

Allegheny Mountain Section of the Mathematical Association of America

Allegheny Mountain Newsletter

Spring Section Meeting!

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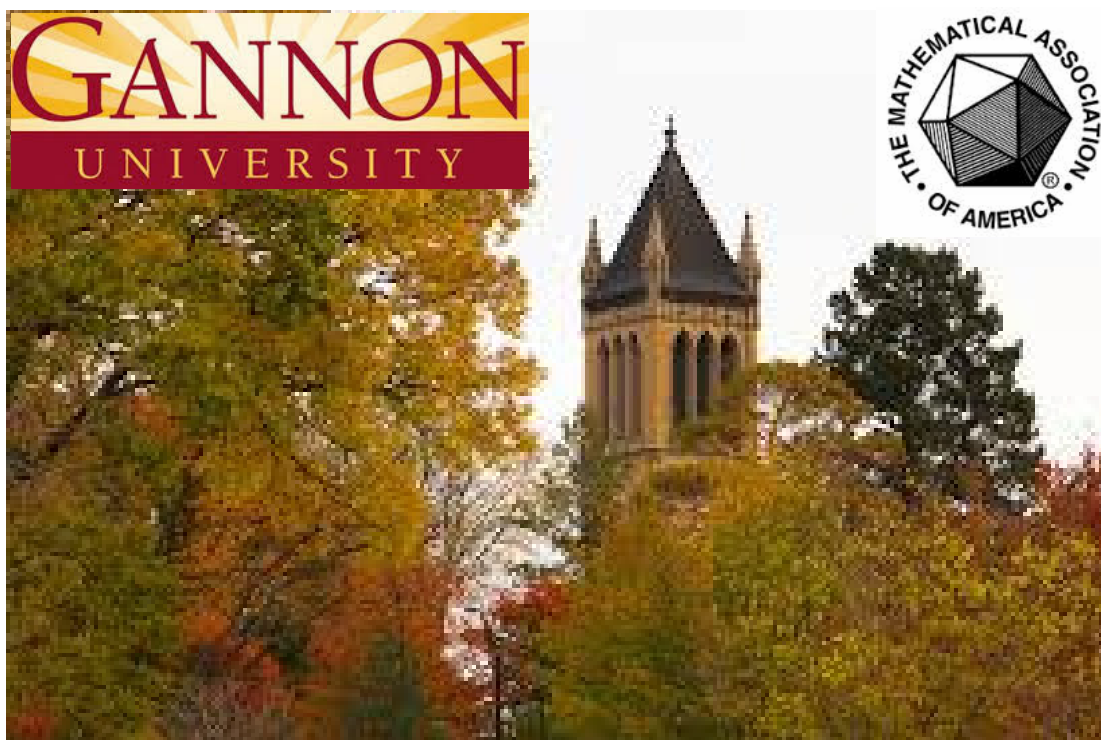
This year's Section Meeting is being held **April 1-2** at Gannon University. As usual, we have an exciting array of invited speakers as well as faculty and student talks. There will also be a student problem competition, a book exhibit and a pizza.

The deadline for registering is **March 25**, which is also the deadline for submitting a talk. Registration forms are online, and can be found at

http://sections.maa.org/allegheny/annual_meeting_2016/meeting2016.htm

Special lodging rates require a hotel reservation by **March 1**, so act soon!

GANNON
UNIVERSITY





John Thompson of The University of Pittsburgh at Johnstown, Section Governor

"I want to remind you that you, too, can influence the direction of the MAA."

From the Governor: John Thompson

Dear Fellow Allegheny Mountain MAAers,

As Governor of the Section, I want to give you an update on some of the activities of the MAA.

Current President, Francis Su, has a strong desire to see the MAA become a vibrant and integral member of the mathematics community. As such, a portion of the Board of Governors' meeting entailed a breakout section on potential programs that the MAA could facilitate to enhance our community. There were many ideas presented and the hope is that some will move towards implementation. With the idea of new programs in mind, I want to remind you that you, too, can influence the direction of the MAA. You can contact me, as your governor, to relay your thoughts and ideas. In addition, service on an MAA committee is another way that you can directly influence the organization. If

you would like to serve on a committee, please contact me (jwt01@pitt.edu) and I'll pass along your information.

