



Wisconsin Section Mathematical Association of America

NEWSLETTER

Spring 2024

Representative's Report

By James Swenson, UW-Platteville

It is an honor to serve as the Wisconsin Section's representative in the MAA Congress. I was pleasantly surprised to learn that my term in that role is being extended by a year, as a result of a change to the Bylaws of the MAA. I'm especially pleased because I very much enjoy working with the great colleagues who make up the Executive Committee of the Wisconsin Section. You might like to join us! As I write this, we need someone to take on the role of Student Activities Coordinator. That position is currently vacant, which is why we're suspending the prizes for student presentations at the section meeting for now. Please get in touch with me or another member of the Executive Committee if you might be interested, or if you know a good candidate who might just need a nudge to jump in.



Moving beyond our own section, the broader MAA also has a wide range of committees, with roles like running SIGMAAs, organizing meetings, promoting the profession, and awarding prizes, just to name a few. This summer, I'll be starting my first term on a committee that handles one of the MAA's awards for excellent papers published in our journals. I'm looking forward to trying something new, and to meeting new colleagues—always the main attraction of committee service! You can get an idea of the many ways

that you can get involved by visiting <https://maa.org/about-maa/governance>.

Although the annual meetings are a highlight, the MAA is a year-round resource. I want to draw your attention to the monthly talks sponsored by the Math Bridge Project, a joint venture between the Section and the Wisconsin Mathematics Council. These Zoom seminars happen at 4 p.m. on the third Wednesday of each month, and are co-presented by members of the MAA-WI and the WMC. There's also a wealth of exciting math to discover on the MAA's YouTube channel, [@MAAvideo](#), and an inexhaustible supply of ideas in the journals that are freely available online to all members. All of us have access not only to the MAA's publications

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Spring Meeting!

The Spring Meeting of the MAA Wisconsin Section is **April 12-13, 2024** at **UW-Whitewater**. See further information in this newsletter and the meeting website at <https://sites.google.com/uww.edu/maa-wi-meeting2024>

(including Convergence, with its stunning trove of Mathematical Treasures, and Scatterplot, the MAA Journal of Data Science, which is launching now!), but also to several other periodicals from MAA's partners—for example, CHANCE and Primus. Finally, all of us have the opportunity to stay connected using [MAA Connect](#). By joining the communities related to your interests, you can stay up to date with the things that matter most to you.

Elsewhere in this newsletter, you'll see a call for nominations for the [Wisconsin Section Distinguished](#)

[Teaching Award](#). I encourage you to send in a nomination: the deadline this year is Pi Day (March 14). This is a great opportunity to honor a respected colleague for their excellent work. Also in this newsletter, you can find information about how to register for the annual [Section Meeting](#) this April at UW-Whitewater, and how to submit a contributed talk. I look forward to seeing many of you there, and hopefully also at MathFest in Indianapolis this August!

Contests Report

by Gabriella Pinter, UW-Milwaukee

<https://www.wisconsin.maa.org/contests>

American Mathematics Competitions

The AMC 10/12 A and B competitions were held on November 8 and November 14, 2023, respectively.



The AMC 8 contest is held January 18-24, 2024. There was a new digital administration platform for these competitions. All of them were in person, but competition managers could choose to administer the tests digitally or in a print-and-scan format. Scores are reported much faster, but general data is not yet available from AMC. Student privacy issues limit the reporting.

MAA-Wisconsin Section High School Contest Examination

This is the first year our new hosts, **Dylan Spence** and the University of Wisconsin-Whitewater, are directing the contest. Thank you very much for their willingness to take over this work.

The Section contest examination was given on Thursday, December 7, 2023. There were 14 schools reporting scores as of January 15 for a total of 187 students. There were 27 schools reporting scores last year for a total of 341 students. The test was offered in-person. The number of schools participating decreased significantly from last year.

The test was quite difficult for the students. The two top scores were in the 56-60 range.

Section NExT-Wisconsin Report

by Niles Armstrong,

Milwaukee School of Engineering

<https://www.wisconsin.maa.org/section-next-wi>

2023 Fall Conference

The Section NExT-WI annual fall conference returned to an in-person format this year on the UW-Platteville Baraboo Sauk County campus on December 2-3, 2023.



We were pleased to have **Holly Attenborough** from UW-Platteville as our keynote speaker. Professor Attenborough spoke on engaging students in a mathematics classroom authentically. We had 8 Section NExT members in attend the conference. **Duncan Clark** (Milwaukee School of Engineering), **Caitlyn Booms** (Mount Mary University), **Warren Shull** (UW-Eau Claire), and **Niles Armstrong** (Milwaukee School of Engineering) provided additional presentations related to derivatives and Taylor series in homotopy theory, Hilbert-Burch virtual resolutions for points in

$P^1 \times P^1$, transitioning to grading for growth, and discontinuities in clearance for a dynamical system, respectively. After the presentations the Section NExT members met to discuss future programming and format. The consensus of the group was that an in-person meeting was of great value and worth the effort. Section NExT-WI will plan to hold the next annual fall conference in-person again. More information will be distributed in August of 2024, but interested parties are welcome to contact the Section

NExT-WI Director directly.

