



Ohio Focus

The MAA Ohio Section Newsletter

Volume 10

Spring 2018

Number 12

Miami University Invites All to Attend Annual Meeting April 6 - 7, 2018

The Ohio Section MAA Annual Meeting will be held on April 6th and 7th at Miami University in Oxford, Ohio. Except for the Friday night banquet, all events take place in Bachelor Hall. Registration, student team competition and committee meetings begin at noon on Friday, with the opening welcome at 1:30 p.m. **Elizabeth Mayfield** (Hood College) will speak on both days. **Olga Brezhneva** (Miami University) will also speak on Friday and **Arthur Benjamin** (Harvey Mudd College) will provide the after dinner talk. Outgoing President **Chris Swanson** (Ashland University) will comment on closing doors to conclude the meeting. Participants are encouraged to submit talks for the contributed paper sessions on both Friday and Saturday. Undergraduate and graduate students in mathematics, mathematics education, or related fields are encouraged to attend.



Bachelor Hall houses the Math and English Departments, the Speech and Hearing Clinic and the Chair of Communications and Theatre. The perspective shown comes from the building's position at the end of Spring Street.

Advanced Planning Needed for Parking and Lodging

All Miami University parking requires purchase and display of a parking permit, and it would be of benefit to MAA attendees if they purchased the permits ahead of time. The weekend of the MAA conference has many other events on campus as well. Passes can be pre-purchased (with a printable parking permit) at this site: <http://www.miamioh.edu/parking/permits/index.html>. The rate is \$3 per day and visiting two days requires two permits. People who wish to park on campus are strongly encouraged to get a parking pass to be safe.

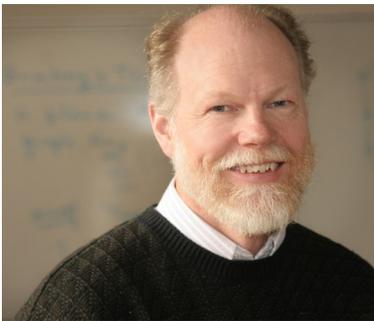
Additionally, all hotels in Oxford are sold out. The hotels listed on page 12 are about a 30 - 45 minute drive. It is better to book early rather than hope to find something last minute.

Contents Directory

Section Representative	p. 2
President	p. 3
Student Activities	p. 4
Officer Candidates	pp. 5 - 6
Speakers Information	pp. 7 - 8
Registration	p. 9
Memorials	p. 10
Ohio NExT	p. 10
Schedule	p. 11
Travel Logistics	p. 12
Upcoming Events	p. 14

New Congress Takes Steps to Organize, Distinctions from Board of Governors Outlined

In early January, I attended the second meeting of the MAA Congress at the Joint Math Meetings in San Diego.



You may recall that the new Congress is meant to serve as a conduit for communication within the Association. Its principal responsibilities include: approving strategic goals and priorities; advising the Board of Directors on changes to the Association bylaws; electing at-large members of the Congress; and recommending to the Board programmatic and social policies for the Association. At its most recent meeting, the Congress elected Jennifer Quinn as the Officer-at-large of the Congress and Judith Covington as the Vice Chair of the Congress. The Officer-at-large also serves as a member of the Board of Directors. Congress also discussed a reframing of the “MAA Core Values.”

In his report to the MAA Congress, Michael Pearson described the restructuring of the production of MAA publications. In September, the MAA concluded an agreement with AMS to sell the MAA’s existing inventory and catalog of books, and entered into a 10-year license of the MAA Press trademark to develop new titles. MAA editorial boards will continue to review proposed titles and maintain control over what is published under the MAA Press imprint. MAA members will continue to enjoy discounts on MAA books and now will also get discounts on AMS titles.

According to Michael Pearson, this publication partnership along with the partnership agreement with Taylor and Francis to publish, market and distribute the MAA journals promises to improve the MAA’s financial outlook immediately, over the next decade, and beyond.

I recommend that you make it a habit to regularly explore the Programs portion of the MAA website (<https://www.maa.org/programs-and-communities>) to keep up with the ways the MAA contributes to the mathematics community. There you will find the just-released *Guide to Evidence-based Instructional Practices in Undergraduate Mathematics*. A complement to the CUPM, this *Instructional Practices Guide* is meant to “serve as a catalyst for community-wide transformation toward improved

learning experiences and equitable access to mathematics for all students.”

As you might expect, the MAA Congress is still getting on its feet organizationally and is still defining its role within the MAA.

One thing that I had expected at the MAA Congress meeting was a report on the financial status of the MAA, but none was given. The Board of Directors now holds fiduciary responsibility for the MAA and it decided that there would be no Treasurer’s report to the Congress. At the meeting in San Diego, Members of Congress asked the Board to routinely make a summary report of the financial status of the MAA at future meetings of the Congress. Congress believes that it cannot be a conduit for communication without the facts to pass along.

The Board of Governors met at each JMM and MathFest. It was announced at the MAA Congress meeting in San Diego that the Board of Directors has decided that the MAA will not provide financial support for Section Representatives and other Congress Members to attend the MAA Congress meeting at the 2019 JMM. The current plan outlined by the Board is that there will only be one “mandatory” meeting of the MAA Congress each year which will be held at MathFest and that the MAA will modestly increase travel support for members of Congress to attend that meeting. The timing and nature of the “voluntary” meetings of the MAA Congress held at Joint Math Meetings is still up in the air. The reason given for this change was that it will be a cost savings (of about \$40,000 per year) for the MAA. I hope that the MAA Congress finds a way to become a vital cog in the governance structure of the MAA and that this not the beginning of a slow slide to irrelevance.

It has been a pleasure to serve the Ohio Section, first as its last Governor and then as its first Representative to the MAA Congress. If you would like to get more involved with the MAA by serving on a national committee, please let me know and I will pass your name along to MAA.

Hope to see you at the Ohio Section Meeting in Miami!

