

Fall 2016, Volume 19, Number 2

Upcoming Meeting

Hope to see you at University of Minnesota-Twin Cities!

University of Minnesota-Twin Cities will host the MAA-NCS Fall meeting, October 14-15, 2016. Our three plenary speakers for the fall meeting are Paul Zorn (St. Olaf College), Joe Gallian (University of Minnesota-Duluth), and Rob Thompson (Carleton College). Wally Sizer (MN State University Moorhead) will speak on Section History, and Deanna Haunsperger (Carleton College) will speak as the MAA President 2017-2018.

A program for the Fall 2016 can be found at <http://sections.maa.org/northcen/> once it is finalized.

Officers Reports

Governor's Report

Su Dorée, Augsburg College

An ad hoc Committee on Governance has been working for several years on rethinking the role of the Board of Governors (BoG). The plan is to replace the BoG with a Congress that will contribute to strategic planning for the MAA and facilitate communication between national and section organizations but would not carry fiduciary responsibility for the organization, nor vote on many issues. These changes are driven by the desire to better utilize the strength of the governors and to align with Illinois law since MAA is incorporated there. While there are some concerns about concentration of power under the proposed structure, there was widespread support for moving to a Congress and the BoG supported these changes at our August meeting. Please join us at the Business Meeting at JMM 2017 for the final vote by the membership. Look for more detail on the proposed changes in the Oct/Nov issue of the MAA FOCUS.

In other news -- A task force has been studying the MAA's presence and use of social media so look for changes over the next year. Increasing the enrollment of faculty and graduate students remains a high priority. Please encourage your colleagues to become members and renew your own membership. A very popular new option is departmental membership, which include one faculty membership and an incredible unlimited free membership for students (with electronic access to journals). The MAA is in the process of partnering with a commercial print-house for books, journals, and perhaps other publications. Editorial control and publication decisions would remain with the MAA.

Please make plans to join us in Atlanta Wed Jan 4-Sat Jan 7 for JMM 2017 and mark your calendars for MathFest 2017 in Chicago which runs the evening of Wed July 26 through the evening of Sat July 29. Note the earlier-than-usual dates for both meetings.

On a personal note, I am deeply honored to serve as Governor for MAA NCS but I must to step down at the end of this first year (in June). The reason is that I was asked to stand for election to chair the Council on Programs and Students and was elected which means I will continue on the BoG as a Council Chair. The MAA NCS will be electing a new governor this spring to serve the usual 3-year term.

President's Report

Co Livingston, Bemidji State University

Welcome back to an interesting year in the North Central Section of the MAA! Last spring Macalester College hosted an excellent meeting, honoring the retirement of former MAA President Dr. David Bressoud. This fall the Section will be celebrating its 100th year in existence. **We are having a Birthday!** The Fall meeting will be held at the University of Minnesota – Twin Cities, host of the first-ever North Central Section meeting. We are honored to have a collection of past and future MAA presidents in this section and three of them will be speaking during this meeting – Drs. Joe Gallian, Paul Zorn, and Deanna Haunsperger. In addition Dr. Wally Sizer will present the history of the North Central Section. Both the Section NExTers and students will have special sessions and others may attend contributed sessions. Those contributions come from you so check the website for information about submissions, registrations and signing up for the banquet on Friday evening, October 14.

Our April 21, 22 meeting will be at Anoka-Ramsey Community College. The best I can tell it has been roughly 30 years since we've met at a community college. It's about time!

The summer seminar is my favorite Section activity. This past summer, thanks to the hard work of Donna Flint and others, South Dakota State University hosted the summer seminar on the topic of "Big Data." We were fortunate to have Peter Bubenik of the University of Florida speak to us about topological data analysis. In addition, several speakers from SDSU discussed the work that they do using "big data." The 36 participants were challenged to do some coding in R during the seminar and we ate a lot of great food. Thanks Donna and SDSU!

Finally, please consider nominating someone for the Distinguished Teaching Award and the Meritorious Service Award and encourage your new faculty to become a Section NExT fellow.