2024 Spring Panel

Planning for a Section NExT spring panel/workshop has begun and is again planned to be held during the annual Spring MAA-Wisconsin Sectional Meeting. More information will be sent out through the Section NExT distribution list. If you would like to be added to our e-mail list, please contact Niles Armstrong at armstrongn@msoe.edu.

Wisconsin Math Council Representative's Report

By Erick Hofacker, UW-River Falls

As I announced in the fall, we are pleased to be offering a co-promoted project by two of our state mathematics organizations, the Wisconsin Mathematics Council (WMC) and the Wisconsin Mathematical Association of America (MAA). The name of the project is the Mathematics Bridge Project (MBP). This project was created to bring members of both organizations together to share the great work that each of them are doing related to PK-16 mathematics and mathematics education in our state.



Each event features two speakers, one representing MAA and the other representing WMC, speaking on a similar topic or theme. The MAA speaker focuses on sharing their work related to an area of mathematics they are currently focused on or conducting research on themselves, or with undergraduate students. The WMC speaker shares their current focus or research related to a topic in the mathematics classroom or in mathematics education. The idea is bringing together speakers and audiences from both organizations to better learn from each other.

During our first event in November, we had **Jon**

Boyle (Marshfield High School) and **Barbara Bennie** (UW-La Crosse) speak about statistics and data science. Jon spoke of his work of implementing more data science into his high school statistics course using tools such as CODAP. Barbara spoke of working with undergraduates on statistical projects, as well as research projects she is involved in at Gunderson Health System. At our second event, **Lisa Hennessey** (WMC President) and **Sherrie Serros** (2023 MAA Distinguished Mathematics Teacher) spoke on the topic of Geometry. Lisa spoke about changes in the K-12 standards in Geometry, such as the increased emphasis on transformations. She also provided an example of activity showcasing how it is taught in high school. Sherrie described work she has done with undergraduate students related to Euclidean and non-Euclidean Geometry. She also shared about [an article that her and her students co-authored](#).

We have three remaining events in spring 2024. On February 21st our theme is Mathematical Modeling. At our March 20th event our two speakers will discuss assessments at the various grade levels. Our final event will be held on April 17th, with a theme of Algebra. All events will be held on Zoom from 4:00 – 5:00 p.m. You can access the events by using the zoom link: <http://www.tinyurl.com/MAAWMCMCBP>.

Looking ahead to 2024-25 we are planning to begin a new outreach project with K-12 and higher education

around the theme of mathematical modeling. In addition to hosting an undergraduate competition, [CO-MAP hosts both a high school and middle school modeling contest](#) during the month of November. In 2022, three K-12 teachers from Wisconsin fielded teams in the competition. In 2023, that number dropped to one. We are looking to provide support to our teachers in the state to provide our students with another opportunity to become engaged and excited about mathematics at an early age. Therefore, we are looking for university faculty with a background and/

or interest in providing support to increase the number of teams that represent our state in 2024. Please share this with others that you know might be interested. More details will be forthcoming in the next few months.

If you would like more information on either the MBP events or becoming involved in supporting our math teachers with preparing teams for the mathematical modeling competition, please contact me at Erick.B.Hofacker@uwrf.edu

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, 2024**. The nomination form and instructions are available on the MAA-Wisconsin web site at <https://www.wisconsin.maa.org/awards>. If you have any questions, contact the immediate past chair Chunping Xie at xie@msoe.edu.

Volunteers Needed

The Section is looking for volunteers to fill the following positions on the Executive Committee. Send nominations or questions to the current Chair Nelu Ghenciu at (ghenciup@uwstout.edu). Section officers must be members of the MAA. For more information on the duties of the MAA-Wisconsin Executive Committee, see <https://www.wisconsin.maa.org/governance>

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.

Secretary-Treasurer

The Section is seeking a new Secretary-Treasurer. The combined position is responsible for keeping the minutes of the official meetings, maintaining the records of the Section, and managing the financial matters of the Section. This is a three-year position.

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.

91st Annual Meeting of the MAA Wisconsin Section

UW-Whitewater April 12-13

<https://wisconsin.maa.org/spring-meeting>

Invited Speakers

Edray Goins, West Pomona College, Chair of the MAA Congress

Indiana Pils Forced to Eat Humble Pi: The Curious History of an Irrational Number

In 1897, Indiana physician Edwin J. Goodwin believed he had discovered a way to square the circle, and proposed a bill to Indiana Representative Taylor I. Record which would secure Indiana's the claim to fame for his discovery. About the time the debate about the bill concluded, Purdue University professor Clarence A. Waldo serendipitously came across the claimed discovery, and pointed out its mathematical impossibility to the lawmakers. It had only been shown just 15 years before, by the German mathematician Ferdinand von Lindemann, that it was impossible to square the circle because π is a transcendental number. This fodder became ignominiously known as the "Indiana Pi Bill" as Goodwin's result would force $\pi = 3.2$.