*Bill Higgins, Wittenberg University
Ohio Section Representative to the MAA Congress*

Transitions (Not Involving Matrices)

The day that I am writing this message is my daughter's 16th birthday and she is looking forward to passing (hopefully) her driving and skills test in two days. As many of you probably know, in order to take the driving and skills test, she had to complete a driver education class and 50 hours of driving with a parent or guardian, which resulted in the two of us taking a number of road trips over Christmas break. (Two hours of driving to purchase "drinking chocolate" at Lilly Handmade Chocolates in Cleveland? Sure, why not!) This is just one of many transitions that most of us experience in our lifetimes. Similarly, as mathematicians, we have experienced a number of transitions in our careers. Sometimes there were obstacles that we had to overcome to make those transitions and often we had mentors along the way to help us overcome those obstacles. As I prepare to transition from being President of the Ohio Section of the MAA to being Past President at the end of the spring meeting, I have been thinking about these transitions, what help I had with the transitions, and what help we can provide our students and colleagues as they encounter similar transitions. There is only room in this column to provide a couple of examples, but I encourage you to think about the transitions you had in your own mathematical careers.

When I graduated from Massillon Perry High School, I had already developed a love of mathematics and decided I would become a high school math teacher, possibly because no one had informed me of other career options for people who are good in math. At Denison University, I distinctly remember sitting in Dr. Don Bonar's office during office hours, after grilling him on how to solve some of the high-numbered problems in Calculus III, when he asked me if I had ever considered going to graduate school in mathematics. I don't think that graduate school was on my radar before he asked me that question, and thus I always try to have a similar conversation with students who are excelling in my classes. Many students are not aware of the funding that is available to attend graduate school in mathematics and thus do not consider this option in fear that they will simply accrue more debt by going to graduate school. Some students also are unaware that they have the mathematical ability to be successful in graduate school and thus I do feel like we have an obligation to make them aware of this option.

Without a doubt, the biggest transition of my career was the one from being a graduate student at the University of Michigan to a first-year, tenure-track assistant professor at Ashland University. My transition was from teaching one Calculus class a semester to teaching 4 sections of 3



different courses in a semester, none of which I had taught before. While my colleagues at Ashland University provided great support for me in suggesting textbooks, sharing example syllabi and introducing me to others on campus, the MAA definitely helped me the most with this transition, by sponsoring programs such as Project NExT and the PREP workshops. I would not be nearly as effective of an instructor as I am today had it not been for these programs. As budgets tighten on college and university campuses making it more difficult for new faculty at some institutions to participate in these national programs, I am pleased that the Ohio Section offers Ohio NExT and the Fall Workshop sponsored by CONSACT so that new faculty members can receive guidance as they begin their transitions. Those of us who are more senior faculty members should encourage our new colleagues to participate in such programs and advocate on their behalf for our institutions to provide funding for their participation in the MAA at both the local and national level.

I stated in my Spring 2017 message that I would be sharing Math Fun Facts from Francis Su's website hosted by Harvey Mudd College in my last two messages. Currently, I am teaching a Mathematical Proof class for the first time that is partially the transition course to the junior/senior level mathematics courses, and thus fits nicely in the theme of this column. As I will be spending a few weeks on mathematical induction, I share one of my favorite fun facts to use after introducing students to mathematical induction:

(Continued on page 4)

Student Activities at the Spring Meeting

Leo Schneider

Student Mathematical Competition

Undergraduate students from institutions of the Ohio section are invited to participate in the eighth annual Leo Schneider Student Mathematics Competition.

This year's competition will take place on Friday from noon until 1:20. Rules and registration information, as well as copies of previous years' problems and their solutions, can be found on the Ohio Section Student Member website, <http://constum.ohiomaa.org/>. Cash prizes (\$150 for first place, \$120 for second, and \$90 for third) will be awarded on Saturday to the top three teams. We encourage student participation in the entire meeting, including student talks, the student pizza party, and the "awards ceremony" on Saturday. Any questions about the competition or other student activities can be addressed to Tom Wakefield at tpwakefield@ysu.edu.

Try your hand at this problem from the 2017 Leo Schneider Student Mathematics Competition.

Solutions are available at the CONSTUM website, <http://constum.ohiomaa.org/>.

Problem 5: Two points are chosen at random (with a uniform distribution) from the unit interval $[0, 1]$. What is the probability that the points will be within a distance of $1/8$ of each other?

Transitions

(Continued from page 3)

All Horses are the Same Color: *Proof.* We'll induct on the number of horses. *Base case:* 1 horse. Clearly with just 1 horse, all horses have the same color. Now, for the *inductive step:* we'll show that if it is true for any group of N horses, that all have the same color, then it is true for any group of $N+1$ horses. Well, given any set of $N+1$ horses, if you exclude the last horse, you get a set of N horses. By the inductive step these N horses all have the same color. But by excluding the first horse in the pack of $N+1$ horses, you can conclude that the last N horses also have the same color. Therefore all $N+1$ horses have the same color. QED.

(Su, Francis E., et al. "All Horses are the Same Color" *Math Fun Facts*. <<http://www.math.hmc.edu/funfacts>>.) I am not providing the "math behind the fact" this time, but allowing any reader who has not encountered this "proof" some time to think about what is wrong, noting

Talks by Students Requested

Undergraduates and graduate students are encouraged to submit abstracts for 15 minute talks at the Spring Meeting. Topics may be drawn from any area of mathematics or a related discipline. The presentation may be an expository talk, a recounting of a mathematical internship or a co-op experience, or the results of a research project. It is expected that each talk will be delivered by a single speaker. Each student speaker will receive a certificate acknowledging his/her contribution to the meeting.

Contributed talks by students, faculty, and others will be given on Friday afternoon and Saturday morning. Talks will be scheduled primarily according to topic and audience level. Student talks are an integral part of the meeting and should be an enjoyable and rewarding experience for all who participate.

See the Call for Contributed Papers on page 5 for submission information.

Student Pizza Party

A student pizza party will be held on Friday evening at 6:30. There is no charge but meeting registration is necessary. See the Section webpage at www.maa.org/Ohio for online registration. Sudoku games will be available during the pizza party for interested students.

that the answer can be found on the website.

