Allegheny Mountain Section Newsletter

PennState Behrend

SPRING SECTION MEETING AT PENN STATE BEHREND

The spring 2018 meeting of the Allegheny Mountain Section will be held April 6-7 at Penn State Behrend located in Erie, Pa. Our three featured speakers will be Annalisa Crannell from Franklin & Marshall, Michael Dorff from Brigham Young University, and Ken Ono from Emory University – Pólya Lecturer.

On Friday afternoon, Annalisa Crannell will be conducting a Section NExT Workshop. Look for information on her workshop in our spring newsletter. Afterwards, there will be a welcome address and an invited talk. On Friday evening we will have a **FREE PIZZA DINNER** for students in addition to our usual banquet dinner. The student problem-solving competition will follow the pizza dinner. There will also be a dessert reception Friday night after the student talks.

A Section Business Meeting will be held Saturday morning - everyone is welcome to attend. We will then have an invited talk followed by a variety of faculty presentations and a closing invited talk.

We hope to see everyone there!

SECTION REPRESENTATIVE TO THE MAA CONGRESS:
Pam Wovchko

Pam Wovchko of West Virginia Wesleyan College, Representative to the MAA Congress

"...I want to convey the thoughts, ideas, and concerns of the section ..."

As you may recall from John Thompson's last Governor's report, the structure of the MAA has changed from a Board of Governors to the MAA Congress. A smaller group, the Board of Directors, now makes financial and other major decisions. The Section representatives to Congress (previously called Governors) give feedback on programs and challenges of the Association. As your representative to Congress, I want to convey the thoughts, ideas, and concerns of the section, so please tell me about things you like or don't like about the Association, ideas that you have about new programs, etc. My e-mail address is wovchko_p@wvwc.edu. If you prefer, you can call (304) 473-8310 or just chat with me at the meetings.

At the January Congress meeting, we discussed our strategic goals, worked on minor bylaw changes, discussed the new role of section representatives, and gave feedback on some important programs/issues. I will highlight some of the items below.

The Association has been working to overcome financial challenges. I will give three examples. First, we recently partnered with Taylor & Francis to publish, market, and distribute our journals. Along with financial advantages, we hope the partnership will increase the audience of our publications. Secondly, the MAA has been seeking out corporate sponsors, particularly for the AMC (American Mathematics Competition). Lastly, as a long-term investment, the size of the cohort of Project NExT fellows has been increased.

The Association has some programs that are relatively new. "Preparation for Industrial Careers in Mathematical Sciences (PIC Math)" has resources and opportunities for students and faculty. This fall the new MAA "Instructional Practices Guide" will be released. Finally, do not forget about the revised departmental membership. Benefits include: one MAA faculty membership, an unlimited number of full-time student memberships, $100 off every hosted WeBWorK course, and more. Please search the MAA website for more details on any of these programs/ opportunities.

Have a great fall semester. I hope to see you all soon.

FROM THE CHAIR:
Tim Flowers

I attended my first MAA section meeting back in 1997. I was a junior undergrad when I arrived at Youngstown State for the spring meeting of the Ohio Section. To be honest, I do not really remember very many details about the conference itself. My memories from over twenty years ago are scattered and are mostly about my classmates that had traveled with me and about James Sellers, our professor who had wrangled us into going. Here is what I do remember about the program of that meeting: I went and listened to several student talks. And while I have no recollection of the content of those presentations, I remember leaving that conference with the thought "I can do that." I had confidence. And I had a goal.

One year later, under guidance from James, I was back at the Ohio Section Spring Meeting. I gave a talk about the divisibility of certain values of a function that counted a particular type of partition (for fun, you can do a Google search for "TSSCPP"). After this, I had a connection to the MAA, and section meetings in particular, that has stayed with me to today.

This is one of our roles as members of the MAA's Allegheny Mountain Section – to connect our students with the association, to give them a confidence and passion about mathematics, and to provide them a forum where they can gather and share. So, let us all start planning now for how we can get some of our students to a meeting and get them involved.

Our 2018 Spring Meeting will be held on April 6 and 7 at Penn State Behrend. The program on Friday will have the usual focus on student activities, including the invited address, the problem solving competition, and student talks. Registration will remain free for students and the section will continue to provide pizza for them (we are going to rearrange the order of some of the student activities so watch for more details about that in the spring newsletter).

As you read the rest of this newsletter, make sure you watch for the various announcements. In particular, we are looking for candidates to run in the spring elections to fill openings on our Executive Committee. If you are interested or if you would like to recommend someone, please get in touch. Also, we are accepting nominations for our section's awards. Please read about the awards and consider nominating a colleague. You can visit our section's webpage for more information (and it is always fun to read through the lists of past winners to be reminded of all the great things that have been done in our section).

If you have any questions or suggestions about section activities, I would be happy to hear from you. Please feel free to write me at flowers@iup.edu. I hope the rest of your fall semester goes well. We will look forward to seeing you at Behrend in April.

