Allegheny Mountain Section of the Mathematical Association of America

Allegheny Mountain Section Newsletter

https://www.alleghenymtn.maa.org

FAIRMONT STATE UNIVERSITY™

SPRING 2024 SECTION MEETING HOSTED BY FAIRMONT STATE UNIVERSITY

Our annual Spring Section Meeting will be held in person at Fairmont State University on Friday, April 5 and Saturday, April 6, 2024. Following the first plenary talk on Friday, we will have our traditional banquet dinner as well as a free pizza dinner for all interested students. A student problem solving competition will be held immediately following the pizza dinner.

We have three fantastic invited speakers lined up: **Sarah J. Greenwald ,** who is an MAA Polya Lecturer, **Pamela E. Harris** who is a Fellow of the American Mathematical Society and the Association for Women in Mathematics, and **Lisa Marano** who serves on the Board of Directors for the MAA. You can find their biographies on pages 8 and 9 in this newsletter.

We are looking forward to seeing everyone in person at Fairmont! More detailed information will be available in the spring newsletter. Don't forget to like us on Facebook (https://www.facebook.com/alleghenymaa/) and follow us on Twitter (https://twitter.com/alleghenymaa).

REPORT FROM OUR MAA SECTION CONGRESS REPRESENTATIVE:
John Thompson

John Thompson of University of Pittsburgh at Johnstown, MAA Congress Representative

"...virtual resources open up opportunities for those who typically find it difficult to attend national meetings."

Greetings from Pitt-Johnstown nestled in the Laurel Highlands! The leaves have fallen (almost all) and the snow has started (sort of), and my term as section representative has just begun. I look forward to serving you over the next several years as the representative of the Allegheny Mountain Section in the MAA Congress.

I attended my first MAA Congress this past August just prior to MathFest in Tampa, Florida. An "Impact Report" was presented and I hope to present it during the Faculty Talks at our Section Spring Meeting at Fairmont State University in April. Reports were given by the Treasurer along with the Council Chairs, as well as the Coordinator on Programs and Competitions. It should be noted that "Sections" has moved from being a mere "committee" to a full "council" standing. This represents a conscious effort by the Association as a whole to recognize the essential role that the Sections play within the organization. Along that line, the association has developed a program for Online Registration for Section meetings. It is my understanding that we will be utilizing it this spring for our meeting. Additionally, the MAA continues to expand its "virtual" footprint with the "MAA Virtual Distinguished Lecture Series." These virtual resources open up opportunities for those who typically find it difficult to attend national meetings.

One final note, the MAA is always seeking additional involvement from members who typically only participate in Section activities. The Council Chairs and the Coordinator on Programs and Competitions reiterated their desire to incorporate volunteers from all the Sections in pretty much all of the MAA programs. Thus, if you desire to increase your "service portfolio" please feel free to contact me (jwt01@pitt.edu) and I would be delighted to pass along your information to the national apparatus.

FROM THE CHAIR:
Daniel Shifflet

Greetings! As this is my first letter as Chair of the section, I thought I would start by introducing myself. I have been at Clarion University (now Pennsylvania Western or simply PennWest) and a member of the Allegheny Mountain Section for the past 12 years. For the last 8 of those years I have been a member of the Executive Committee in various rolls. Before that I was a member of the Ohio Section as an undergraduate and graduate student. In fact, 2023 marks my 20-year membership to the MAA!

I never once, in the first 19 of those 20 years, thought about being Chair of a section. I joined the MAA, like many of you, for the experiences. I joined for the interesting articles and books on college-level mathematics. I joined for the local and national conferences that covered topics of interest to me. I joined so that I could share my enthusiasm for these ideas with others.

It was about 8 years ago, though, when I learned 'sharing' comes in many shapes and sizes. Sure, we can share our research through presentations and papers, but we can also share our time by volunteering, we can share our ideas by speaking up, and we can share our experiences by mentoring.

I hope you have something to share as well. Whether it be time, ideas or experiences, we want to hear from you. Here is a quick list of 'sharing' opportunities the section provides every year:

Events
- Fall Section NExT Meeting – usually in September, all are invited!
- Barbara T. Faires Colloquium Series – three virtual presentations a year (2 fall, 1 spring) by section members like you!
- Spring Section Meeting – national speakers, games for students, and social events with other section members, April 5 and 6 at Fairmont State University!