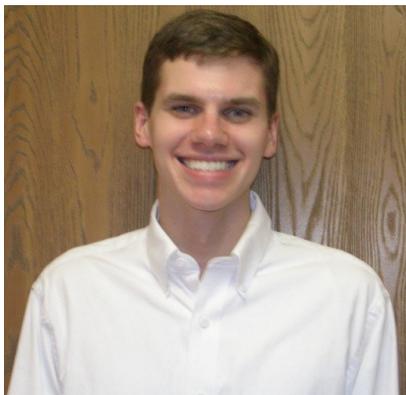
I wish to thank the Program Committee chaired by Barbara Margolius and the local arrangements coordinator John Prather for the wonderful Fall 2017 Meeting of the Ohio Section at Ohio University - Eastern. The Program Committee has planned another great meeting for us at Miami University this spring featuring invited speakers Elizabeth Mayfield of Hood College, Olga Brezhneva of Miami University, Arthur Benjamin of Harvey Mudd College and Christopher Swanson of Ashland University. I look forward to seeing you April 6-7 in Oxford. I have been informed that it is a very busy weekend at Miami University, so I would encourage you to reserve your hotel room ASAP.

Christopher Swanson, Ashland University
Ohio Section President

Nominating Committee Presents Candidates for Two Office Openings

The nominating committee has determined a slate of candidates for open offices in the upcoming year. **Tom Wakefield** (Youngstown State University) is running for treasurer-elect while **Matt Davis** (Muskingum University) is nominated for the Program Committee.

Matt Davis has been nominated to a three-year term on the Program Committee. Originally from Celina, Ohio, he completed his undergraduate degree in Math and Vocal Performance at Ball State University, and received his Ph.D. from the University of Wisconsin in 2010. After a 2-year postdoc at Harvey Mudd College, he returned to Ohio, joining the faculty of Muskingum University in 2012. Matt's professional interests include research in representation theory and combinatorics, especially as it can be applied to voting and elections, and exploring inquiry-based learning and other active learning techniques in the classroom. In his spare time, he enjoys making music, gaming, and going on adventures with his wife Kate.



Thomas P. Wakefield has agreed to take on the responsibilities for treasurer-elect. He received his Ph.D. in mathematics from Kent State University in 2008 and is now Professor and Acting Chair in the Department of Mathematics and Statistics at YSU. His relationship with the Ohio Section of the MAA began as an undergraduate at Youngstown State, when he attended and presented at four spring meetings. As a faculty member, he has served on CONSTUM since returning to the Ohio Section in 2009 and currently chairs the Committee. He regularly attends MathFest, the Joint Meetings, and actuarial meetings with students and serves as Councilor on the Executive Committee of Pi Mu Epsilon, the national mathematics honors society. Tom has supervised summer research experiences for students at YSU, organized lectures and talks for students, advised students who published their research results, and supervised dozens of undergraduate presentations and capstone research projects to broaden student awareness of and engagement in the larger mathematics community. He has several peer reviewed publications in algebra and actuarial science and has achieved "Fellowship" level status in the Society of Actuaries, the premier global actuarial accreditation professional society.

His relationship with the Ohio Section of the MAA began as an undergraduate at Youngstown State, when he attended and presented at four spring meetings. As a faculty member, he has served on CONSTUM since returning to the Ohio Section in 2009 and currently chairs the Committee. He regularly attends MathFest, the Joint Meetings, and actuarial meetings with students and serves as Councilor on the Executive Committee of Pi Mu Epsilon, the national mathematics honors society. Tom has supervised summer research experiences for students at YSU, organized lectures and talks for students, advised students who published their research results, and supervised dozens of undergraduate presentations and capstone research projects to broaden student awareness of and engagement in the larger mathematics community. He has several peer reviewed publications in algebra and actuarial science and has achieved "Fellowship" level status in the Society of Actuaries, the premier global actuarial accreditation professional society.

Call For Presenters For Two Contributed Paper Sessions

Fifteen-minute presentations on any topic of general interest in mathematics or related areas are encouraged for the Contributed Paper Sessions on Friday afternoon and Saturday. Reports on projects, research announcements, or anything that would be of interest are welcome. Contributors should send a title and brief abstract by Friday **March 23**, 2018.

Online submission with your meeting registration (at <http://sections.maa.org/ohio/>) is strongly preferred, but if necessary, you may submit your title and abstract to the chair of the Program Committee, Barbara Margolius, at b.margolius@csuohio.edu, or by U.S. mail at Cleveland State University, Department of Mathematics, 2121 Euclid Avenue, RT 1515, Cleveland, OH 44115-2214.

Abstracts should be 25 to 75 words in length and

employ proper English grammar and spelling. One speaker per session is greatly preferred, but two speakers in one session can be accommodated if necessary. Please use only plain text in your title and abstract.

Each presentation room will have a PC, a computer projector, and laptop connections. Presenters can either plug their laptops into the overhead projection system or plug a flash drive into the resident computer. If you wish to project from an Apple device, then you must bring your own adapter. Document cameras (Elmo's) are available if you indicate a need for one when you register. Internet access will be provided. Specific questions about technology availability should go to local arrangements director Doug Ward at wardde@miamioh.edu.

Electronic Voting for Section Representative is Currently Underway

As required by the bylaws, two names are being put forward for the role of Section Representative. They are **Daniel Otero** (Xavier University) and **John Prather** (Ohio University - Eastern Campus). Ohio Section MAA members are able to vote on these until March 13.

Daniel E. Otero is an Associate Professor at Xavier University in Cincinnati. He earned his Ph.D. at Penn State University in 1987, where he trained as a number theorist and algebraist, and has spent most of his career at Xavier, where he turned his scholarship towards the history of mathematics and its use in teaching undergraduates.

His most thrilling work at the moment is in an NSF-sponsored grant project nicknamed TRIUMPHS that is designing, creating, testing, evaluating, and disseminating dozens of classroom modules for instructors to use to teach standard topics in the college mathematics curriculum through readings from primary historical sources.

In addition to having served as President of the MAA Ohio Section and currently as its Archivist, he is Past Chair of the History of Mathematics SIGMAA. Having served on the editorial board of *Convergence* (2014-2017), he is now on the editorial board of MAA's *Spectrum* book series. He became an MAA member in his junior year in undergraduate school, enticed by reading engaging articles and working problems in the MAA's journals. Ever since, he has found the organization an invaluable professional support, one worthy of giving of his own time and talents. He would be honored to extend this service in the Ohio Section as its Representative at the national level.