In this talk, we review this humorous history of the irrationality of π . We introduce a method to compute its digits, present Lindemann's proof of its irrationality (following a simplification by Miklós Laczkovich), discuss the relationship with the Hermite-Lindemann-Weierstrass theorem, and explain how Edwin J. Goodwin came to his erroneous conclusion in the first place.



Kristen Lampe, Carroll University

Shuffle Up and Deal: A Mathematical Journey through Playing Poker with Wild Cards

The setting: Five Card Stud poker

The objectives: To play poker using wild cards in a mathematically satisfying way. Along the way, to think like a mathematician. As a bonus, to learn a little history.

The method: Attend the talk to find out!



Candace R. Rice, Smith College

Viewing the World through a Mathematical Lens

The way that numbers interact within the world has fascinated me from an early age. My research path has led me to work on problems that are essentially about viewing the world through a mathematical lens. While discussing my journey to a career in Mathematics, I will share with you some of my favorite mathematical applications, including but not limited to DNA knotting, fighting parasites and Gerrymandering organs.



91st Annual Meeting of the MAA Wisconsin Section

UW-Whitewater April 12-13

Call for Speakers

Talks of all kinds are welcome, particularly ones that are accessible to students. If you wish to present a talk, complete the form found on the meeting site, <https://sites.google.com/uww.edu/maa-wi-meeting2024>. Speaker Submission Deadline is 3/14/24 (Pi Day!). Talks received after this deadline will be considered as time and space permit.

Call for Student Speakers

The Section encourages undergraduate students who have done research in mathematics to give a 25-minute presentation at the Spring Meeting. If you wish to present a talk, complete the form found on the meeting site, <https://sites.google.com/uww.edu/maa-wi-meeting2024>. Team presentations are welcome. Speaker Submission Deadline is 3/14/24 (Pi Day!). Talks received after this deadline will be considered as time and space permit.

Registration

MAA Members: \$30 Early Registration (\$40 after March 29th)

Non-Members: \$40

Students: Free

Additional Banquet Fee is \$25 for non-students and \$10 for students. Registration form can be found on the meeting site, <https://sites.google.com/uww.edu/maa-wi-meeting2024>.

Lodging

Lodging is limited in Whitewater; please make your accommodations early.

Lodging information can be found on the meeting site, <https://sites.google.com/uww.edu/maa-wi-meeting2024>.

Excitement

We are thrilled to be returning to UW-Whitewater 10 years after their last hosting! We expect another wonderful MAA-WI Spring Meeting and look forward to seeing you there. Consider giving a talk, bringing students, encouraging students to give talks, and joining us for the banquet.

And while you are considering the above, also think about hosting a future spring meeting on your campus! If you have any questions regarding what that entails, please feel free to contact me or anyone on the Executive Committee.

Holly Attenborough

Chair-Elect of MAA-WI

UW-Platteville

attenborough@uwplatt.edu

Know Your Wisconsin Mathematician

Pamela E. Harris

University of Wisconsin—Milwaukee

Interviewed by Anthony van Groningen

Where did you grow up?

I was born in Guadalajara, Jalisco Mexico and grew up there until about 8 years old, then we lived in Southern California for a bit, returned to Mexico, and finally made our way north to Milwaukee, Wisconsin by the age of 12. I truly consider Milwaukee home.

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

I like to say that I became an accidental mathematician. I didn't know that people could do mathematics as a professional job! I credit my great professor and mentor Dr. Rebecca Sanders (Marquette University) with setting me on the path towards graduate school. I

attended UW Milwaukee, and I was fortunate to find a great PhD adviser, Dr. Jeb Willenbring, who

not only taught me a lot of mathematics, but also gave me a thesis problem which I continue to work on to this day (12 years since I completed my PhD) and which now my students work on. Having found great people who have supported me throughout many stages in my career are what helped me realize that I could have a fulfilling job as a professional mathematician and educator.

Where did you go to undergraduate school? What about graduate school? What was that experience like?

