Allegheny Mountain Newsletter

Spring Section Meeting: Duquesne University, April 7-8

Do you enjoy mathematics? Do you want to reconnect with friends and colleagues from the Western Pennsylvania and West Virginia area? Then the Spring 2017 Section meeting is the place to be.

Our three featured speakers:

Robert Devaney, Boston University
The Fractal Geometry of the Mandelbrot Set
In this lecture we describe several folk theorems concerning the Mandelbrot set. While this set is extremely complicated from a geometric point of view, we will show that, as long as you know how to add and how to count, you can understand this geometry completely. We will encounter many famous mathematical objects in the Mandelbrot set, like the Farey tree and the Fibonacci sequence. And we will find many soon-to-be-famous objects as well, like the "Devaney" sequence. There might even be a joke or two in the talk.

Dan Fox, Pittsburgh Pirates
The Math Says Yes: Analytics and Organizational Change in Major League Baseball
Major League Baseball is an institution with a long and storied tradition. In this talk we'll explore what happened in one organization when analytics met tradition. We will also talk about the implementation of analytics at all levels of the operation and provide some examples of how the math is being used to inform the decision making process.

Jennifer Quinn, University of Washington
Epic Math Battles: Counting vs. Matching
Which technique is mathematically superior? The audience will judge of this tongue-in-cheek combinatorial competition between the mathematical techniques of counting and matching. Be prepared to explore positive and alternating sums involving binomial coefficients, Fibonacci numbers, and other beautiful combinatorial quantities. How are the terms in each sum concretely interpreted? What is being counted? What is being matched? Which is superior? You decide.

As always we look forward to excellent presentations by well respected speakers.

In addition to our invited speakers, there will be the usual contributed paper sessions for faculty and student speakers, a pizza party on Friday night, and much more. Please plan on being there.

For more information, please go to http://sections.maa.org/allegheny/annual_meeting_2017/meeting2017.html. Detailed information will be included in the spring newsletter.

From the Chair: James Sellers

James Sellers, Penn State University, Section Chair

As I sit down to write this letter tonight, I am reminded of the fact that life is full of transitions, both personally and professionally. In the last few years, I became a father-in-law (on two separate occasions, and I am truly thankful for both of my daughters-in-law), and I also became a grandfather for the first time! These marked significant milestones in my life, and I am now enjoying these new roles very much.

In this "letter from the chair", I would like to focus on a few transitions which are related to us as members of the MAA community.

First, from the corporate perspective, the membership of the MAA who were present at the business meeting at the Joint Mathematics Meetings in Atlanta voted to approve a new set of bylaws for the Association. This is a significant transition for the Association, and represents the work of numerous people (including the membership of the Board of Governors over a number of years). If you aren't familiar with the proposed changes, let me direct you to Matt Boelkins' article in the MAA FOCUS from October/November 2016. You can access the online version of FOCUS at http://www.maa.org/press/periodicals/maa-focus. You might also see the MAA's announcement of the vote at http://www.maa.org/about-maa/governance/maa-members-approve-important-updates-to-association-bylaws-and-articles-of-incorporation. Both of these documents should prove helpful in explaining the new bylaws and the corresponding changes to the MAA's governance.

As I think about the changes to the Association's governance, I am also reminded that John Thompson's term as our section governor will end soon. I want to personally thank John for his work as our section governor over the last few years, and I wish him the best as he considers how he might continue to serve our section and the Association. In the coming weeks, you should be notified by the Association of the vote for our next governor; I hope you will take the time to consider the candidates who have been put forth and place your vote.

Let me close this note by asking you to consider doing one or more of the following in the next few days:
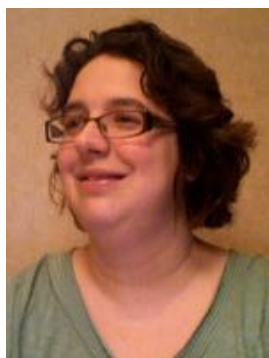
1) Nominating someone for one of our section awards (teaching, service, and mentoring); more information about these awards and the (very straightforward!) nomination processes for each can be found at the section website http://sections.maa.org/allegheny/ I would go so far as to *challenge* you to nominate at least one colleague from our section for one of these awards! The time spent doing this is well worth it!