John Prather received his Ph.D. from the University of Kentucky in Complex Analysis in 1997. He also holds a J.D. from Vanderbilt University (1991), but really didn't want to do that for the rest of his life. In his preferred career, he is in his 21st year at Ohio University's Eastern Campus, where he is an Associate Professor of Mathematics and the Faculty Chair of the

campus. In the Ohio Section of the MAA, John served as section President from 2014-15. Prior to that, he was Co-Coordinator of Ohio NExT from 2007-2013, and was a member and chair of the section's Committee on Teacher Education and Licensure for many years. He was a National Project NExT fellow in 1998-1999, and an Ohio NExT fellow from 1999-2001. Recently, he enjoyed serving as the local arrangements coordinator for the section's 2017 fall meeting.

OHIO FOCUS

The newsletter of the Ohio Section of the Mathematical Association of America, which first appeared in 1973, is published twice yearly in time to reach members before the fall and spring meetings. Newsletters are published online at www.maa.org/Ohio. Notification postcards are sent using labels provided by the MAA.

Editor: David Stuckey, 419-783-2464
dstuckey@defiance.edu
Science and Mathematics Division
Defiance College
Defiance, OH 43512

The deadline for the next newsletter is **August 13, 2018**. E-mail copy is preferred. Please send copy to the editor (see above), and also to the Section Webmaster, Darren Wick, for posting on the web (dwick@ashland.edu).

Elizabeth Mayfield, Hood College
Women And Mathematics
In the Time of Euler

This talk examines some female contemporaries of Euler, some famous, some not so famous. We will look at mathematics that was written both by and for women in the eighteenth century.



Gerbert d'Aurillac and the March of Spain:
A Guy in the Right Place at the Right Time

Gerbert was a tenth century scholar and churchman who eventually was named Pope Sylvester II. In the Year 1000, he probably knew more mathematics than anyone else in Europe. We'll explore how that came to be and we will look at some of his mathematical writing.

Elizabeth (Betty) Mayfield is Professor Emerita of Mathematics at Hood College in Frederick, Maryland. Her dissertation at the University of Rhode Island focused on partial differential equations, especially those describing the propagation of sound underwater. But soon after she began teaching, she discovered a love of the history of mathematics and has devoted herself to learning more about it for most of her career. As past Chair of the MAA's Committee on Sections, she describes herself as the world's greatest fan of MAA Sections, spreading the word about their energy, good work, and sense of community. She has also served as Chair of the Committee on Undergraduate Student Activities and Chapters and First Vice President of the MAA. She is attending our Section meeting as an MAA Section Visitor and is eager to participate in many of the meeting's activities and learn more about the Ohio Section and its members.

Olga Brezhneva, Miami University
The Power of the Karush-Kuhn-Tucker
Theorem and an Introduction to the
Optimization Theory

We begin the talk by introducing some optimization problems. Then we turn our attention to optimality conditions and the Karush-Kuhn-Tucker (KKT) Theorem, which is one of the powerful results in the theory of optimization. We will discuss some history of the KKT theorem and illustrate how only basic facts from linear algebra and the definition of differentiability can be used to prove the theorem. We will also talk about some current trends in the area of optimization and optimality conditions, specifically. This talk will be accessible to undergraduate students.



Olga Brezhneva is an Associate Professor of Mathematics and an Affiliate of the Department of Electrical and Computer Engineering at Miami University. She received her M.S. degree in Applied Mathematics from Moscow State University and her Ph.D. in Mathematics from the Russian Academy of Sciences. Prior to coming to Miami University in 2004, Olga completed postdoctoral work at the Institute for Mathematics and its Applications at the University of Minnesota. She received the E. Phillips Knox Distinguished Teaching Award at Miami University in 2007 and a Greater Cincinnati Consortium of Colleges and Universities Teaching Award in 2008. Her primary area of research is optimization and she is a co-author of 41 publications in the areas of optimization, differential equations, and numerical analysis.

Arthur Benjamin, Harvey Mudd College

Bingo Paradoxes

Imagine you are walking past a crowded Bingo parlor with hundreds of people playing. Suddenly you hear one person excitedly call out "Bingo!". Is it more likely that they have 5 in a row or 5 in a column (or are they the same)? Or is the most probable outcome diagonal? The answers will surprise you.

Born and raised near Cleveland (Mayfield Heights, Ohio) **Arthur Benjamin** earned his B.S. in Applied Mathematics from Carnegie Mellon University and his Ph.D. in Mathematical Sciences from Johns Hopkins University. Since 1989, he has taught at Harvey Mudd College, where he is the Smallwood Family Professor of Mathematics. He has served as co-Editor (with Jennifer Quinn) of Math Horizons for MAA and is a Fellow of the AMS. His numerous awards include the MAA Haimo Prize for distinguished teaching, the MAA Beckenbach Book prize for *Proofs That Really Count*, and the Communications Award from the Joint Policy Board for Mathematics. He has given 3 TED Talks, which have been viewed over 12 million times. His newest book, a New York Times Bestseller in Education, is called *The Magic of Math: Solving for X and Figuring out Why*. Aside from his research interests in combinatorics and game theory, he enjoys tournament backgammon, writing parodies, racing calculators, and performing magic.



Christopher Swanson, Ashland University

When One Door Opens, Another Closes

A form of entertainment that has greatly grown in popularity in the last few years is the escape room. In an escape room, participants typically pay \$20-\$30 each to be locked in a room for 45-60 minutes during which they try to find clues and solve puzzles to figure out how to escape before time expires. While I have not participated in an escape room (at least as of when this abstract was due), I have great interest in doing so and was curious if there was an app available that would simulate an escape room. In searching, I found the app "100 Doors Challenge" and discovered that mathematics was helpful in opening doors on some of the levels. I will present how to use mathematics to open the door on some levels of this app in order to move on to the next closed door.

Christopher N. Swanson is a native Ohioan (but don't call him a Buckeye) who is originally from the Massillon/Canton area and received his B.S. from Denison University in 1994. He received his Ph.D. from the University of Michigan (GO BLUE!) in 1999 under the direction of Thomas F. Storer and immediately joined the faculty at Ashland University where he has also been the Director of the university-wide Honors Program for the last 11 years. Chris's research interests are combinatorics and probability. Chris is a national Project NExT Fellow (Brown Dot) and is the faculty advisor for the AU Problem Solving Group. Chris has been active in the Ohio Section, having been an Ohio NExT Fellow, having served on CONCUR, CONSTUM and the Ohio NExT Organizing Committee, having chaired contributed paper sessions, and having given 20 presentations at Ohio Section meetings or Ohio NExT workshops. In 2006, Chris received the national Alder Award from the MAA in recognition for distinguished teaching by a beginning mathematics faculty member and he received the Ohio Section Distinguished Teaching Award in 2014. In his spare time, Chris enjoys watching movies, playing disc golf, cycling and participating in the applied probability seminar.