I started college at Milwaukee Area Technical College where I completed two associate degrees. I loved my years there. I had great teachers who never judged me when I made very silly math mistakes, or just flat out did not know how to do arithmetic. I also had so many opportunities to be part of student leadership which truly helped me learn how to be organized and work in a group. Skills that have bene-

fitted me tremendously as I advanced in my studies and even now as a professor. After MATC, I transferred to Marquette University to complete my bachelor's in science. As I mentioned I had great professors and mentors at Marquette. I was involved with student organizations there as well and I was able to find a nice balance between spending time doing a lot of mathematics while serving as the Volunteer Director for PrideFest – a volunteer job I really enjoyed. Once I completed my bachelor's I applied to only one graduate school: University of Wisconsin, Milwaukee where I completed my master's and doctorate. UWM is where I had my first experience really struggling mathematically. I failed my master's exams and was unsure I would continue in the program. I also struggled because I did not have a lot of peers with the same ethnic background

as me and I had not realized how much that was affecting my own ability to believe in myself. Not only this, but I had a baby

right before starting at UWM and my husband was a Marine serving in Iraq. Yet, once again, great mentors and professors helped me through those rough moments and even when the math got hard, I had a great support system both at home and at school. It truly helped that my peers at UWM were very collaborative rather than competitive. I remember working on homework in small groups, struggling together, and having that moment of joy when we finally all understood how to solve a problem. That environment really helped me succeed and it is one I try to recreate as a professor.

What was the influence of your family on your education?

Even though my parents did not have many educational opportunities they have always valued education and hard work. By moving to the U.S. my parents left their families, friends, culture, and language in the hopes that my siblings and I would have more

... I am a mathematician who loves counting and finding patterns.

educational opportunities than they did. This motivated me to work hard at school and to pursue a career that would make them proud of me.

What brought you back to UWM?

Since summer of 2022, I serve as an Associate Professor of Mathematics at the University of Wisconsin - Milwaukee. In short, I was recruited to return to UW-Milwaukee as a tenured faculty member. To be honest, I never imagined this would occur. It is extremely unlikely to be hired as faculty in the department one earned their PhD. So, when this opportunity came, it was a very easy decision for us to move back home and to work in the department that shaped me as a mathematician. The greatest part of it all is that my job is better than I ever expected. I have great and dedicated colleagues whose values align well with my own, and students who are intelligent, hardworking and motivated, and who consistently support one another.

What have your students meant to you as a teacher and mathematician?

My students mean so much to me. I know it's very cliché to say, but it often feels like my students are a part of my family. I also learn from them constantly! My favorite part of working with students is their mathematical curiosity. There are so many times that I simply take mathematical statements for granted. Yet, when a student is seeing a result for the first time and they are understanding why it is true they often lead me to think about a proof from completely new perspectives. I also do a lot of research with students. In that case we often turn the tables on the student-teacher relationship. My students become the experts and I am just trying to keep up with their findings! My students make a better teacher and mathematician.

What courses do you like to teach?

I really like teaching at all levels of the mathematical curriculum. Some of my favorite courses to teach are courses in combinatorics and abstract algebra as those are my research areas. I also really enjoy flipping those courses so that we spend a major part of

our class time solving problems and learning from each other. I also really enjoy research courses where the goal is to solve mathematical problems, write articles, and develop presentation skills.

Have you found that the teaching of mathematics has changed much over the years?

Absolutely! I think mathematics professors are now more knowledgeable about the science of teaching and learning and they are more willing to engage with mathematical educators whose expertise in those subjects should be welcomed in every mathematics department. I also think more math professors are willing to move away from the lecture and sage-on-the-stage style of teaching to help build more collaborative classroom environments. I am thankful for the work the MAA has done in providing a lot of professional development for math professors and I hope this continues to expand because students will benefit greatly from our continued growth. After all, teaching, like learning, requires a growth-mind set!

How have you been involved with the MAA?

I have been involved in many initiatives with the MAA throughout my career including organizing sessions at meetings and serving on MAA committees. One of my favorite works with the MAA was an OPEN Math Workshop on Mentoring Undergraduates in Research, which was co-organized with Allison Henrich, Michael Dorff, and Michael Young. We worked with participants on learning how to be good mentors, how to choose good research problems, and how to create a supportive community of researchers that enables all students to thrive, especially those students from historically marginalized groups.

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

As a partially ordered set with three maximal elements, the best part of being a mathematician are the math, the people, and the traveling.

What is the worst part of teaching mathematics?

In the past I would have said grading is the worst part of teaching. In fact, I think many agree as a common phrase I have heard (but do not know who to attribute it to) is: "I teach for free; I get paid to grade." However, the cost of living has risen substantially, we have lived through a global pandemic, systemic racism, oppression, and wars continue, there is a mental health crisis, etc, etc. Yet, somehow, we are supposed to teach mathematics as if those things disappear the second a student walks into a math classroom. Given all of these challenges, for me the worst part of teaching is that I cannot address and alleviate all my student's needs so that the only thing we needed to worry about was how to solve these math problems.

How do you describe what you do when you are talking to somebody outside of mathematics?

I say I am a mathematician who loves counting and finding patterns. I often tell them about the kinds of problems I like and share with them problems they can give their kids or friends. I find that people who are not in professional math circles might not have a clear picture of what a mathematician does. This is why I find it extremely important to write expository articles and share my math with the public. So far, my favorite piece is this NPR Short Wave interview:

[Choose Your Own \(Math\) Adventure](#).

