that I could learn physics later but if I studied physics I would never go back to

Teaching has always been the part of the job that I have enjoyed most: teaching and learning from my students.

learn the maths properly. So, maths it was. There is some truth to my father's observation, but I would never want it to imply that physics is somehow a subordinate discipline to maths.

In fact, my father himself was very interested in applied mathematics and physics, and we once wrote a joint paper on a problem arising from my thesis work.

What role has teaching played in your career?

Teaching has always been the part of the job that I have enjoyed most: teaching and learning from my students. In fact, one of my reasons for coming to the US as a graduate student is that I knew I would have to support myself with teaching, whereas if I did my graduate work in Britain I would be given a grant to do research full time. I don't think I have ever taught a class where I didn't learn something about the subject myself. Partly as a result, I really enjoy teaching courses that I have not taught before. My own approach to teaching changed drastically when I became a Co-PI on the NSF-funded project, the Milwaukee Mathematics Partnership, and worked with two wonderful faculty colleagues—Hank Kepner and DeAnn Huinker—from the UWM School of Education, as well as a superb group of master teachers from the Milwaukee Public Schools. Largely as a result of what I learned through that project, my own teaching has become much more student-centered and interactive. I have tried to follow those principles even in teaching graduate

courses, and I am happy to say that many of the students who took those classes are taking a similar approach in teaching their own students.

How have you found the teaching of college mathematics has changed over the years?

Overall, although nothing happens quickly in higher education, I do feel that there is a national move to improve college teaching in mathematics, with organizations such as the Conference Board of Mathematical Sciences leading the way. There are national programs, guidance, and an overall emphasis on good teaching which did not exist when I started my career. (Now, if we could only get more departments, and universities generally, to place a higher emphasis on teaching when considering faculty remuneration, tenure, and promotion—not only in mathematics.)

How would you describe your mathematical interests/research?

My mathematical interests are very broad. That is not necessarily a good thing, since one usually has to focus intensely on a specific problem to make a real success of mathematical research. My research has been in areas that have some application, however distant, to physics. I have worked in differential equations, quantum mechanics and, most recently, in classical thermodynamics.

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

One of the best aspects of working in mathematics is its universality: there are very few areas of the natural and social sciences where mathematical analysis cannot be used to gain insight. (I am not quite so convinced about the utility of mathematics in music and art, but there has been a lot of work done in those areas also.) As for the worst, every mathematician knows the response to saying what they do for a living: “Oh, I was never any good at maths.” In my

experience, this usually means the speaker failed to master manipulation of fractions or, later, algebraic expressions. In other words, they were not good at

computing. This identification of mathematics with computation is a continuing frustration for me: mathematics is about reasoning at least as much as it is about computation. In fact, I tell my students that the better they become as mathematicians, the less they will have to compute! (A related frustration: when someone says, “I did the math.” Have

you ever heard someone utter that phrase and mean anything other than “I computed”?)

I’m interested in learning more about your involvement in mathematics education and the Milwaukee Mathematics Partnership.

As I said earlier, although I have always been interested in teaching well, my formal introduction to mathematics education came with the Milwaukee Mathematics Partnership (MMP). Specifically, when Hank Kepner and DeAnn Huinker walked across the UWM campus from the School of Education to a meeting in the mathematics department and announced that they had an opportunity for a large grant from the NSF to improve mathematics education in Milwaukee Public Schools, but they needed a mathematician to serve as a Co-PI. I was the doofus who put his hand up and said that sounded interesting! It was incredibly naïve of me, because I really had no knowledge at that point as to what it would involve, but I have not regretted it for one minute. I have met and worked with a very large number of interesting and talented people; I have seen master teachers at work (and done my best to emulate them); and the initial involvement has led to broader engagement at local, state, and even national level. (As a side comment, my first sabbatical, at the University of Auckland, occurred exactly at the start of the MMP. When I planned the sabbatical, I was completely unaware that the University of Auckland

One of the best aspects of working in mathematics is its universality: there are very few areas of the natural and social sciences where mathematical analysis cannot be used to gain insight.

has a powerful Mathematics Education group based within its Department of Mathematics, but I made contact with that group at the start of the year, and developed friendships that have survived to the present day. That group introduced me to the Southern Hemisphere Delta Conference on Undergraduate Mathematics and Statistics Education, which meets every 2 years, and I have attended almost every iteration of that conference since 1997. (It does not hurt that the conference is usually held at a location in some United Nations world heritage site; I have seen some beautiful parts of the world—well, the southern hemisphere—as a result of this contact.)