Details About Meeting Registration, Online and Otherwise

Online registration is preferred. Visit the Section web site at www.maa.org/Ohio on or after Tuesday, **February 20**, to have one-stop registration, a banquet reservation, and abstract submission. The deadline for meeting pre-registration and banquet reservations is **March 30**. Abstracts for contributed papers must be submitted by **March 23**.

On-site meeting registration is always available, but last minute banquet tickets cannot be guaranteed. Early registration helps those who are preparing the meeting arrangements and is always appreciated. Registration will begin at 12:00 pm on Friday in 115 Bachelor Hall and will continue Saturday morning at 8:00 am.

Meeting participants who are unable to register online at www.maa.org/Ohio may register by mail by sending the following information: name, affiliation, address, phone, e-mail address (if any), type of position, and banquet buffet reservation (London broil with mushroom demi-glace, chicken breast with citrus gastrique, and vegetable lasagna). Send with check, payable to Ohio Section MAA, for applicable fees [registration fee (\$30 ordinary registration, \$15 retired or part-time, no fee for students or first-time attendees), banquet buffet fee (\$33 per person)] to: Ohio Section MAA Spring Meeting, % Doug Ward, 123 Bachelor Hall, 301 S. Patterson Ave., Oxford, OH, 45056. Registration by mail will be pending receipt of registration fees.

Updates From Campuses Across the Section

Bluffton University announces the retirement of **Don Hooley** at the end of this academic year. Don taught mathematics and several times served as department chair at Bluffton since 1994, except for a sabbatical year in Honduras and a semester in India. Don's plans for retirement begin with two months volunteering in the mathematics program at the Woodstock School in India this fall.

At the end of this academic year, the Department of Mathematics and Computer Science at **John Carroll University** will say farewell to **Doug Norris** and **Marc Kirschenbaum**, both of whom are retiring, and to **Billie Marget**, who is moving to Augsburg University.

Pending funding, **Marshall University** will be hosting the 30th annual Cumberland Conference on Combinatorics, Graph Theory, and Computing on May 19-20,

2018. Details on the conference are found on the website: <http://www.marshall.edu/math/cumberland2018/>.

Information on registration and hotels will be posted there as soon as it is available. You can contact the organizers at cumberland2018@marshall.edu.

On April 20 and 21, 2018, **Marshall** will be hosting the (state-level) West Virginia Math Field Day. We expect 286 students and 600 to 800 people overall. Winners will proceed to the national level. The mathematics department is responsible for writing high-school-level questions.

Sinclair Community College announces that **Craig Birkemeier** received tenure and **Najat Baji** was promoted to Associate Professor in fall 2017. **Moez Ben-Azzouz** won the OATYC Teaching Excellence award for 2017 and was also recognized as an Outstanding Educator in the state for 2017 by Ohio Magazine.

Undergraduates Encouraged to Participate in History of Math Contest

The History of Mathematics Special Interest Group of the Mathematical Association of America is pleased to announce its fifteenth annual Student Paper Contest in the History of Mathematics. This contest is open to all undergraduate students. Papers will be judged by a panel of specialists for content, originality, and presentation.

Eligible papers include, but are not limited to, those finished in the spring 2017 but after the spring 2017 deadline, those finished in the fall 2017, and those papers that will be finished in the spring before the 2018 deadline. The submission deadline is Saturday, March 24, 2018. Results will be announced via email and on the HOM SIGMAA website in May. More details can be found at <http://sigmaa.maa.org/hom/> under the "Writing Prizes" menu. Submissions and questions can be directed to Dr. Dorothee Blum at Dorothee.Blum@millersville.edu.

In Memoriam: Ranko Bojanic and Neal Carothers

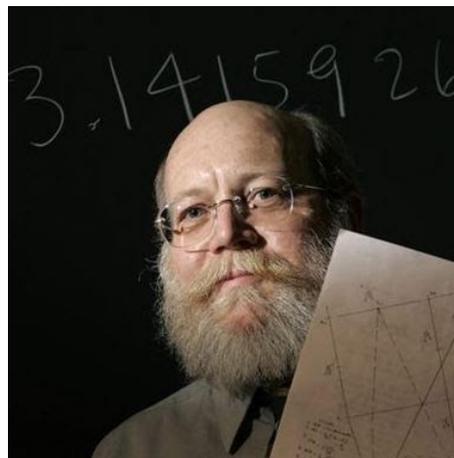
Bojanic Ranko Bojanic, age 92, of Columbus, passed away February 21, 2017. Born in Yugoslavia, Ranko was raised in Belgrade. He was Professor Emeritus at The Ohio State University, where he spent more than 50 years. He was world-renowned in the field of Approximation

Theory and an advisor of many Ph.D. students. Ranko came to OSU in 1963 following work at the University of Notre Dame, Stanford, the Tata Institute (India), the University of



Belgrade and the University of Skopje (Yugoslavia). His most fruitful work was conducted in Columbus with his lifelong friend and OSU colleague, the late Prof. Bogdan Baishanski. He is remembered for his immense intelligence, profound generosity and kindness, gentle humor and unshakeable loyalty, modesty, and a joy in caring for his beloved dogs.

Neal Carothers died suddenly January 29, 2018 in Bowling Green at age 65. He was born in Toledo, and received his doctorate in 1982 from The Ohio State University in Banach Spaces. Before coming to Bowling Green State University in 1987, he had taught at Wayne



State and Texas A&M. He served as Chair of the Department of Mathematics and Statistics from 1999 to 2007, and was an active member of the MAA Ohio Section. Those he worked with knew him as a

gifted mathematician, an exceptional educator and an expositor of the highest degree. His love and passion for mathematics was evident and infectious. His most cherished accomplishment was his reputed text "Real Analysis." More details are available at http://www.sent-trib.com/obituaries/dr-neal-carothers/article_e1b55aa0-0059-57da-ab12-762201ff3767.html.