Section NExT Report

Su Dorée, Augsburg College

Section NExT is thriving. At the Spring meeting at Macalester College, Jody Sorensen and Su Dorée at Augsburg College and Matt Richey at St. Olaf College led a workshop *Engaging Students on the First Day of Class* where participants worked through examples of two successful first-day activities and engaged in a lively discussion of strategies for starting the semester. Matthew Wright at St. Olaf College gave the Section NExT lecture.

Please join us at the Fall 2016 MAA-NCS Section meeting at the University of Minnesota-Twin Cities, where Section NexT will host a workshop the afternoon of Saturday October 15 -- *Activities for the Flipped Classroom*, led by Kristen Sellke of St. Mary's University of Minnesota and Lori Ziegelmeier of Macalester College. This, and all, Section NExT workshops are open to anyone interested in thinking about new ideas for the classroom. Robert Thompson at Carleton College will give the Section NExT lecture.

If you or any of your North Central Section colleagues are in the first four years of college teaching, please consider applying to Section NExT. National Project NExT fellows are automatically in Section NExT -- but please send information to make sure we don't miss anyone. To apply, email Jody Sorensen at sorensj1@augsborg.edu

Campus News

Augsburg College

We've had a busy year with several different projects in the works. We are proud to announce the addition of a minor in Statistics starting this Fall semester. Concurrent with that we've also changed the name of our department to the Department of Mathematics and Statistics. Yay! We're part of a newly funded NSF I-USE grant creating interdisciplinary connections for mathematics courses in the first two years. Also, we are excited that our STEM Programs Office received funding for a NSF DUE grant focused on preparing juniors and seniors for STEM careers. Finally, after a quarter century planning process, construction on the Hagfors Center for Science, Business, and Religion commenced May 2016. The new building will house Mathematics, other STEM disciplines, Business, and Religion, along with additional student study and classroom spaces. The current move-in date is January 2018. (Submitted by John Zobitz)

Bemidji State University

Our department has multiple staffing challenges this year. Randy Westhoff, who has been very active in the North Central Section, became the campus Interim Assistant Vice President of Academic Affairs last year. Glen Richgels is on sabbatical this fall and Heidi Hansen is on a full year sabbatical, spending the first couple months in Norway. Our remaining math education specialist, Todd Frauenholtz, is the PI on an NSF STEM grant for which he mentors 14 scholarship winners through their college experience. Our chair, Derek Webb has started us through our 5-year planning, as we need to make several decisions that all depend on having solutions to the other issues already in place. Derek has also implemented an online course for mathematics educators titled "Mathematics and Culture." Last year, Eric Lund graciously provided independent studies on topology and a second semester of modern algebra for students interested in attending graduate school. Eric also continues to guide our actuarial emphasis. Last year we were joined by recent NDSU PhD graduate Tom Dunn who is in a fixed-term position. Tom is an algebraist and it is apparently never too cold for him. We are also blessed with several outstanding adjunct and fixed-term faculty who work primarily with our remedial or liberal education courses. Overall we are negotiating the role of distance education in our program, working on retention of under-prepared students, making hiring decisions, continually considering how to best progress our majors through their schooling into careers or graduate school and coping with societal pressures bearing down on higher education. (Submitted by Co Livingston)

College of St. Benedict/St. John's University

Four SJU students gave talks at Mathfest based on their summer research; one of the four is a high school student taking college courses. Kris Nairn is on her sabbatical at the Fields Institute in Toronto in a programme on Computational Algebraic Geometry.