2) Consider attending the next Spring Meeting of the Allegheny Mountain Section. The 2017 meeting will be held at Duquesne University on April 7-8. More information about that meeting will be forthcoming on our section website as well. It promises to be a great meeting, including opportunities for students and faculty to speak as well as the ability to network with one another and learn more about teaching and research in the mathematical sciences. I always come away from such meetings encouraged and invigorated, ready to go back home and do something differently, whether it is something new or something that I can improve!

MAA100

MATHEMATICAL ASSOCIATION OF AMERICA
CELEBRATING A CENTURY OF ADVANCING MATHEMATICS

Section NExT News

Erin Bancroft, Grove City College,
Section NExT Program
Co-Coordinator

Section NExT welcomes Erin Bancroft from Grove City College as our new co-coordinator. Erin was a 2011-2012 National Project NExT fellow (peach dot) and has frequently participated in the Allegheny Mountain Section NExT workshops.

The fall Section NExT Meeting was held at IUP on September 24th. The morning session was a panel discussion on teaching strategies for non-major classes including statistics, education, and liberal arts, which also branched into a conversation about ways to reach students who are struggling or not attending. The panelists were Carolyn Cuff of Westminster College, James Hamblin of Shippensburg University, and John Prather of Ohio Eastern University. The afternoon session featured an interactive session on the mathematics of voting led by James Hamblin.

Kim Roth, Juniata College,
Section NExT Program
Co-Coordinator

The spring Section NExT meeting is held before the Section Meeting in April. This year Jenny Quinn from University of Washington will give a talk entitled "Exposition is the way (to write for the MAA)." If you are interested in attending a future meeting or you have a new colleague to whom you would like emails about future meetings sent, contact Kim Roth (roth@juniata.edu) or Erin Bancroft (eebancroft@gcc.edu).

Highlights of the 2016 Spring Section Meeting

The Spring 2016 Section Meeting took place at Gannon University on April 1-2. Thank you and congratulations to the local organizer, Geoffrey Dietz, as well as the faculty and staff of Gannon University for hosting this successful and well planned event.

In addition to 32 student talks and 24 faculty talks, representing 19 colleges and universities in our section, there were three invited talks. Scott Chapman of Sam Houston State University presented "Pi Through the Eyes of the *American Mathematical Monthly*," in which he described the role of one of the most widely read journals in mathematics for general audience papers from his perspective as Editor of the Monthly for the last five years. Gary Gordon and Liz McMahon of Lafayette College gave a joint talk "The Joy of SET," detailing the combinatorics, probability, linear algebra, and geometry that can be found in the popular card game SET. Finally, Suzanne Dorée of Augsburg College explored the factorial representations of numbers in her talk "Writing Numbers as the Sum of Factorials."

Congratulations to John Thompson of the University of Pittsburgh at Johnston, winner of the 2016 Allegheny Mountain Section Service Award.

Upcoming Section Meetings

- 2017: Duquesne University, Pittsburgh, PA, April 7-8

- 2018: Penn State Behrend, Erie, PA, April 6-7

Call For Nominations

2017 Allegheny Mountain Section Teaching Award

The criterion for the Annual Allegheny Mountain Section 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 4, 2017 to:

Shelly Bouchat
rbouchat@iup.edu
Indiana University of Pennsylvania
Mathematics Department
Stright Hall, Room 233
Indiana, PA 15705

2017 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 4, 2017 to:

John Thompson
jwt01@pitt.edu
University of Pittsburgh
at Johnstown
Department of Mathematics
Krebs Hall, Room 230B
Johnstown, PA 15904
(814) 269-2043

2017 Allegheny Mountain Section Mentor Award

Since the year 2000 the Allegheny Mountain Section of the MAA has awarded the Distinguished Faculty Mentor of Undergraduate Mathematics Students Award. We are soliciting nominations for this award from now through March 4, 2017. 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 to:

Catherine Stenson
stenson@juniata.edu
Juniata College
Department of Mathematics
1700 Moore Street
Huntingdon PA 16652
(814) 641-3736