Ohio Next Program Meeting on Friday and Saturday Around Annual Meeting

Ohio MAA Section NExT (New Experiences in Teaching) is a program for new faculty members. Its goal is to help newer faculty to network with colleagues, to share ideas and experiences that promote professional growth, and to encourage faculty to become involved in the Ohio MAA Section.

Please note that the Ohio NExT schedule has changed significantly. If you have attended previously, then you will want to pay particular attention to the new format. We hope that this schedule will fit better with attendees' travel plans.

Preceding the Ohio Section Spring Meeting on the morning of Friday, April 6th, members of Ohio NExT will gather for lunch at 11 a.m. in Bachelor Hall, Room 114 on the Miami University Campus. This is a great opportunity to meet old friends and make new ones. After the lunch, the NExTers will spend an hour or so discussing a topic related to the profession.

Then, on Saturday, April 7th, following the Ohio Section

Spring meeting, the Ohio NExT program will continue in Bachelor Hall, Room 114 on the campus of Miami University. The program will begin with lunch followed by a workshop from Betty Mayfield titled Another Kind of Undergraduate Research Experience: Investigations in the History of Mathematics and from Olga Brezhneva titled Active Learning Strategies for Undergraduate Mathematics Courses. Two contributed talks from Ohio NExTers will also be part of the program.

The Ohio NExT program is free to Ohio NExT fellows. Ohio NExT is open to anyone in the Ohio Section who is in his/her first five years of teaching in Ohio. If this applies to you, please consider joining us this spring or next fall. Contact Katie Cerrone (kc24@uakron.edu) for membership information and details.

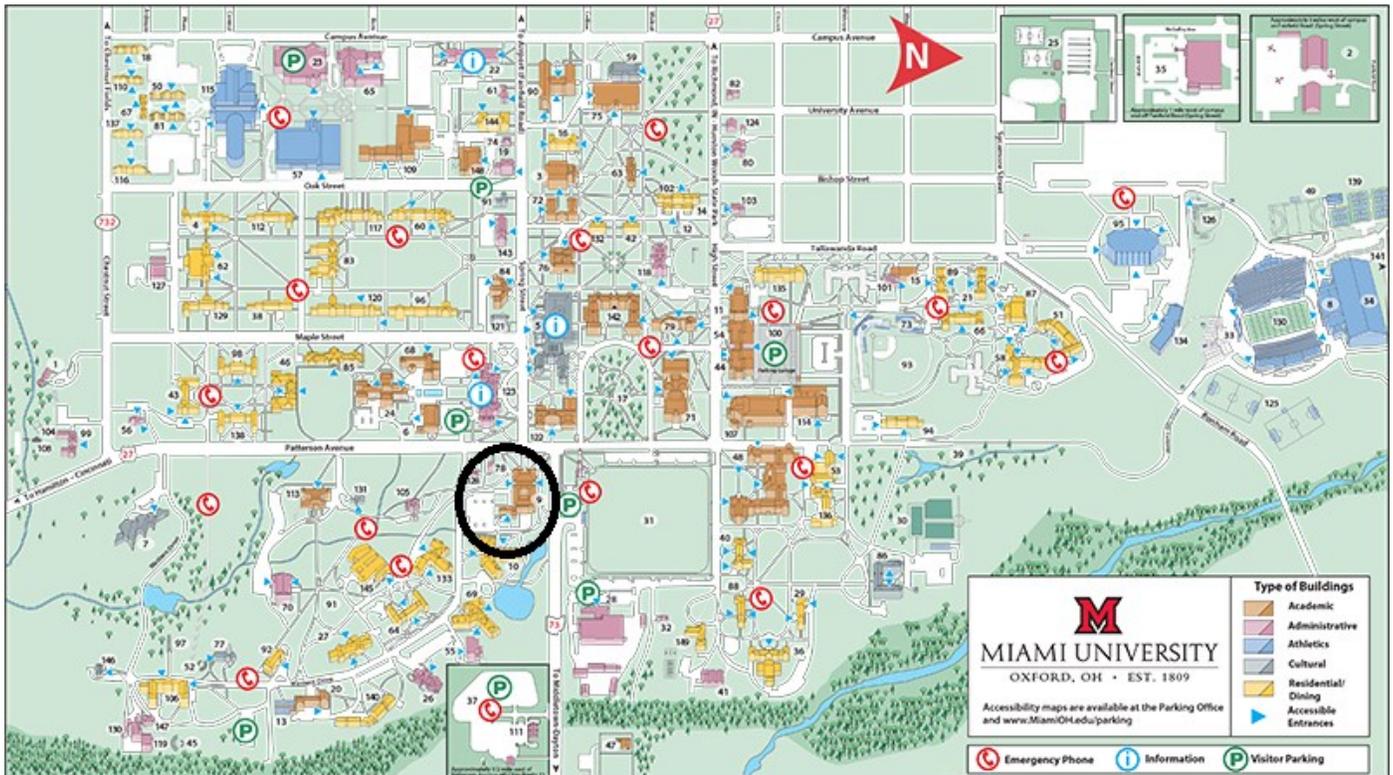
Ohio NExT is coordinated by chair Chandra Dinavahi of the University of Findlay (dinavahi@findlay.edu) and committee members Katie Cerrone, University of Akron (kc24@uakron.edu) and Michael Schroeder of Marshall University (schroederm@marshall.edu).