The Board continues the deliberative process of updating the governance of the MAA. There seems to be a general consensus that there remain a section-based representative body to which the administrative employees and the "new Board" would report. In contrast to the current Board's fiduciary role, this new representative body would act more as an advisory/consulting body. It looks like this summer's MATHFEST may be the meeting where final approval and a transitional plan are considered. Even if a new governing structure is approved, it will take some time to carry out the transition.

Finally, as I've reported in the past, the Association's financial situation in recent years has been less

than stellar. While my previous report mentioned that there was some room for optimism, alas, the ending of 2015 failed to produce the financial improvements for which we had hoped. Hence, the MAA continues to struggle with budgetary shortfalls. While the finances lag, it is encouraging to see that membership in the MAA increased. This increase is largely due to the new Departmental Memberships which are packaged with student memberships. However, it is important to note that the "core" memberships had a slight uptick as well.

As the snow falls, I look forward to seeing those of you who can attend the Spring Section Meeting in Gannon!

Sincerely,
John Thompson

From the Chair: James Sellers

As I look out my window on this crisp, sunny, cold February morning, I am reminded of just how much I look forward to spring – the warmer temperatures, the lack of snow to shovel, the beauty of the flowers and trees in bloom. But I am also reminded that spring means much more to me; it means attending the MAA Allegheny Mountain Section annual meeting. I truly look forward to our regional meeting every year. I have great memories from many past meetings, and they often revolve around the people present. I always enjoy chatting with many friends and colleagues from across the section (at the Friday evening banquet, between talks, at the book exhibit tables, you name it), and I also enjoy the chance to hear some great faculty and student speakers. I am also reminded that two of my past publications came directly from attending talks at sectional MAA meetings. (One occurred many years ago when a colleague and I cornered Art Benjamin after one of his plenary talks and we discussed a generalization of one of the

results he had mentioned... and another came from talking to an undergraduate research advisor after one of his students shared their findings in a student paper session. You just never know when these kinds of interactions will take place!)

So I ask today that you strongly consider attending our 2016 meeting which is to be held at Gannon University during the first weekend in April. There is a great deal of information about the meeting (from the plenary speaker information to the schedule for the weekend to the online registration forms and so much more) on the meeting website. Please take some time today to complete your registration and make your plans to attend! Also, I encourage you to share a talk in one of our sessions during the meeting. If you aren't sure about what you might talk about, you might check out our "Past Spring Meetings" link at the section to see what some of your peers have talked about at previous section meetings. It's a great way to share your findings with

colleagues, and you never know what the networking benefits will be!

As I close, let me reiterate my encouragement to nominate a deserving colleague for one of our section awards. The process for doing so is quite straightforward, so it would hopefully not take too much time. But it could mean quite a bit to one of your colleagues! Please nominate a colleague or friend for this year's awards!

More information about a number of the items I mentioned above can be found at our section website:

<http://sections.maa.org/alleghey/>

I wish you all the very best as you continue through your spring semester, and I look forward to seeing you at Gannon in April.



James Sellers of Penn State University, Section Chair

"...let me reiterate my encouragement to nominate a deserving colleague for one of our section awards."

Section NExT Report: Kim Roth and Pam Richardson

The Spring 2016 Allegheny Mountain Section NExT Workshop will be held on Friday, April 1 from 1:30-3:30 at Gannon University. Participants in the workshop are also invited to attend the Section NExT lunch from 12:30-1:30.

Have you ever wanted to try Inquiry-Based Learning? Do you currently use it in your courses? Are you interested in learning more about IBL teaching? If the answer to any of these questions is “yes,” you should definitely join us for the workshop! We are pleased to welcome Dr. Suzanne Doree of Augsburg College in Minneapolis, MN as our workshop leader. Dr. Doree will run an interactive session, “**Turning Textbook Exercises into Inquiry-Based Activities.**” Dr. Doree assures us that the workshop will be appropriate for those who are new to IBL as well as for more experienced IBL users.