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

I think of my published work I am rather fond of the article "Parking Functions: Choose your own adventure" as it really was a great deal of fun thinking of how to write an article as a choose your own adventure book and have the conclusions be open problems in mathematics.

What is your advice to college students and new teachers?

For college students, I would recommend visiting their professors during office/student hours. Come ready with your questions and show us where you might need a hint. Also take time to ask us about our research and try to get to know us. Share with us what opportunities you might be interested or just ask us what things we know of that you might benefit from participating in. Building those connections with your professors can really end up leading to a lot of opportunities that you might not have known about before. Professors can also become great mentors, and their advice and mentorship can really change your life.

For new teachers, I would recommend getting to know your students and do not assume they will just show up to office hours in your office, where they might feel intimidated. Instead hold your help hours in common areas where students work: the tutoring center, the multicultural center, a classroom, etc. Make it easy for them to come to you and take the time to get to know them. Remember they are people who take multiple classes, hold a job, have families, and can be experiencing some additional challenges. Be supportive and kind and help them navigate their college years. Teaching is a hard job, and it requires that you care not just about teaching mathematics, but that you remember that you are teaching people.

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

Darrah Chavey

Beloit College remembers our friend and colleague Professor **Darrah Chavey**, who passed away unexpectedly on Saturday, Jan. 6, 2024 from complications of heart surgery.

A professor of mathematics and computer science, Darrah joined the faculty in 1987, and at the time of passing was the college's longest-serving tenured faculty member. Over the decades since, he was beloved as a teacher, mentor, and colleague. Generations of students remember him as a warm, generous, and passionate man who loved geometric symmetry in cultural art, ballroom dancing, and science fiction. He taught algorithms, software engineering, and web design, and was also a certified ballroom dance instructor—a true renaissance man.



Darrah and his wife, Peggy, met in 1979 at a square-dancing class. They shared their passion for dance, teaching classes in the community and at the college, and endowing a Beloit College student prize in dance. He also served as the faculty advisor for the ballroom dance club and the Beloit Science Fiction and Fantasy Association.

In 2007, Darrah received the Phee Boon Kang'73 Prize for Innovation in Teaching with Technology. He believed that math could be used as a tool to teach other subjects, and his teaching reflected his desire to help students see the connections between mathematics, art, and culture.

Over the years, Darrah remained committed to the College's mission and its students, said Wisconsin State Sen. Mark Spreitzer'09. "Darrah was a larger-than-life figure. He cared deeply about his students and supported them in their lives outside the classroom in many ways. He didn't just teach classes, he changed lives."

"In addition to Darrah's dedication to teaching, he maintained a research and publishing program in geometry," notes Emeritus Professor Paul Campbell. "A few years ago, he published a paper with former students, finishing and adding to their work from 25 years earlier." At the time of his death, he was working on a book on ethnomathematics—the study of the relationship between various cultures and mathematics—and specifically traditional games and geometric patterns. "He was the hardest working and best colleague I ever had," Professor Campbell says.

Fred Burwell, college archivist emeritus, recalls that Darrah was also quite a collector. "He loved to talk about his science fiction collections, and he often donated artifacts of Beloit College history that he bought on auction sites and elsewhere." One of his last gifts to the archives was a copy of a typescript of the novel *The Glass Inferno*, co-authored by Beloit alum Frank M. Robinson'50, on which the blockbuster *The Towering Inferno* was based.

Darrah's legacy will live on in all the lives he touched.

Carroll University

By Kristen Lampe

Darrel Johnson was granted tenure and is now an Associate Professor of Mathematics.

Milwaukee School of Engineering

By Anthony van Groningen

MSOE's OP math competition was held on January 11th (2024). 12 high schools participated with 15 total teams. Brookfield Academy took first prize in the team competition. **Sami El-Hajjar** (Univ. School of Milwaukee) had a perfect score on the exam and **Adrian Yin** (Brookfield Academy) finished in second place for the individual section. We plan on holding the event again next year.

Actuarial Science student **Benjamin Leisher** has had made great accomplishments: Ben passed 5 Society of Actuaries Exams: Exam P, FM, FAM (with a 10), SRM and PA. He is preparing for Exam ALTAM that he plans to take and hopefully pass before graduation.

University of Wisconsin-Eau Claire

By aBa Mbirika

Barron County Campus

Kelli Collier completed her doctoral journey through Edgewood College and graduated in December 2023 with her EdD. The title of her soon to be published dissertation is "Mergers in Higher Education: Collaborative Value Creation Among Public HEI's in the United States". It will be available on ProQuest soon!

Feroz Siddique was awarded sabbatical for the Spring 2025 semester. He will complete his textbook "Linear Algebra and its Application". He also received the campus Godwin Goellner Award in Education from UWEC Barron County Foundation. Congratulations! Feroz and his co-PI **Wufeng Tian** submitted an institutional NSF grant application to support their undergraduate research pathways and develop CURE's (course-based undergraduate research experiences) in Mathematics and Psychology.