Tim Flowers of Indiana University of Pennsylvania, Section Chair

"This is one of our roles as members of the MAA's Allegheny Mountain Section – to connect our students with the association, to give them a confidence and passion about mathematics, and to provide them a forum where they can gather and share."

SECTION NExT REPORT: Kim Roth of Juniata College

Welcome to John Tolle, of Penn State DuBois, as the new co-coordinator of Section NExT. I thank Erin Bancroft for her service as Section NExT co-coordinator.

The Fall 2017 Section NExT Workshop was held at Grove City College on September 30th. The topic of the workshop was Student Engagement and Effective Ways to Grade. A panel on different grading techniques took place in the morning. Erin Bancroft of Grove City College spoke about using rubrics. Henry Escuadro of Juniata College talked about using cover sheets on homework, and grading homework with a focus on completion. Tim Flowers of Indiana University of Pennsylvania spoke about using online homework systems. Afterward, the group discussed various techniques and ideas they use for grading. Informal discussions continued throughout lunch. In the afternoon Kimberly Burch of Indiana University of Pennsylvania spoke about using

classroom response systems, including Plickers, Kahoot!, and Quizzizz.

The Spring 2018 Section NExT meeting will be held on April 6th at Penn State Erie (The Behrend College), beginning with lunch, and ending about a half hour before the Spring Section Meeting begins. Annalisa Crannell of Franklin and Marshall College will give a workshop on Inquiry Based Learning (IBL). She will give several strategies for incorporating IBL into existing classes, and show how different versions of IBL can be used at different course levels, from Calculus I to Abstract Algebra and Analysis.

If you are interested in attending a future meeting or you have a new colleague in mathematics whom you'd like to receive emails about future meetings, email Kim Roth (roth@juniata.edu) or John Tolle (jut14@psu.edu).

CALL FOR NOMINATIONS

The Executive Committee is looking for MAA Allegheny Mountain Section members to fill the following three positions; Chair-Elect, Second Vice-Chair and Secretary.

All section officers participate in three Executive Committee meetings each year. The spring meeting is held at the Spring Section Meeting, usually in April. The summer meeting is typically held in May or June, and the fall meeting is usually held in 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 February 5, 2018 to either:

Tim Flowers (Section Chair)   or   Henry Escuardo (Chair of the Nominating Committee)
flowers@iup.edu   escuadro@juniata.edu
Indiana University of Pennsylvania   Juniata College
237 Stright Hall   BAC C 108 C
Indiana, PA 15705   Huntingdon, PA 16652

EXECUTIVE COMMITTEE POSITION DESCRIPTIONS

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).

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.

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.

SEEKING NOMINATIONS FOR AWARD RECIPIENTS

2018 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 5, 2018 to:

Dan Shifflet
dshifflet@clarion.edu
Clarion University
Department of Chemistry, Mathematics, and Physics
840 Wood Street
Clarion, PA 16214

2018 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 5, 2018 to:

Kim Roth
roth@juniata.edu
Juniata College
Department of Mathematics
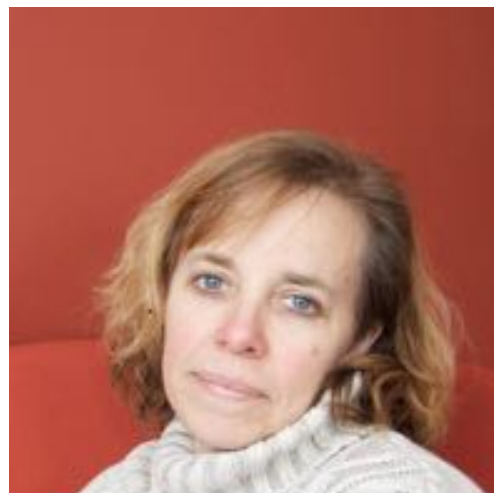1700 Moore Street
Huntingdon, PA 16652

2018 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 criteria, by March 5, 2018 to :

David Prier
prier001@gannon.edu
Gannon University
Department of Mathematics
162 W. Sixth Street
Erie, PA 16541

MEET OUR INVITED SPEAKERS: SPRING 2018

Annalisa Crannell is a Professor of Mathematics at Franklin & Marshall College and recipient of both her college's and the MAA's distinguished teaching awards. Her early research was in topological dynamical systems (also known as "Chaos Theory"), but she has become active in working with mathematicians and artists on Projective Geometry applied to Perspective Art.   Together with mathematician/artist Marc Frantz, she is the author of *Viewpoints: Mathematical Perspective and Fractal Geometry in Art*. She especially enjoys talking to non-mathematicians who haven't (yet) learned where the most beautiful aspects of the subject lie.