Dr. Suzanne Doree earned her an undergraduate mathematics degree from the University of Delaware and earned her Ph.D. from the University of Wisconsin-Madison. She is well-known as an accomplished teacher and speaker, and she has won awards from the MAA North Central Section for both teaching and service. She frequently serves as a Project NExT consultant and is an active participant in NExT discussions. Dr. Doree will also give an invited address later in the conference.

Details on how to register for the workshop will be emailed to the Section NExT list soon. If you would like to be added to the Section NExT email list, please contact Pam Richardson (richarpa@westminster.edu) or Kim Roth (roth@juniata.edu). We hope that you will join us for the Section NExT workshop on April 1!

Report of the Nominating Committee Submitted by Tamara Lakins, Chair

The members of the Nominating Committee are Tamara Lakins (Allegheny College), Chair; George Bradley (Duquesne University); and Pam Wovchko (West Virginia Wesleyan College). The committee is pleased to present the following slate of candidates for the election at the 2016 Spring Meeting at Gannon University. Candidate biographies can be found on p.5.

Chair Elect

Tim Flowers (Indiana University of PA)
David Miller (West Virginia University)

Second Vice-Chair/First Vice-Chair

Kim Jones (Washington and Jefferson College)
Melissa M. Sovak (California University of PA)

Secretary

Kimberly Burch (Indiana University of PA)

Newsletter Editor

John Tolle (Penn State DuBois)
Lauren Williams (Mercyhurst University)

Biographies of the Candidates for Executive Committee Positions

Tim Flowers, Indiana University of PA – Candidate for Chair Elect

Tim Flowers is a tenured assistant professor at Indiana University of Pennsylvania. He was the Local Organizer for the 2013 spring meeting at IUP and then served for a term as a Vice Chair of the section. He has been on several section award committees and was on the committee for the recent Bylaws revisions. He is also a member of the MAA Committee on the Status of the Profession. He has organized invited and contributed MAA paper sessions and a panel for the JMM and MathFest. He is also active in the MAA's WeBWork project and was named to the problem library's newly formed Editorial Board in 2015. Tim has a Ph.D. in number theory from Clemson University and his current research is in combinatorics.

David Miller, West Virginia University – Candidate for Chair Elect

Dr. David Miller is an Associate Professor and the Undergraduate Program Director at West Virginia University. He earned his M.S. degree in Applied Mathematics and Ph.D. in Mathematics with an emphasis in Undergraduate Mathematics Education from Oklahoma State University. He was awarded the 2013 Allegheny Mountain Section and 2012- 2013 Eberly College of Arts and Science (ECAS) Teaching Awards. He has recently served as both the second and first vice chair of the Allegheny Mountain Section and is currently serving on the Allegheny Mountain Section Teaching Award committee. He has also served nationally on the MAA Science Policy Committee that visited with a variety of representatives on Capitol Hill in March 2010. Dr. Miller was selected for a National Academies of Science Mentor award from 2009 - 2014. He loves teaching upper level undergraduate mathematics courses and has developed the Emerging Scholars Program in Calculus I through IV at WVU to encourage underrepresented students in Science, Technology, Engineering, and Mathematics. He is the co-PI on the NSF Louis Stokes Alliance for Minority Participation grant and has previously been a co-PI on several other NSF grants.

Kim Jones, Washington and Jefferson College – Candidate for Second Vice Chair

Kim Jones is an Instructor at Washington and Jefferson College. She earned a B.A. in Anthropology and Mathematics from The Pennsylvania State University, and an M.S. in Mathematics from Virginia Commonwealth University. She has over 20 years of teaching experience at the college level. One of her greatest joys is sharing her love and excitement for mathematics with her students. She joined the mathematics department at W&J in the fall of 2005. In addition to teaching, she has served as W&J's math placement coordinator for the past six years. She also helped with the coordination of the MAA's Centennial celebration conference at W&J last spring. In her spare time she enjoys reading, hiking, bird watching and yoga.