What advice would you have for “pure mathematicians” looking to engage more in mathematics education in college and their community schools?

Mathematicians thinking of getting involved in Mathematics Education need to appreciate that it is not just “mathematics lite”: there are distinct problems concerned with improving teaching in K-12 (and Colleges!) which lie in at the intersection of social psychology and mathematical content. Your colleagues in the School of Education know about these issues, so seek them out, talk with them, and listen to what they say. The same goes for those master K-12 teachers I have mentioned before, but here the gulf is greater. In the MMP, we had design teams consisting of a mathematics faculty member, a university mathematics educator, and a K-12 teacher, and each brought something important to the discussions. If you can manage to get a group like that together, I believe that is the ideal structure.

What advice do you have for high-school or undergraduate students interested in a career in mathematics?

First, mathematics is a fascinating and beautiful area. I heartily encourage to investigate it as a career choice for its intrinsic appeal alone. Second, mathe-

tics is a universally useful area: knowledge of mathematics will open up job opportunities for you not just in mathematics itself, but in a very wide array of fields. Unfortunately, from my point of view, in today’s economy it seems you will have to make choices based on utility more than I had to a couple of generations ago. This suggests taking at least one course in Statistics and one in some sort of Applied Mathematics. You should be aware, though, that the study of any of these applied subjects at college level will require good prior experience in “core” mathematics, up to and including Calculus.

If you are planning a career in teaching mathematics, you will have many pedagogical requirements to satisfy, but in your copious remaining time you should take as many mathematics content courses as you can. In different areas. At least at the start of your career, it is probably more important that you are familiar with a wide variety of areas of mathematics than that you take advanced courses in any particular one. Whatever courses you take, don’t be satisfied with learning the basic skills: work to understand the deeper principles and structures that explain those skills. In K-12 terms, pay attention to the Standards for Mathematical Practice (SMP) in your state standards as you are learning the subject—and then infuse them in your own teaching. The SMPs describe how students should be thinking about and *doing* mathematics—and that, for me, is a crucial part of mathematics teaching and learning. In fact, the SMPs are a pretty good description of *real* mathematics.

Mathematicians thinking of getting involved in Mathematics Education need to appreciate that it is not just “mathematics lite”

Do You KYWM?

Do you know a Wisconsin mathematician that we should interview for an upcoming newsletter? Help support us in documenting the lives of impactful regional mathematicians by contacting the PIO at vangroningen@msoe.edu.

Campus News

Beloit College

By Ben Stucky

Student **Brandon Joly** collaborated with professors **Mehmet Dik** and **Tom Stojsavljevic** on the following publication: Joly, B., Stojsavljevic, T., and Dik, M. (2022) FIFA/Coca-Cola World Rankings on the Predictability of the Men's and Women's FIFA World Cup: A Comparative Analysis. *Proceedings of International Mathematical Sciences*, 4(1), 31-58. Brandon also completed a poster presentation under the guidance of Professor **Ben Stucky**: Joly, B., (August 2022) Predicting the Top 3 Locations in Walworth County for a Mobile Health Clinic: An Application of the Maximal Covering Location Problem. MAA MathFest PIC Math Showcase, Philadelphia, Pennsylvania.

Student **Nam Thai Hoang** uploaded the following preprint to the arxiv with his collaborators: Hoang, T.N., Truong, S., & Schmidt, C. (2022). Wildfire Forecasting with Satellite Images and Deep Generative Model. *ArXiv, abs/2208.09411*.

Carthage College

By Mark Snavelly

Landon Gauthier and Megan Stickler joined the Carthage Mathematics Department this fall. Landon, a University of Wisconsin-Platteville graduate, recently completed his Ph.D. at the University of Kentucky, and Megan recently completed her Ph.D. at the University of Houston. Please join us in welcoming them to the Wisconsin Section.

Milwaukee School of Engineering

By Anthony van Groningen

Bill Brummond joins the mathematics faculty as a Visiting Assistant Professor. He has 40 years of industry experience as an actuary. He received his Ph.D. in Mathematics from University of Missouri - St. Louis in 2019. Bill teaches actuarial science and other math courses for the department.

Duncan Clark gave a talk entitled "The Goodwillie derivatives of the identity in structured ring spectra" at the 2022 Union College Mathematics Conference in Schenectady, NY on June 4, 2022 and gave the same presentation at the AMS Fall Sectional Meeting at University of Massachusetts-Amherst on October 1st.