Michael Dorff is the department chair and professor of mathematics at Brigham Young University. He earned his Ph.D in 1997 from the Univ. of Kentucky in complex analysis, has published about 35 refereed papers, and has given about 500 talks on mathematics. He is interested in undergraduate research, in non-academic careers in mathematics, and in promoting mathematics to the general public. He will be the next president of the Mathematical Association of America. Also, he is a Fellow of the American Mathematical Society, a Fulbright Scholar in Poland, received a national Haimo Teaching Award from the MAA, and co-directs the PIC Math (Preparation for Industrial Careers in the Mathematical Sciences). He is married with 5 daughters. In any free time he has, he enjoys reading,

MAA
MATHEMATICAL ASSOCIATION OF AMERICA

Ken Ono is the Asa Griggs Candler Professor of Mathematics at Emory University. He is considered to be an expert in the theory of integer partitions and modular forms. He has been invited to speak to audiences all over North America, Asia and Europe. His contributions include several monographs and over 160 research and popular articles in number theory, combinatorics and algebra.

He received his Ph.D. from UCLA and has received many awards for his research in number theory, including a Guggenheim Fellowship, a Packard Fellowship and a Sloan Fellowship. He was awarded a Presidential Early Career Award for Science and Engineering (PECASE) by Bill Clinton in 2000 and he was named the National Science Foundation's Distinguished Teaching Scholar in 2005. In addition to being a thesis advisor and postdoctoral mentor, he has also mentored dozens of undergraduates and high school students. He serves as Editor-in-Chief for several journals and is an editor of The Ramanujan Journal. He is also a member of the US National Committee for Mathematics at the National Academy of Science. He was also an Associate Producer of the film "The Man Who Knew Infinity" which starred Dev Patel and Jeremy Irons.

Congratulations to our 2017 Allegheny Mountain Section award recipients!

Distinguished Teaching Award:
Cheryl Leech of Allegheny College

Mentor Award:
David Prier of Gannon University

Service Award:
Kim Roth of Juniata College

UPCOMING MEETINGS

- **Joint Mathematics Meetings**
  January 10-13, 2018 in San Diego, CA
  http://jointmathematicsmeetings.org/jmm

- **Allegheny Mountain Section Spring Meeting**
  April 6-7, 2018 at Penn State Behrend, Erie, PA

- **MAA MathFest**
  August 1- 4, 2018 in Denver, CO

- **Allegheny Mountain Section Spring Meeting 2019**
  April 5-6, Shepherd University, Shepherdstown, WV

2017 PHOTO GALLERY

Ryan Higginbottom with student presenter Xueyi Lei.

Do you have a student presenting a poster at the Joint Mathematics Meetings in San Diego? Or is there an early-career faculty member in your department who will be speaking at JMM? Send photos from the JMM to kjones@washjeff.edu by the end of January and we will select some to include in our next newsletter.

DUQUESNE UNIVERSITY — Spring Section Meeting

W&J students and faculty ready for the talks!

Students enjoying the pizza party.

Chicago MathFest

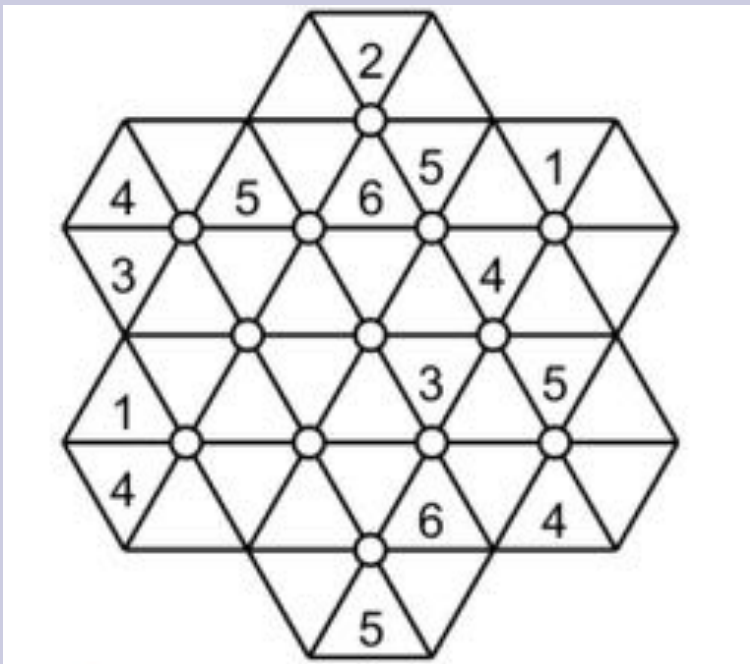James Sellers and John Bukowski having fun taking selfies at MathFest.

FOUND MATH

MAA Found Math Photo:
submitted by Ahmad Al Hammouri

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

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

FALL PUZZLE
SNOWFLAKE SUDOKU

Fill each hexagon with the numbers 1 through 6 so that no number repeats in any given hexagon.

Puzzle from http://innoludic.com

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

Kim Jones

Washington & Jefferson College

kjones@washjeff.edu