UWEC Barron County campus held their annual **Educational Assistance through Scholarship (EATS)** on the first Saturday of February. EATS is UWEC-BC Foundation's largest fundraising event of the year. In 2024, they raised over \$44,000, and the proceeds not only support scholarships but help fulfill all the other aspects of the Foundation's mission: Thursdays at the U, Campus Cupboard food pantry, and many other initiatives supported by UWEC Foundation.

Eau Claire Campus

The University of Wisconsin-Eau Claire Department of Mathematics hosted the **40th Annual Mathematics Meet for High School Students** on Saturday, February 17, 2024. Thirty-two teams from eleven schools competed in this year's competition. The competition features four individual events and one team event, separated out by the school's division size. Individual awards are awarded to the top six individuals in each division and team awards are awarded to the top two teams. All competitors and team sponsors receive t-shirts and participation certificates. UW-Eau Claire scholarships, funded by a

grant from Xcel Energy, are awarded to the top four individual winners in each of the three divisions at an awards ceremony. Put next years UWEC High School Math Meet on your radar. Spread the word to high school math departments in your part of Wisconsin about this fun event!

Katrina Rothrock had a paper published in the *International Journal of Research on Undergraduate Mathematics Education* and titled "[What College Freshmen Believe About Themselves: An Investigation of Mathematical Mindset, Identity, Self-efficacy, and Use of Self-Regulated Learning Strategies in Mathematics](#)" The article shares results of an investigation of how gender, high school mathematics course history and university mathematics course placement are related to first-time freshmen's mathematical mindset, identity, self-efficacy, and use of self-regulated learning strategies.

Chris Davis, Shelly Harvey (Rice University), and JungHwan Park (Korea Advanced Institute of Science & Technology) had their paper submitted to *Selecta Mathematica* and titled "[Concordance to boundary links and the solvable filtration](#)". Chris also had his paper submitted to *Algebraic and Geometric Topology* and titled "[Whitney tower concordance and knots in homology spheres](#)".

Melissa Troutt, Lindsay Reiten and Dr. Jodie Novak (both from University of Northern Colorado) had their paper published in the *Journal of Mathematics Teacher Education* and titled "Emergent Mathematical Worlds From Teacher Knowing in Whole-Class Discourse: Using an Enactivist Lens on the Teaching of Exponential Functions" (see this link <https://link.springer.com/article/10.1007/s10857-023-09610-6>).

aBa Mbirika presented at the UWEC ORSP Faculty/Academic Staff Faculty Forum in November 2023. His presentation was titled "[Tantalizing Tale of Numerical Sequences](#)".

Student **Janee Schrader** presented at NCUWM (Nebraska Conference for Undergraduate Women in Mathematics) in January 2024. Her presentation was titled "Exploring Combinatorics of Pretzel Links through Grid Diagrams".

Colleen Duffy was awarded sabbatical for the Spring 2025 semester. She will be working on a project titled "Mathematics in Latin American Cultures".

silviana amethyst was awarded a sabbatical for the Fall 2024 and Spring 2025 semester. She will be working on a

project titled “Dissemination, Implementation, and Visualization of Numerical Algebraic Geometry”.

For four days from Jan 3rd to 6th, 2024, the Joint Mathematics Meeting was held in San Francisco, CA, with around 6000 people in attendance. Representing UWEC, 11 students and 9 faculty came to present their research, organize special sessions, and attend the various research and pedagogical talks/panels/discussions. The UWEC contributions to this conference were as follows:

The student presentations in the Pi Mu Epsilon (PME) Contributed Session on Research by Undergraduates were as follows:

Morgan Fiebig gave a talk titled “Patterns in the Pisano period and entry points of linear recurrence sequence modulo m ”, **Janee Schrader** gave a talk titled “Exploring the combinatorics of pretzel links through grid diagrams, and **Sarah Heuss** and **Allison Versaskas** gave a talk titled “Randomly generating the unknot”.

The student posters in the AMS-PME Poster Session were as follows:

Brianna Evans gave a poster titled “Identities of 3rd order linear recurrence sequences”, **Duncan Koepke** gave a poster titled “Codebook creation for partial correction”, **Jordan Hebert** gave a poster titled “Universal hashing for message authentication”, **Maddy St. Pierre** gave a poster titled “Extending block length over an adversarial multiple access channel”, **Morgan Fiebig**, **Caden Joergens**, and **Briar Weston** gave a poster titled “Improvements to snap-together algebraic surfaces”, and **Annabelle Piotrowski** gave a poster titled “Math department scheduling using linear programming”.

The following faculty organized special sessions:

Allison Beemer along with co-organizers Rafael D’Oliveira (Clemson University) and Hiram Lopez (Virginia Tech) organized the *AMS Special Session on Coding Theory for Modern Applications*. **silviana amethyst** along with co-

UWEC faculty and students at this JMM conference



organizers Padi Fuster Aguilera (University of Colorado at Boulder) and Selvi Kara (University of Utah) organized the *MEET and SHARE: A Mathematician’s Storytelling Event*.