Alyssa Genschaw attended the International Conference

on Harmonic Analysis and Partial Differential Equations in El Escorial, Spain, where she delivered a research talk. She also gave a research talk at the Instituto de Ciencias Matemáticas in Madrid, Spain in their "Analysis and Applications" seminar. She has submitted a preprint for publication titled "Lower bounds on Bourgain's constant for harmonic measure" with **Matthew Badger**.

Dylan Heuer gave a virtual poster presentation to the Formal Power Series and Algebraic Combinatorics conference which was held virtually in January. He also attended the "Open Problems in Algebraic Combinatorics" seminar at the University of Minnesota in May, 2022. His paper "Partial Permutation and Alternating Sign Matrix Polytopes," co-authored with **Jessica Striker** of North Dakota State University, was accepted for publication by the *Siam Journal on Discrete Mathematics*.

Peter Kuhfittig published two papers "[Using embedding theorems to account for the extreme properties of traversable wormholes](#)," *Letters in High Energy Physics*, Vol. 2022, Article ID: 244 2022 and "[On wormholes in spacetimes of embedding class one](#)," *Fund. J. Math. Phys.*, Vol. 9, pp. 21-33, 2021. He also has the preprint "[A survey of recent studies concerning the extreme properties of Morris-Thorne wormholes](#),".

The Actuarial Science Club held its first Alumni Event on September 24th in the Diercks Atrium and was well-attended by current students, IAB members, faculty, and alumni. There were panel discussions on "Non-Traditional Actuarial Roles" and "Recent Graduates" presented by alumni to students. Miller Baking Co., Cookies by Elyse, and Milliman all donated to the event.

UW-Eau Claire

By aBa Mbirika

Eau Claire Campus

Congratulations to **Nicole Owen**, office manager in the mathematics department. She is the 2022 recipient of the UW System Board of Regents University Staff Excellence Award. The award was presented as part of the Board of Regents' meeting at UW-Eau Claire. More information is at [this link](#)

UWEC was one of four universities selected for the Casualty Actuarial Society's CAS University Award this year. [This link](#) has some details regarding the award. In No-

member, we will be attending the CAS Annual Meeting in Minneapolis to receive the award and to share some details about our program.

UWEC is proud to be hosting **NCUR (National Conference on Undergraduate Research)** in April 2023. NCUR is dedicated to promoting undergraduate research, scholarship and creative activity in all fields of study by sponsoring an annual conference for students. Unlike meetings of academic professional organizations, this gathering of student scholars welcomes presenters from all institutions of higher learning and from all disciplines. It would be great if you can encourage your students to present at the conference. The abstract submissions are now open. More information is at [this link](#)

Alex Smith has stepped down as chair. He was department chair of mathematics from 2007 to Spring 2022. Although no longer chair of the math department, he is now interim chair of the computer science department and the economics department.

Congratulations to **Abra Brisbin** who has stepped into Alex Smith's role and is now the chair of the mathematics department. This is now Abra Brisbin's 11th year in the math department, and she looks forward to serving in the role of chair.

In Fall 2022, the department welcomed five new faculty members (as lecturers and visiting assistant professors). Information on each new member is below:

Ryan Cushman joins the mathematics department as a visiting assistant professor. He was previously a postdoctoral research fellow at Toronto Metropolitan University following his graduate studies at Western Michigan University.

Ben Whitney joins the mathematics faculty as a visiting assistant professor. He previously worked as a postdoc at Oak Ridge National Lab, where he studied scientific data compression. Since relocating he has been quietly enjoying Wisconsin's beautiful farmland and friendly Midwestern drivers from the comfort of his bike saddle.

Warren Shull joins the mathematics department as a

visiting assistant professor. He completed his Ph.D. at Emory University with a thesis on graph theory and taught most recently at Central Community College in Hastings, Nebraska. He is excited to work with the students and faculty at UWEC and is especially pleased with the biking infrastructure in Eau Claire. It remains to be seen how far into the winter he can continue using it!

Michael Vaughan is joining the mathematics department as a lecturer with primary duties of teaching mathematics courses. Vaughan received his master's degree in mathematics from the University of Alabama-Tuscaloosa. He considers himself a lifelong student and educator of mathematics, and in his spare time he enjoys petting his cat, spending time outdoors, and playing his banjo.