Volunteer
- Executive Committee Elected Positions – looking for Chair-Elect, Secretary, Second Vice-Chair for the ballot in the spring, appointed positions are also available
- Help at the spring meeting – we could always use section moderators, speaker transportation, and student contest judges

Communication
- Student and Faculty Talks – at the spring meeting
- Section Awards – nominate your colleague for a Teaching, Service, or Mentor award
- Contribute to this Newsletter – we're always looking for section information

Contact information for all of this can be found on our website (https://www.alleghenymtn.maa.org). I want to give a special thanks to Dr. Richard Ligo (Gannon University) for putting in the time this summer to make sure our virtual presence is organized and up-to-date. If you haven't seen our website recently, now is the time to check it out and begin sharing!

Daniel Shifflet of Penn-West University, Section Chair

"...we can share our research through presentations and papers, but we can also share our time by volunteering, we can share our ideas by speaking up, and we can share our experiences by mentoring."

SECTION NExT REPORT
Kristen Pueschel, Penn State New Kensington and
Kuei-Nuan Lin, Penn State Greater Allegheny

Section NExT had its fall meeting on Saturday September 23rd at the lovely Washington and Jefferson campus. Many thanks to John Zimmerman and the W&J Math department for hosting and funding the event. The meeting was hybrid, with 3 participants and 1 panelist over Zoom and 4 participants and 6 organizers and presenters in person. In the morning session, J. Lyn Miller, Slippery Rock University, led a workshop on writing letters of recommendation. This was followed by a panel on handling situations in the classroom, in which Faun Doherty, Washington and Jefferson, John W Thompson, University of Pittsburgh Johnstown, and Lyn Miller shared their experience and advice. After lunch, Debbie Gaydos, Penn State Greater Allegheny, led a session on Desmos Activities, which included demonstrations of many different types of activities. The day ended with a Lightning Round, in which participants were invited to talk about something that they were using in their classrooms. Lauren Sugden, Duquesne University, demonstrated a first day activity that she uses in her statistics class. Gabe Kramer, Penn State Behrend, talked about ZipGrade, an app-based scantron alternative. John Zimmerman finished the day with an impromptu demo of CalcPlot3D.

The spring Section NExT workshop will be the afternoon of April 6th. We are thrilled to announce that plenary speaker Pamela E. Harris will give a workshop on incorporating student research opportunities into classes. Professor Harris was an editor of the text "A Project-Based Guide to Undergraduate Research in Mathematics: Starting and Sustaining Accessible Undergraduate Research" and has more than 15 papers with undergraduate co-authors. More details about the spring meeting coming soon!

If you have colleagues that are new to the section or new to full-time teaching, please consider encouraging them to sign up for the Section NExT mailing list by sending an email to Kuei-Nuan Lin (linkn@psu.edu) or Kristen Pueschel (klp65@psu.edu).

In Person Section NExT Participants at Washington & Jefferson College

Call for Nominations

The Executive Committee is looking for MAA Allegheny Mountain Section members to fill the following six positions: Chair-Elect, Secretary, Second Vice-Chair, Director of e-Communications, Historian and Section NExT Co-Coordinator.

All section officers participate in three Executive Committee meetings each year. One meeting is held at the Spring Section Meeting, usually in early April. Another meeting is typically held in May or June, and the third meeting is usually held in early October. Section officers are also expected to attend the Business Meeting which is conducted the Saturday morning of the Spring Section Meeting. Section officers often serve in other ways as well, such as serving on committees or assisting with the events of the Spring Section Meeting. In addition, all section officers contribute to e-mail discussions about Section business throughout the year.

Please consider nominating one of your Allegheny Mountain Section friends or colleagues for one of these service positions. Self-nominations are welcomed. All nominations should be sent by January 13, 2024 to:

John Thompson, University of Pittsburgh at Johnstown
jwt01@pitt.edu

Chair-Elect
The Chair-Elect serves for one year before beginning a two-year term as Chair. The Chair-Elect has no specific duties other than to serve on the Executive Committee and to prepare to become Chair. The Chair prepares meeting agendas with input from the other officers and presides at the Business Meeting and the three Executive Committee Meetings each year. The Chair is generally responsible for the operations of the Section throughout the year which include setting dates for future section meetings, giving opening and closing remarks at the section meeting, writing a message from the chair for each newsletter and being a contact between the section and the MAA. After completing the two-year term, the Chair becomes Past Chair for one year to maintain continuity in the Section leadership. During the years of being Chair, most of the work occurs right before and after Executive Committee Meetings with the largest amount being before and during the Spring Section Meeting. The term of the position is four years (one year as chair-elect, two as chair, and one as past chair).

Secretary
The Secretary keeps minutes of the Business Meeting and the three Executive Committee Meetings each year and submits the Annual Section Report to the MAA after gathering the appropriate data (with the help of the Treasurer and others). The Secretary also preserves records of the section, maintains files of official correspondence of the section, and notifies members of all regular and special meetings. Most of the Secretary's duties occur immediately before and during the Executive Committee Meetings. The term of the position is three years with possibility of re-election for subsequent terms.