Melissa M. Sovak, California University of PA – Candidate for Second Vice Chair

Melissa Sovak is an Associate Professor at California University of Pennsylvania. She earned a B.S. from Carlow University in Mathematics and Accounting, an M.S. from Duquesne University in Computational Mathematics and Ph.D. from the University of Pittsburgh in statistics. Melissa's research area is Statistics and Mathematics education, and she has redesigned several courses using the Flipped Classroom technique. Melissa is also the program coordinator for Cal U's new Professional Science Master degree program in Applied Mathematics.

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Biographies of the Candidates for Executive Committee Positions

(continued from p.5)

Kimberly Burch, Indiana University of PA – Candidate for Secretary

Kimberly Burch is an Associate Professor at Indiana University of Pennsylvania. She earned her Ph.D. in graph theory from the University of Pittsburgh in 2002. She has served as Second and First Vice-Chair of the section and as the Secretary. She is interested in how technology such as online homework systems and Plickers (a free classroom voting system that enables the collection of real-time formative assessment data without the need for specialized hardware) can improve student performance, and she enjoys mentoring undergraduate students.

John Tolle, Penn State DuBois – Candidate for Newsletter Editor

John Tolle (Ph.D. 1996, University of Kentucky) is Instructor in Mathematics at Penn State DuBois, and co-coordinator of the Campus Honors Program there. His mathematical interests are quite varied, leading to publications in diverse areas such as voting theory, differential equations, and mathematics pedagogy. He has been a member of MAA for 14 years, involved in the Allegheny Mountain Section for all of those years, giving many talks at section meetings, and in recent years, bringing a few students along. Three of those students subsequently switched their majors from engineering to mathematics. He has been a section officer in the past, serving as Second Vice Chair and First Vice Chair.

Lauren Williams, Mercyhurst University – Candidate for Newsletter Editor

Dr. Lauren Williams began teaching at Mercyhurst University in 2013 after earning her M.A. and Ph.D. in mathematics from the University of Wisconsin Milwaukee, where she was supported by a GAANN fellowship. Her research interests include the application of combinatorics to problems in representation theory. Her research work includes articles in the *Transactions of the AMS* and the *Journal of Combinatorics*, though she finds collaborating with students to be even more rewarding. At Mercyhurst, Lauren teaches any class with “algebra” in the title, along with some information technology courses such as Mobile Application Development and Data Visualization. She also enjoys finding new ways to blend her interests in art, programming and mathematics, often in the form of web applications. She is a member of the MAA, AMS, and AWM.



Tentative Schedule for the Spring 2016 Meeting

Friday, April 1, 2016

11:30 – 12:30	Section Officer's Meeting	Waldron Campus Center 219
12:30 – 1:30	Section NEXt Lunch	Waldron Campus Center 219
1:30 – 3:30	Section NEXt Workshop	Waldron Campus Center 219
2:00 – 4:00	Registration	Zurn Science Center Lobby
2:00 – 3:45	Book Exhibits	Zurn Science Center 330
3:55	Welcome from Gannon University Dr. Keith Taylor, President	Zurn Science Center 104
4:00 – 5:00	Invited Address	Zurn Science Center 104
5:00 – 5:45	Registration	Zurn Science Center Lobby
5:15 – 6:30	Dinner and Awards	Waldron Campus Center 219
6:40 – 7:25	Student Problem Competition	Zurn Science Center 101
6:40 – 9:30	Book Exhibits	Zurn Science Center 330
7:35 – 9:30	Student Talks	Zurn Science Center classrooms
9:30 – 10:15	Evening Social – Pizza Party	Zurn Science Center lobby