Oscar Solano-Guzman joins the department of mathematics as a lecturer. He completed his master's in science at The University of Edinburgh in Scotland and his bachelor's degree in Mexico City. He is looking forward to showing his students that mathematics goes beyond just formulas and equations. For him, mathematics is a way to show creativity and originality. His hobbies include playing soccer, running, and studying languages.

Carolyn Otto taught an Algebra course at Oxford University during the summer of 2022 for the EDGE: Enhancing Diversity in Graduate Education program.

aBa Mbirika attended the 20th International Conference on Fibonacci Numbers and their Applications from July 25-29, 2022 in Sarajevo, Bosnia-Herzegovina. At this workshop/conference, he presented a talk titled "GCD of sums of k consecutive Fibonacci, Lucas, and generalized Fibonacci numbers" ([abstract](#) and [video](#)).

Allison Beemer, together with co-PIs **Joerg Kliewer** (New Jersey Institute of Technology) and **Oliver Kosut** (Arizona State University) were awarded an NSF Collaborative Research grant titled "Do You Trust Me? Practical Approaches and Fundamental Limits for Keyless Authentication" in 2021. The grant will provide support for undergraduate research and travel during the four-year funding period.

News to Share?

If you have news you would like to share with the MAA Wisconsin community, contact your campus liaison or the Public Information Officer (vangroningen@msoe.edu). Does your department not have a liaison? Why not volunteer for the role? Contact the PIO for more information.

RNT (Rethinking Number Theory) got a Number Theory Foundation grant. RNT is co-organized by Heidi Goodson (Brooklyn College), Allechar Serrano López (Harvard University), and **Mckenzie West**. The RNT workshops are intended for early-mid career number theorists and has two major emphases: number theory research and making math more equitable through conversation and action. Info at [this link](#). RNT had a session at the AWM Research Symposium on June 16-19, 2022, in Minnesota and at MathFest on August 3-6, 2022, in Philadelphia.

Mckenzie West and her collaborators **Maria Chara**, **Sam Kottler**, **Beth Malmskog**, and **Bianca Thompson** had a paper accepted by the journal *Designs, Codes and Cryptography* and titled "[Minimum Distance and Parameter Ranges of Locally Recoverable Codes with Availability from Fiber Products of Curves](#)". Mckenzie West and her student **Natalie Wijesinghe** (UWEC Dec'20 and currently in a PhD program at Colorado State University) had a paper accepted by the journal *Involve* and titled "Representations of integers by powers of two primes".

aBa Mbirika and his collaborator **Jürgen Spilker** (emeritus professor, Friburg University in Germany) had a paper accepted by the *Fibonacci Quarterly* journal's 2022 conference proceedings and titled "[GCD of sums of \$k\$ consecutive squares of generalized Fibonacci numbers](#)".

The Fall 2022 *Math in the Woods* was also a great success with an attendance of 60+ people. Chancellor Schmidt came and talked with all the students present. The new dean of Arts and Science, Aleks Sternfeld-Dunn, came with his doggie and he too talked with various students. Of the 19 students that came, 12 were math majors and the others were friends from a variety of mostly STEM majors. One student brought their mom for us faculty to meet. Yay! As far as faculty members and their partners and family, we had a whopping show of 45 more attendees. Of the 45, I should mention that 4 were dogs (but dogs are family too and the students loved meeting them as well). Two emeriti faculty came, Bob Langer (1975-2005) and Don Reynolds (1992-2011) with his wife Tamara.

UW-Milwaukee

By Jonah Gaster

The department welcomes new Department Chair **Craig Guilbault**, who takes over this Fall from outgoing chair **Suzanne Boyd**. We gratefully acknowledge the incredible job Suzanne has done shepherding the department through the manifold challenges of the past several years.

Suzanne's tireless work to facilitate a healthy, vibrant, and welcoming community for every member of the department has been inspiring. Thanks, Suzanne!