EXECUTIVE COMMITTEE POSITION DESCRIPTIONS

Second Vice-Chair

The primary duty of the Second Vice-Chair is to organize the faculty contributed talks at the Spring Section Meeting. This includes collecting the faculty talk registrations (typically sent by e-mail), coordinating with the host institution, scheduling times and rooms, and finding moderators for talks. Much of this work is done in the weeks directly preceding the Section Meeting. After one year, the Second Vice-Chair becomes the First Vice-Chair for one year. The First Vice-Chair acts as the contact person for the three invited speakers for the Spring Section Meeting. Duties include inviting the speakers who have been determined by the executive committee (usually during the summer) and confirming travel, lodging, and registration with the invited speakers. The First Vice-Chair also finds people to meet the speakers when they arrive at the meeting and to introduce the speakers. This work occurs mostly in the summer and in the month before the section meeting. The term of the position is two years total.
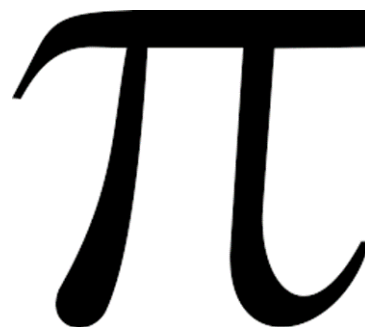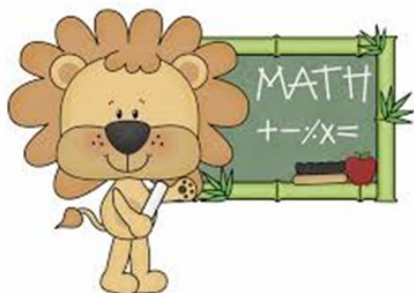
Director of e-Communications

The primary responsibility of the Director of e-Communications is to maintain the section website as an up-to-date repository of section information. The Director posts announcements to the website, information about the spring section meeting, and the section newsletter. The Director also sets up the electronic registration for meetings. The term of the position is two years with possibility of re-appointment for subsequent terms.

Section Historian

The primary responsibility of the Section Historian is to collect and preserve records that are central to the section. The term of the position is two years with possibility of re-appointment for subsequent terms.

Section NExT Co-Coordinator

The primary responsibility of the Section NExT Co-Coordinators is to run the Section NExT program. The Co-Coordinators recruit members of Section NExT, plan the Section NExT events, and arrange for speakers at Section NExT activities. Section NExT typically runs an early fall meeting, and a meeting that runs immediately after the spring section meeting. The term of the position is two years with possibility of re-appointment for subsequent terms.

SEEKING NOMINATIONS FOR AWARD RECIPIENTS

2024 Allegheny Mountain Section Distinguished Teaching Award

The criterion for the Annual Allegheny Mountain Section Distinguished Teaching Award is a record of extraordinary success in teaching, a record of teaching effectiveness that can be documented, and an ability to foster curiosity and generate excitement about mathematics. It is preferable to have an award recipient whose teaching influence extends beyond their own institution. The nominee should be a member of the MAA, must teach at an institution within the section, and should have at least five years of teaching experience in a mathematical science.

Teaching is to be interpreted in its broadest sense, not necessarily limited to classroom teaching (it may include activities such as preparing students for mathematical competitions at the college level, for example, the Putnam Prize Competition or the Mathematical Contest in Modeling, or attracting students to become majors in a mathematical science or to become Ph.D. candidates).

Please send your nomination, with a description of how the nominee meets the criterion, by March 3, 2024 to:

Adam Roberts, PennWest Clarion
aroberts@pennwest.edu

2024 Allegheny Mountain Section Service Award

The criterion for the Annual Allegheny Mountain Section Service Award is a consistent record of excellence in service to the section over a period of time. In this context "service" is interpreted in a broad sense to include holding office, coordinating contests, organizing sessions, acting as a panelist, speaking at sessions, acting as the coordinating host for a meeting, or participating in any other activity that contributes to the well-being of the Section. Please send your nomination, with a description of how the nominee meets the criterion, by March 3, 2024 to:

Tamara Lakins, Allegheny College
tlakins@allegheny.edu

2024 Allegheny Mountain Section Mentor Award

The Mentor Award has been a part of the Allegheny Mountain Section since the year 2000. A nominee should have made significant contributions to the development of undergraduate students in mathematics as scholars. This includes, but is not limited to, encouraging student participation in MAA activities and advising students who make presentations at the Section meetings. Please send your nomination, with a description of how the nominee meets the criterion, by March 3, 2024 to:

Kimberly Burch , Indiana University of Pennsylvania
kjburch@iup.edu

MEET OUR INVITED SPEAKERS: SPRING 2024

Sarah J. Greenwald, an MAA Polya Lecturer, is a professor in the Department of Mathematical Sciences and a faculty affiliate of Gender, Women's and Sexuality Studies in the Department of Interdisciplinary Studies at Appalachian State University. Greenwald earned a PhD in Riemannian geometry from the University of Pennsylvania and a BS in mathematics from Union College. Investigating connections between mathematics and society, Greenwald has won awards for teaching, scholarship and service. These include an MAA Henry L. Alder Award for Distinguished Teaching by a Beginning College or University Mathematics Faculty Member, an AWM Service Award, and College of Arts and Sciences Outstanding Teacher of the Year. As an AWM Fellow, Greenwald was cited for "creative and effective efforts to spark interest in mathematics among young people, especially girls… extensive contributions to advancing women in mathematics through writing, lectures and working with professional societies… and mentorship of students."

Lisa Marano is a Professor of Mathematics and Interim Dean of the College of the Sciences and Mathematics at West Chester University of Pennsylvania. In the Mathematics Department, she was the Founding Director of the Actuarial Science and Mathematical Finance Programs. She was also inaugural co-Director of the university's First-Year Experience program. Lisa is also on the Board of Directors for the Mathematical Association of America, serving as the Chair of the Council on Sections. Her mathematical research interests include areas which intersect probability theory, statistics, and mathematical finance. Additionally, she is investigating the efficacy of her university's new FYE program and the impact it has had on the faculty team-teaching in the program.

Dr. Pamela E. Harris is a Mexican-American mathematician and serves as Associate Professor of Mathematics at the University of Wisconsin-Milwaukee. She received her B.S. from Marquette University, and M.S. and Ph.D. in mathematics from the University of Wisconsin-Milwaukee. Dr. Pamela E. Harris's research is in algebraic combinatorics and she is the author of over 70 peer-reviewed research articles in internationally recognized journals. She is a Fellow of the American Mathematical Society and of the Association for Women in Mathematics. Dr. Harris is also an award winning mathematical educator, receiving the 2022 MAA Deborah and Franklin Tepper Haimo Award for Excellence in Mathematical Education, 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 has supervised the research of over 120 undergraduate students, a majority of whom identify as members of groups historically excluded in higher education, has served as a research faculty mentor for undergraduate research programs at the Mathematical Sciences Research Institute and the Institute for Computational and Experimental Research in Mathematics, and she is a trained Entering Mentoring Workshop Facilitator. She is the President and co-founder of Lathisms: Latinxs and Hispanics in the Mathematical Sciences, cohosts the podcast Mathematically Uncensored and is a coauthor of the books Asked And Answered: Dialogues On Advocating For Students of Color in Mathematics, Practices and Policies: Advocating for Students of Color in Mathematics, and Read and Rectify: Advocacy Stories from Student of Color in Mathematics.

SECTION AWARDS

Congratulations to our 2023 Allegheny Mountain Section award recipient!

Service Award:
Dr. John Tolle, Penn State DuBois

UPCOMING MEETINGS

Joint Mathematics Meetings 2024
January 3 - 6, 2024
San Francisco, CA

Allegheny Mountain Section Spring Meeting 2024
April 5 - 6, Hosted by Fairmont State University

MAA MathFest 2024
August 7 - 10, Indianapolis , IN

FOUND MATH

Large Mobius strip in the New Albany (OH) Elementary School library taken during a meeting of the Central Ohio Council of Teachers of Mathematics.
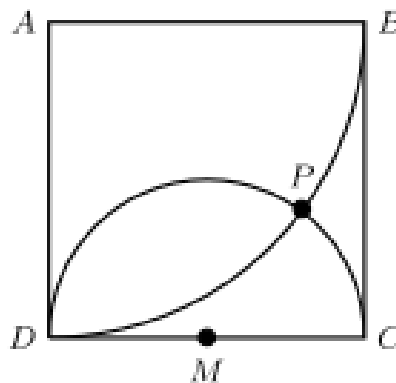
Photo by Dick Bolognese.

Found Math is a photo gallery of mathematical images on the MAA website.

https://www.maa.org/community/columns/maa-found-math

FALL PUZZLE

Square $ABCD$ has sides of length 4, and M is the midpoint of $\overline{CD}$. A circle with radius 2 and center M intersects a circle with radius 4 and center A at points P and D. What is the distance from P to $\overline{AD}$?

*From: 2003 AMC 12A Problems/Problem 17

Do you have any exciting news you would like to share? If so, please send it to me! We would love to hear what you and/or your students are doing within our section.

Newsletter Editor

Adam Roberts

PennWest University

aroberts@pennwest.edu