Spring Meeting Program

Friday, April 6, 2018

Saturday, April 7, 2018

12:00-4:00	Registration	115 Bachelor Hall	8:00-10:00	Registration	115 Bachelor Hall
12:00-1:20	Leo Schneider Student Team Competition	201, 219 Bachelor Hall	8:00-10:00	Book Vendors and Exhibits	120 Bachelor Hall
12:00-1:00	Committee Meetings:		8:00-8:50	Coffee and Pastries	115 Bachelor Hall
	CONCUR (Curriculum)	118 Bachelor Hall	8:15-8:50	Committee On Local Arrangements	112 Bachelor Hall
	CONSACT (Section Activities)	110 Bachelor Hall	8:15-8:50	Executive Committee Meeting (if needed)	114 Bachelor Hall
	CONTEAL (Teacher Education & Licensure)	112 Bachelor Hall	9:00-9:10	Welcome and Announcements; Student Competition Results	101 Bachelor Hall
1:00-4:00	Vendor & Book Exhibits	120 Bachelor Hall	9:10-10:10	Invited Address: "Gerbert d'Aurillac and the March of Spain: A Guy in the Right Place at the Right Time" Elizabeth Mayfield	101 Bachelor Hall
1:30-1:45	Welcome and Announcements	101 Bachelor Hall	10:10-10:30	Break	
1:45-2:45	Invited Address: "Women and Mathematics in the Time of Euler" Elizabeth Mayfield	101 Bachelor Hall	10:30-11:45	Contributed Paper Session	102, 110, 112, 114, 201 Bachelor Hall
2:45-3:00	Break		11:45-12:00	Break	
3:00-4:00	Invited Address: "The Power of the Karush-Kuhn-Tucker Theorem and an Introduction to the Optimization Theory" Olga Brezhneva	101 Bachelor Hall	12:00-1:00	Invited Address: "When One Door Opens, Another Closes" Chris Swanson	101 Bachelor Hall
4:10-5:50	Executive Committee Meeting	118 Bachelor Hall	1:00-1:10	Closing Remarks	101 Bachelor Hall
4:15-6:30	Contributed Paper Sessions	102, 110, 112, 114, 201 Bachelor Hall	<i>Event locations are subject to change. Check the official program you receive when you register for the meeting in Bachelor Hall. Also, check the Section web page, www.maa.org/Ohio, for program updates, online registration, and contributed paper submissions.</i>		
6:30-7:00	Social Time		The Ohio Mathematics Association of Two-Year Colleges spring conference is being held this year at Mohican State Park from noon on Friday, April 13 through noon on Saturday, April 14. A pre-conference workshop is also being planned for Friday morning which will focus on Quantitative Reasoning in Ohio's higher education institutions. Please visit www.ohiomatyc.org or contact Aaron Altose (Aaron.Altose@tri-c.edu) for more information.		
7:00-8:00	Student Pizza Party	Bachelor Hall Courtyard			
7:00-8:00	Banquet	Pavilion A Armstrong Center			
8:00-9:00	Invited Address: "Bingo Paradoxes" Arthur Benjamin	101 Bachelor Hall			
9:00	Business Meeting and Presentation of Teaching Award	101 Bachelor Hall			



Directions to Miami University

From the North or the East

Option 1) Take I-70 West to State Route 127
 Take 127 South to State Route 73
 Take 73 West into Oxford, Ohio

Option 2) Take I-75 South to State Route 73
 Take 73 West into Oxford, Ohio

Once you reach Oxford, Bachelor Hall is the last building before the stop at Patterson Avenue.
 Turn right into the Cook Field parking lot, across the street from Bachelor Hall. See page 1 for instructions on gaining a parking permit beforehand.

From the South

Take State Route 27 North into Oxford.
 Route 27 becomes Patterson Avenue.
 Turn right onto Western Drive.
 The Bachelor Hall parking lot is the first drive to the left.
 Additional parking is available in the lot across Route 73 from Bachelor Hall. See page 1 for instructions on gaining a parking permit beforehand.

A campus map is available online at <http://miamioh.edu/about-miami/visiting-miami/campus-maps/index.html>.

A map of on-campus parking lots is available at <http://miamioh.edu/files/documents/parking/2017-18-parking-map.pdf>

Lodging

Courtyard Marriott - [Hamilton, OH](http://Hamilton.OH)
[1 Riverfront Plaza](http://1.Riverfront.Plaza)
513-896-6200

1 King bed \$129
 Ask for: MAA Conference room block
 Cut off date: 4/16/2018

Hampton Inn & Suites - [Richmond, IN](http://Richmond,IN)
[455 Commerce Rd.](http://455.Commerce.Rd.)
765-966-5200

1 King bed or 2 Queen beds \$129
 Ask for: MAA Conference room block
 Cut off date: 3/7/2018

Holiday Inn Express - Fairfield (appx. 45 minutes away)
 Fairfield, OH
513-860-2900

1 King or 2 Queens \$139.99/night
 Booking code: MTH (call to use this code if possible)
 Cut off deadline: 3/16/18

AC Hotel by Marriott/
 AC Hotel Cincinnati at Liberty Center
 Liberty Township, OH 45069
513-644-2207

King with sofa or 2 Queen beds \$139 per night
 Name of event: Miami University
 Cut off date: 3/16/18

2017-2018 Ohio Section Officers and Committees

ELECTED OFFICERS

President

Chris Swanson, Ashland University (2018)
419-289-5264; cswanson@ashland.edu

President-Elect

Katie Cerrone-Arnold, University of Akron
330-927-8809; kc24@uakron.edu (2018)

Section Representative

William Higgins, Wittenberg University
937-327-7859; whiggins@wittenberg.edu
(2018)

Secretary

Pamela Warton, University of Findlay
419-434-4147; warton@findlay.edu (2018)

Secretary-Elect

Barbara D'Ambrosia, John Carroll Univ
216-397-4682; bdambrosia@jcu.edu (2018)

Treasurer

Brian Shelburne, Wittenberg University
937-327-7862; bshelburne@wittenberg.edu
(2019)

OTHER OFFICERS

Department Liaisons Coordinator

Chris O'Connor, Shawnee State U (2020)
740-351-3309; coconnor@shawnee.edu

Webmaster

Darren Wick, Ashland University
419-289-5795; dwick@ashland.edu (2020)

On-line Registration

G. Jay Kerns, Youngstown State University
330-941-3310; jkerns@ysu.edu (2019)

Newsletter Editor

David Stuckey, Defiance College (2018)
419-783-2464; dstuckey@defiance.edu

OhioMATYC Liaison

Jim Anderson, University of Toledo
419-530-7296; jim.anderson@utoledo.edu

OCTM Liaison

Aaron Blodgett, University of Findlay
419-434-6920; Blodgett@findlay.edu (2018)

Archivist

Daniel Otero, Xavier University
513-745-2012; otero@xavier.edu (2020)

COMMITTEES

* Denotes committee chair. Elected Officers and Committee Chairs are voting members of the Executive Committee. Terms expire at the end of the Spring meetings of the year listed. See the Bylaws.