Pi Mu Epsilon will be April 7-8, 2017 with invited speaker Francis Su from Harvey Mudd College. (Submitted by Tom Sibley)

Concordia College-Moorhead

We are pleased to welcome Dr. Julia Walk to the mathematics department on a tenure-track appointment. Julia is a 2011 graduate of Luther College with majors in mathematics and English, and a 2016 doctoral graduate of the University of Iowa in mathematical biology. We also bid a fond farewell

to Dr. James Forde, who began at Concordia in 1970 and finished his last mathematics course for us this past spring of 2016; we wish Jim well in his retirement. Building on the momentum of having the winning student team at the Midwest Undergraduate Data Analytics Competition (MUDAC), hosted by Winona State University, in 2014-2016, Concordia-Moorhead has added a new Computer Science major with concentrations in Data Analytics and Computing. (Submitted by Doug Anderson)

Gustavus College

Mike Hvidsten is teaching in Malaysia for the school year. He is also preparing a second edition of his geometry textbook and updating his geometry software.

We welcome two new faculty in the department this year: they are Jeff Ford, a 2002 Gustavus graduate with a Geology major, who was on the faculty of MSU-Mankato last year, and is finishing up his PhD (in topology) from Auburn. Emily Gunawan, from U. of Minnesota-Minneapolis, doing doctoral work at Minnesota. (Submitted by Ron Rietz)

Minnesota State University, Mankato

The department of Mathematics and Statistics welcomes two new faculty members, Dr. Ke Zhu (Symplectic Geometry & Topology) and Dr. Wook Kim (Number Theory). This academic year both Dr. Chia Chi Tung and Dr. Han Wu are on sabbatical leave. Dr. Ruijun Zhao awarded tenure, Dr. Dan Singer was promoted to full professor, and Dr. Hyekyung Min was promoted to Associate Professor. The department starts a new Actuary Club lead by Dr. Hyekyung Min. The department's Graduate Teaching Assistantship has been increased to 32 positions. (Submitted by Namyong Lee)

St. Cloud State University

Our department went through a self-study last fall semester and had a site visit by external reviewers last spring. In addition to our normal responsibilities of teaching and advising this fall, we are preparing a HLC visit this November. Our forty-third Annual Scholarship Banquet will be held in October for the first time. The SCSU Math Contest will be in its 50th year the coming April.

Professor Shiju Zhang returned from a year of sabbatical. Professor Jeff Chen will spend the spring semester conducting research in the history of mathematics. A visiting scholar from the Federal University of Oye-Ekiti in Nigeria will arrive on campus soon to learn about statistics curriculum at SCSU and the use of software in teaching and research projects. (Submitted by Peiyi Zhao)

University of Minnesota-Duluth

Our department lost to retirement the services of three long-time faculty members, Professors Barry James, Kang James, and Harlan Stech. The good news is that they have been replaced with three promising, energetic Assistant Professors: Richard Buckalew from Ohio University and the Mathematical Biosciences Institute, Thierry Chekouo from Cameroon, the University of Montreal, and the M D Anderson Cancer Center in Houston, and Juming Pan, from China and Bowling Green State University. Richard works in mathematical biology, Thierry in biostatistics, and Juming in statistics. (Submitted by Bruce Peckham)

University of Sioux Falls

Dr. Joy Lind will be on sabbatical at the University of Auckland (NZ) during the Spring 2017 semester. While there, she plans to work on current applications of mathematics in the area of operations research, including projects in routing/network design and rostering. In addition, she expects to develop and disseminate a library of modules for classroom use, based on the applications cultivated during her time in New Zealand. (Submitted by Jason Douma)

Winona State University

The department welcomes new faculty Nicholas Gilbertson as an assistant professor of Mathematics Education and Todd Iverson as an assistant professor specializing in statistics and data science.

Winona State University was one of three universities awarded an REU through the American Statistical Association using NSF support. In summer 2017, students at the 10-week REU will receive specialized training from Silas Bergen, Brant Deppa, and Chris Malone and will collaborate with colleagues at the Integrated Public Microdata Series International on projects involving international census microdata.

Aaron Wangberg will hold a 3-day *Raising Calculus to the Surface* workshop from June 18th- 20th in 2017 at WSU. The project lets students discover multivariable calculus concepts using physical dry-erasable *surfaces*. Information is available at <https://raisingcalculus.winona.edu> (submitted by Aaron Wangberg)