Feroz Siddique along with co-organizer Ashish K. Srivastava (Saint Louis University) organized the *AMS Special Session on Issues, Challenges and Innovations in Instruction of Linear Algebra*.

The faculty presentations were as follows:

Allison Beemer gave a talk titled “Authenticated partial correction over adversarial MACs” in the *AMS Special Session on Advances in Coding Theory*.

Chris Ahrendt gave a talk titled “An overview of various discrete analogs of differential equations using the time scale calculus” in the *AMS Contributed Paper Session on Harmonic Analysis, Probability Theory, and Related Topics*.

silviana amethyst and **Warren Shull** gave a talk titled “Purpose-driven calculus content in WeBWork” in the *AMS Contributed Paper Session on Mathematics Education, History, and Related Topics*.

Mckenzie West gave a talk titled “Parameters of fiber product codes constructed using curves from Many-Points.org” in the *AMS Special Session on Coding Theory for Modern Applications*.

Warren Shull gave a talk titled “Taking the leap: How I transitioned to grading for growth in a semester” in the *AMS Contributed Paper Session on Mathematics Education, History, and Related Topics*.

aBa Mbirika gave a talk titled “The Narayana sequence and a tantalizing connection with primes of the form $x^2 + 31y^2$ in the *AMS Contributed Paper Session on Number Theory and Related Topics*.

Mckenzie West gave a talk titled “An active approach to linear algebra” in the *AMS Special Session on Issues, Challenges, and Innovations in Instruction of Linear Algebra*.

New faculty member **Chloe Lewis** participated as a Project NEXT Fellow in their teaching and learning sessions. Project NEXT is a professional development program for new or recent Ph.D.s in the mathematical sciences.

UW-Milwaukee
By Jonah Gaster

The math department at UWM is very excited to host the upcoming American Mathematical Society’s 2024 Spring

Central Sectional meeting, to be held on UWM's campus April 20-21st, 2024. The conference will feature many Special Sessions organized and co-organized by UWM faculty, on a diverse array of topics including stochastic control, holomorphic dynamics, hyperbolic geometry, geometric group theory, numerical PDEs, and representation theory. Moreover, one of the three invited Plenary Addresses will be delivered by UWM alum **Kevin Schreve** (PhD 2015), currently in a tenure-track position at Louisiana State University.

UWM will also be the host for the upcoming Graduate Research Workshop in Combinatorics (GRWC), an annual two-week collaborative research workshop for advanced graduate students and postdocs from all areas combinatorics. Participants will come from institutions around the world to work in small collaborative groups with faculty and postdocs on research problems from across the discipline, and to attend a variety of professional development workshops to prepare students and postdocs for industrial and academic careers. UWM's own **Pamela Harris** is the lead local organizer for the event. Interested parties can refer to the website for more information. Dr. Harris will also be delivering the 2024 Canadian Mathematical Society Summer Meeting - Public Lecture at University of Saskatchewan, Canada on May 31.

On April 3rd, **Caroline Klivans** (Brown University) will deliver UWM's Marden Lecture. Morris Marden (1905-1911) was the founder of our graduate program in mathematics, and the early inspiration for the research that grew with it. Each spring, a distinguished mathematician is invited to present a general audience lecture. The Marden Lecture is funded through the Miriam and Morris Marden Fund and is co-sponsored by the Department of Mathematical Sciences. More info can be found on our website. All are welcome!

UW Oshkosh

By *John Beam*

We are sorry that the UW budget issues have resulted in the loss of another three valuable members of our academic staff, **Daniel Lollar**, **Linda Uselmann**, and **Spencer Bye**. We wish them all the best in their future endeavors.

On February 28-29, our department is hosting the Third Annual Conference of the Wisconsin Association of Mathematics Teacher Educators. Information can be found at:

<https://wiamte.org/conference/>

Under the direction of **Eric Kuennen**, UW-O will be hosting its fifth annual Mathematical Problem-Solving Contest for students in grades 7-10. The contest, to be held on April 30, is expected to attract about 1,000 students from around the state.

Various combinations among faculty members **Amy Parrott**, **Eric Kuennen**, **Fawnda Norman**, **Jason Belnap**, **Jen Szydlik**, **John Beam**, and **Steve Szydlik** have written four chapters accepted for publication in the upcoming MAA Notes Series book *The GeT Course: Resources and Objectives for the Geometry Courses for Teachers*.

David Penniston gave a plenary address at the Palmetto Number Theory Series XXXVI meeting held at Clemson University, October 21-22, 2023.

Ken Price had a recent publication in the refereed international research journal, *Communications in Algebra*. The paper, "Enhancing Lie Color Algebras," is closely tied to his 1997 doctoral dissertation and is based on extending a construction by Bahturin and Pagon, first published in 2008. Ken looks forward to presenting his paper at the upcoming Southern Regional Algebra Conference this March.