Ohio NExT Organizing Committee

*Chandra Dinavahi, U. of Findlay (2018)
419-434-6598; dinavahi@findlay.edu
Michael Schroeder, Marshall U. (2019)
304-696-6643; schroederm@marshall.edu
Katie Cerrone Arnold, Univ of Akron (2020)
330-927-8809; kc24@uakron.edu

CONTEAL

*Aaron Blodgett, Univ of Findlay (2020)
Najat Baji, Sinclair Comm College (2017)
James Fitzsimmons, Wilmington Coll (2019)
Jenna Van Sickle, Cleveland State U (2019)
Laurie Dunlap, University of Akron (2020)

CONSTUM

*Tom Wakefield, Youngstown State U (2019)
David Gerberry, Xavier University (2018)
Matt Davis, Muskingum University (2019)
Melissa Dennison, Baldwin Wallace U (2019)
Alyssa Hoofnagle, Wittenberg Univ (2020)
Matthew McMullen, Otterbein Univ (2020)

CONSACT

*Paige Rinker, John Carroll University (2018)
M B Rao, University of Cincinnati (2019)
Aurel Stan, Ohio State University (2019)
Yong Wang, Ohio Northern University (2019)
Lokendra Paudel, University of Akron (2020)
Zhijun Yin, University of Akron (2020)

CONCUR

*Chandra Dinavahi, U of Findlay (2019)
William Fuller, Ohio Northern Univ (2017)
Mihai Caragiu, Ohio Northern Univ (2019)
Glen Lobo, Sinclair Comm College (2019)
Kelly Bubp, Ohio University (2020)

If you are interested in serving on one of the Ohio Section committees, please contact the Ohio Section President, Chris Swanson, or the President-Elect, Katie Cerrone-Arnold.

OTHER COMMITTEES

Program Committee

*Barbara Margolius, Cleveland State U (2018)
Michael Schroeder, Marshall Univ (2019)
Moez Ben-Azzouz, Sinclair Comm Coll (2020)

Nominating Committee

*Adam Parker, Wittenberg Univ (2018)
John Prather, Ohio Univ-Eastern (2019)
Chris Swanson, Ashland University (Pres)
Pam Warton, University of Findlay
(Secretary, nonvoting)
Barbara D'Ambrosia, John Carroll Univ
(Secretary-Elect, nonvoting)

Teaching Award Committee

*Katie Cerrone-Arnold, University of Akron
(President-Elect)
Bonita Lawrence, Marshall University (2018)
Carol Schumacher, Kenyon College (2019)
Pam Warton, University of Findlay
(Secretary, nonvoting)
Barbara D'Ambrosia, John Carroll Univ
(Secretary-Elect, nonvoting)

LOCAL ARRANGEMENTS FOR MEETINGS

Spring 2018: Miami University
Doug Ward, wardde@miamioh.edu

Fall 2018: Malone University
Kyle Calderhead, kcalderhead@malone.edu

Spring 2019: University of Akron
Malena Espanol, mespanol@uakron.edu

Thank You to the many people who contributed articles and information, pointed out items to be included, and provided proof-reading for this newsletter. It truly is a combined effort.

David Stuckey, Editor

Calendar

Ohio Section Meetings

Spring 2018 Annual Meeting, April 6 - 7
Miami University, Oxford, OH

Fall 2018 Section Meeting, October 26 - 27
Malone University, Canton, OH

Spring 2019 Annual Meeting, April 5 - 6
University of Akron, Akron, OH

National MAA-AMS

MathFest, August 1 - 4, 2018, Denver, CO

Annual Joint Meetings, January 16 - 19, 2019,
Baltimore, MD

MathFest, July 31 - August 3, 2019, **Cincinnati, OH**



Annual Joint Meetings, January 15 - 18, 2020,
Denver, CO

MathFest, July 29 - August 1, 2020, Philadelphia, PA

Annual Joint Meetings, January 6 - 9, 2021,
Washington, D.C.

Other Meetings: Ohio and Near States

AMS Spring Central Sectional Meeting,
March 17 - 18, 2018, **Ohio State Univ, Columbus, OH**
<http://www.ams.org/meetings/sectional/sectional.html>

Tri-Section MAA Meeting (Indiana, Michigan, and
Illinois), March 23 - 24, 2018, Valparaiso University,
Valparaiso, IN
<http://sections.maa.org/indiana/meetings/Spring18/announcement.html>

Allegheny Mountain Section MAA Meeting, April 6 - 7,
2018, Penn State Behrend, Erie, PA
<http://sections.maa.org/allegheny/>

Kentucky Section MAA Section Meeting, April 6 - 7,
2018, Western Kentucky University, Bowling Green, KY
<http://sections.maa.org/kentucky/meetings/indexMeetings.shtml>

OhioMATYC Spring Meeting, April 13 - 14, 2018
Mohican Lodge & Conference Center, Loudonville, OH
<http://www.ohiomatyc.org/index.php/meetings-menu/link/meeting-information-menu/link>

Cumberland Conference on Combinatorics, Graph
Theory, and Computing, May 19 - 20, 2018
Marshall University, Huntington, WV
<http://www.marshall.edu/math/cumberland2018/>

OCTM Annual Conference, October 11 - 12, 2018
Akron, OH
<http://www.ohioctm.org/conferences/68th-annual-conference-akron-2018>

Other Meetings Across America

T³ International Conference, March 2 - 4, 2018
San Antonio, TX <https://education.ti.com/en/professional-development/t3-international-conferences>

International Conference on Technology in Collegiate
Mathematics (ICTCM), March 15 - 18, 2018, Washing-
ton, D.C. <https://www.pearson.com/us/about/news-events/events/2018/03/ictcm.html>

NCTM Annual Meeting, April 24 - 25, 2018
Washington, D.C.
<http://www.nctm.org/Conferences-and-Professional-Development/Annual-Meeting-and-Exposition/>

SIAM Annual Meeting, July 9 -13, 2018, Portland, OR
<http://www.siam.org/meetings/an18/>

Joint Statistical Meetings, July 28 - August 2, 2018, Van-
couver, British Columbia, Canada
<http://www.amstat.org/ASA/Meetings/Joint-Statistical-Meetings.aspx?hkey=bc3bc257-950f-44f8-aed6-b37736571bfc>

AMATYC Annual Conference, November 9 - 12, 2018
San Diego, CA
<https://amatyc.site-ym.com/?2017ConfHome>