Saturday, April 2, 2016

7:30 – 8:45	Breakfast	Waldron Campus Center Yehl Room
8:00 – 8:45	Business Meeting	Waldron Campus Center Yehl Room
8:00 – 9:00	Registration	Zurn Science Center lobby
9:00 – 10:00	Invited Address	Zurn Science Center 104
10:00 – 11:45	Book Exhibits	Zurn Science Center 330
10:15 – 11:30	Faculty Talks	Zurn Science Center classrooms
11:45 – 12:45	Invited Address	Zurn Science Center 104
12:45	Closing Remarks	Zurn Science Center 104

Invited Speakers for the Spring Section Meeting

[Scott Chapman](#), Sam Houston State University

Talk Title: "How to Deal with a Mathematics Journal Editor: Confessions of the Outgoing Monthly Editor"

Abstract: For over 115 years, the American Mathematical Monthly has served as Mathematics' most widely read journal for general audience papers. The Monthly holds a unique niche amongst journals in the Sciences, as its articles are intended to inform, stimulate, challenge, enlighten, and even entertain; Monthly articles are meant to be read, enjoyed, and discussed, rather than just archived. The long history of the Monthly does not just include papers which had significant impact on both the research and teaching communities, but its articles can be used as a mirror which reflects the trends and attitudes of not only Mathematicians, but academics in general. In this talk, I will briefly cover the history and accomplishments of the Monthly. I shall then use the contents of my recent Notices of the American Mathematical Society (Feb. 2016) paper on dealing with a mathematics journal editor as a springboard to review the highlights and lowlights of my five years as Editor of the Monthly.

[Gary Gordon](#) and [Liz McMahon](#), Lafayette College

Talk Title: "The Joy of SET®"

Abstract: The card game SET® is played with a special deck of 81 cards. There is quite a lot of mathematics that can be explored using the game. We'll look at questions in combinatorics, probability, linear algebra, and especially geometry. The deck is an excellent model for the finite affine geometry $AG(4,3)$ and provides an entry to surprisingly beautiful structure theorems for that geometry. If you'd like some practice before the talk, go to www.setgame.com for the rules and a Daily Puzzle.

[Suzanne Dorée](#), Augsburg College

Talk Title: Writing Numbers as the Sum of Factorials

Abstract: In standard decimal notation, we write each integer as a linear combination of powers of 10. In binary, we use powers of 2. What if we used factorials instead of exponentials? How can we express each integer as a sum of factorials in a minimal way? This talk will explore the factorial representation of integers, including historical connections to permutations, a fast algorithm for conversion, and the secret of the "third proof by mathematical induction." Next we'll extend this representation to rational and then real numbers, ending with some remaining open questions.

Local Arrangements for the Spring Section Meeting:

Hotel Information:

The hotels listed below have special rates for conference attendees. Further details, such as locations, amenities can be found by following the links or at http://sections.maa.org/alleggheny/annual_meeting_2016/hotel.htm. Mention the Section Meeting to receive the prices below. The deadline for the quoted conference rate is **March 1**.

<u>The Avalon</u>	(\$85)	(814) 459-2220
<u>Hilton Garden Inn</u>	(\$129)	(814) 866-1390
<u>Econo Lodge</u>	(\$79)	(814) 866-5544
<u>Courtyard by Marriott</u>	(\$109)	(814) 860-8300
<u>Fairfield Inn by Marriott</u>	(\$119)	(814) 868-0985

Driving Information:

Traveling North on I-79:

Proceed to Erie's Bayfront Highway exit. Follow the signs and continue on the Bayfront Highway along Presque Isle Bay, passing the marinas and continuing to State Street. Turn right onto State Street at the traffic light. Proceed south on State Street through the downtown district to West 7th Street. Turn right onto West 9th Street and follow parking directions.

Traveling East or West on I-90:

Take the I-79 North exit and travel to Erie's Bayfront Highway exit. Follow the signs and continue on the Bayfront Highway along Presque Isle Bay, passing the marinas and continuing to State Street. Turn right onto State Street at the traffic light. Proceed south on State Street through the downtown district to West 7th Street. Turn right onto West 9th Street and follow parking directions.

Interim Newsletter Editor

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