The department welcomes **Pamela E. Harris**, who makes her return to the University of Wisconsin-Milwaukee this Fall. Dr. Harris was previously Associate Professor in the Math Department at Williams College, as well as Faculty Fellow of the Davis Center and the Office of Institutional Diversity, Equity, and Inclusion at Williams. She received her B.S. from Marquette University, and M.S. and Ph.D. in mathematics from UWM. Dr. Harris has published over 50 peer-reviewed research articles in algebraic combinatorics and is the recipient of numerous awards for her research, teaching, and service. Among them: Dr. Harris was the 2020 recipient of the MAA Northeast Section Award for Distinguished College or University Teaching, the 2019 MAA Henry L. Alder Award for Distinguished Teaching by a Beginning College or University Mathematics Faculty Member, and the 2019 Council on Undergraduate Research Mathematics and Computer Sciences Division Early Career Faculty Mentor Award. She was also selected as a 2020 Inaugural Class of Karen Uhlenbeck EDGE Fellows and was one of 50 women featured in the book "Power in Numbers: The Rebel Women of Mathematics." Dr. Harris co-organizes research symposia and professional development sessions for the national conference of the Society for the Advancement of Chicanos/Hispanics and Native Americans in Science (SACNAS), and co-founded Lathisms.org, a platform that features the contributions of Latinx and Hispanic scholars in the Mathematical Sciences. She cohosts the podcast [Mathematically Uncensored](#) and has recently coauthored the books [Asked And Answered: Dialogues On Advocating For Students of Color in Mathematics](#) and [Practices and Policies: Advocating for Students of Color in Mathematics](#). We are thrilled to have Pamela join the department and look forward to all the exciting things to come in her career at UWM.

The department congratulates newly minted Associate Professor **David Spade** for his successful promotion to tenure.

This summer, the National Science Foundation awarded a \$600,000 grant to **Dexuan Xie**, in collaboration with Ranjan Dash from the Medical College of Wisconsin. Dexuan is collaborating with Dash to build computer models that will simulate how ions move through the Voltage Dependent Anion Channel (VDAC) and how the properties of those

ions impact the function of mitochondria. The funding will facilitate the development of targeted interventions that can curb the progression of diseases such as heart disease, hypertension, diabetes, cancer, and neurodegenerative diseases.

UW-Oshkosh

By John Beam

On the Oshkosh campus, our administrative assistant **Ann Trabbold** has retired after more than 20 years of service to the department. We miss her and thank her for the many things she did for us. Our department has also lost two long-standing academic staff members this year: from the Oshkosh campus, **Jaе Lee** has moved back to South Korea to rejoin his family; and from the Fox Cities campus, **Lirong Ding** has retired after 24 years. (A side note: Lirong began her career teaching at the university after earning her MS in Mathematics Education from UW Oshkosh!)

Happily, following these retirements we welcome four new academic staff members to our campuses: **Fearase Alniemi**, **Samuel Chukwuemeka**, **Spencer Bye**, and **Diane Underhill**.

We are also happy to share the news that **Amy Parrott** (Oshkosh campus) and **Carrie Tirel** (Fox Cities campus) have earned promotions to Full Professor -- and on top of that, Carrie has won an Edward M. Penson Faculty Award!

The department's outreach activities continued this summer with the Summer Oshkosh Mathematics Academy for middle schoolers. For more information go to [this link](#).

And this October 26-27, our department is hosting the Second Annual AMTE-WI conference. The focus is *Building Partnerships: Working to Establish Effective K-16 Relationships to Recruit, Develop, and Support Quality Mathematics Teaching in Wisconsin*. More info at [this link](#).

UW-Platteville

By James Swenson

Congratulations to **Kyle Czarnecki**, **Mary Paler**, and **Dan Wackwitz**, who have earned tenure and promotion to the rank of Associate Professor.

Congratulations to **Katie Volz**, who has been promoted to the rank of Senior Lecturer.

We wish a very happy retirement to UW-Platteville alumna **Cinda Furry**. We all owe Cinda our deep gratitude for the 22 years she spent in the math department as our De-

partment Associate. We are very pleased to welcome **Vicki Chase** as our new Department Associate.

We wish a very happy retirement to UW-Platteville alumna **Jodean Grunow**, whose distinguished career as a teacher and an expert in K-12 math education included 19 years at UW-Platteville.

Our best wishes to **Kevin Bombardier** and **Stephanie Kernik**, who have moved on to new positions.

We are pleased to welcome Professor Emeritus **Clem Jeske** back to campus, this time as a lecturer.

We congratulate **Holly Attenborough**, who has taken on the position of Assistant Provost at UW-Platteville.

Congratulations to **Barb Bernet**, who will serve as Chief Reader for the AP Statistics exam starting in 2023.

Congratulations to **Irfan Ul-Haq**, who has been named a Wisconsin Teaching Scholar for 2022-23.

The 49th annual UW-Platteville High School Math Contest will be held on campus this fall -- we look forward to seeing so many excited young mathematicians in person once again.

Kirthi Premadasa of UW-Platteville made a presentation titled "A new technique for course assessment using mathematical optimization" at the International Conference on Multidisciplinary Approaches in Science 2021.