UW-Platteville

By *James Swenson*

The UW-Platteville department of mathematics is very pleased to welcome **Camille Schuetz** to the faculty. A UW-Platteville alumna, Camille earned her Ph.D. from the University of Kentucky in 2023.

We are equally pleased to announce that **Katie Volz** has joined the UW-Platteville math faculty. Katie received her doctorate from the University of Iowa, graduating in 2007, then taught at Augustana (IL), Cornell, and Grinnell before coming to UW-Platteville as a lecturer in 2017.

This fall, we had a lot of fun hosting the 50th annual UW-Platteville High School Math Contest, which brought 551 students to Platteville from 30 schools in Wisconsin, Illinois, and Iowa. We dedicated this year's competition to the late **Rick Tufte**, the contest's cofounder.

This winter marked the re-retirement of **Clem Jeske**, who came back to teach with us after retiring from the faculty in 2019. All told, he taught at UW-Platteville for over 35

years. We honor his long record of service and dedication to our students!

UW-Stout

By Steve Deckelman

Nelu Ghenciu, Tyler Skorczewski, Wellington Santos, and Steve Deckelman attended the Joint Mathematics Meetings in San Francisco 2024.

Wellington Santos gave a talk *Unmasking Deceitful Servers: Ensuring integrity in Secure Distributed Matrix Multiplication* and published two journal papers: W. Santos *Fractional decoding and the Rosenbloom-Tsfasman metric*, *Advances in Mathematics of Communications*, January 2024 (early access); G.L. Matthews, A. W. Murphy, and W. Santos, *Fractional decoding of r -Hermitian codes*, *Finite Fields and their Applications*, December 2023 (early access).

Steve Deckelman gave a talk *Physical Mathematics and the Dirichlet Principle*.

Laura Schmidt had a paper accepted by the journal *The Scholarly Teacher*, titled "Analysis of Students' Transition Back to Face-to-Face Instruction"

Tyler Skorczewski gave a talk on joint with **Keith Wojciechowski** *Crop per drop: using ODE models to find relationships between irrigation practices and kidney bean yield*. Tyler also gave a talk on his joint work with Keith at the International Congress on Industrial and Applied Mathematics in Tokyo, Japan last August titled *ODE models relating irrigation to kidney bean yield*.

Chris Mooney published a paper *Pseudo-Dedekind rings, semistar operations, and content formulas for power series*, with **Jason Juett** is available online now (as of October 2023) at *Communications in Algebra*. Chris also had the research article with one of his student groups accepted at *International Electronic Journal of Algebra* called *On magic type labelings of zero divisor graphs*, with Jackson Feggestad, Jacob Halvorson, Noah Royce, and **Nathæn Wan-**

ta. Jackson and Nathæn got their abstract accepted to NCUR to present this research there in April.

Tyler Thomas, Computer Science, will be an invited speaker on the topic of usable security and cryptographic techniques at the AMS special session on Mathematical Aspects of Cryptography and Cybersecurity on April 20-21 at the University of Wisconsin-Milwaukee, *The Convergence of Mathematical Cryptography and Human Interaction*.

Michael Tetzlaff, Computer Science, will be teaching a "short course" at IS&T Archiving 2024, "Capturing Specularity with Kintsugi 3D and Camera-mounted Flash" on April 9. Michael was also a co-mentor for a student **Alexis Williams** whose abstract "Specularity and cultural heritage 3D models" has been accepted for a poster presentation during the Psi Chi program at the 96th Annual Meeting of the Midwestern Psychological Association (MPA), April 18-20, 2024.

UW-Whitewater

By Balamurugan Pandiyan

Xueqing Chen published two peer-reviewed articles. Bai, Liqian; Chen, Xueqing; Ding, Ming; Xu, Fan *Generalized quantum cluster algebras: the Laurent phenomenon and upper bounds*. *J. Algebra* 619 (2023), 298–322. Chen, Xueqing; Ding, Ming; Zhang, Haicheng *The cluster multiplication theorem for acyclic quantum cluster algebras*. *Int. Math. Res. Not. IMRN* 2023, no. 23, 20533–20573.

Ki-Bong Nam gave a talk in the international math conference on Groups, Semigroups, Algebraic Combinatorics and Related Topics entitled "Generalized Weyl-type Algebras and Their Modules", Hainan University, Haikou, China, Nov 3-8, 2023.

John Reilly, Huckleberry Rahr, and Charlotte Toboyek revised the developmental Math 041 Beginning Algebra Curriculum to better prepare students for the subsequent course, Math 139 Quantitative Reasoning.

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.

MAA-Wisconsin Executive Committee

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<https://www.wisconsin.maa.org/governance>

Website

The Section's website has moved to

<https://wisconsin.maa.org>

*Archives of Section documents may be found in the
Section's [MAA Connect](#) Community Library.*