UW-Stevens Point

By Cynthia McCabe

The UW-Stevens Point Mathematical Sciences Department welcomes **Grant Kopitzke** as a new Assistant Professor at the Wausau campus this fall. He received his Ph.D. in Mathematics from UW-Milwaukee in 2021, and his research interests are Algebraic Combinatorics, Representation Theory, Invariant Theory, Enumerative Combinatorics, and Mathematics Education. Grant is also delightfully well-rounded with interests in woodworking and music. To carry the circular analogy further, one could say he has come full circle in his post-secondary years. He started his college career at a two-year campus in the UW System, Fox Cities, and we are very happy to have him educating the next generation of students at the two-year campus in Wausau now.

UW-Stout

By *Steven Deckelman*

Laura Schmidt received the 2021-2022 Outstanding Teaching Award for the STEMM College (College of Science, Technology, Engineering, Mathematics, and Management).

Chris Bendel along with co-authors **Daniel Nakano**, **Cornelius Pillen** and **Paul Sobaje** published a paper "On Donkin's tilting module conjecture I: Lowering the prime". *Representation Theory* 26 (2022), 455–497.

Michael Tetzlaff, computer science, attended and presented work completed with the assistance of Stout students **Tyler Garcia** and **Zhangchi Lyu** at the Archiving 2022 conference (virtual) of the Society for Imaging Science and Technology, "An Online Model Viewer for Cultural Heritage in Unity 3D." *IS&T Archiving Conference*. 2022, 50-55.

Seth Berrier, **Michael Tetzlaff**, and **Tyler Thomas**, computer science, attended and presented on a panel at the 2022 Midwest conference of the Consortium for Computing Sciences in Colleges: "Interdisciplinary Project-Driven Learning in Game Design and Development." We are excited that Stout hosted the fall 2022 meeting of CCSC -Midwest.

Min Shu statistics presented "Detecting the Bitcoin Bubbles and Crashes" on Mar. 31 at the 89th Annual Meeting of the MAA Wisconsin Section. She also presented "Realtime Detection of Bitcoin Bubbles and Estimation of Bubble Formation Time" on Jun. 8 at the Symposium on Data Science and Statistics (SDSS) Pittsburgh, PA.

Keith Wojciechowski and **Tyler Skorczewski**, along with students **Anna Hansen**, **Audrey Williams**, and **Noah Royce** worked on a mathematical modeling approach to irrigation in sandy soils. The goal of the project is to use statistics, mathematics, and computer science to help growers manage water resources for growing dry beans in sandy soil types. The project was funded by the Freshwater Collaborative of Wisconsin.

UW-Whitewater

By *Balamurugan Pandiyan*

We hired two new tenure-track faculty this year: **Hayley Bertrand** and **Dylan Spence**. Dylan Spence is married to Hayley Bertrand. Both Hayley Bertrand and Dylan Spence earned their Ph.D. in mathematics from the Indiana University, Bloomington, IN. Hayley's research area is at the interface of algebra, topology and combinatorics while Dylan's research area is in non-commutative algebraic ge-

ometry.

We have a major staff changing in the department – our previous Department Chair, **Angela Harlan** was promoted to Assistant Dean of the Graduate School, while **Geethamali Samaranayake** has been chosen as Interim Department Chair.

Wesely Hough passed Exam P: Probability on September 16, 2022. This exam was a three-hour multiple-choice examination and was offered by the Society of Actuaries.

Rachel Chaphalkar earned tenure in August 2022 and she had one publication and presentation: Feliciano-Semidei, R., Wu, K., & Chaphalkar, R. M. (2022). Introducing conditional probability using the Monty Hall problem. *Journal of University Teaching & Learning Practice*, 19(2), 93-109; Hecker, M., Lask, E., Chaphalkar, R.M., Wu, K. (2022, June). Native American Students' Hidden Strengths in Mathematics - An Asset-based Approach Mixed Method Study. *International Blackfoot Research Conference*, Browning, MT, and virtual.

Ki-Bong Nam gave three talks: "Notes on Transcendental Numbers and Their Approximations", Math Institute, Ewha Univ., (hosted by Prof. Jungho Yoon), July 27, 2022; "Generalized Radical Weyl Algebras and Their Modules", Dept. of Math., Choongnam Univ., (hosted by Prof. Sei-Qwon Oh), July 26, 2022 and "Generalized Radical and Their Related Topics", Dept. of Math, KAIST, (hosted by Prof. Sanghoon Baek), Aug. 1, 2022.