



Mathematical Matters

The Newsletter of the Pacific Northwest Section of the MAA

Fall 2019

2020 PNW Sectional MAA Meeting University of Alaska Anchorage June 25 - 27, 2020

Join us June 25th-27th in Anchorage, Alaska for the 2020 Section meeting.

Speakers include Michael Dorff, Matthew Richey, and Christopher Wrather.

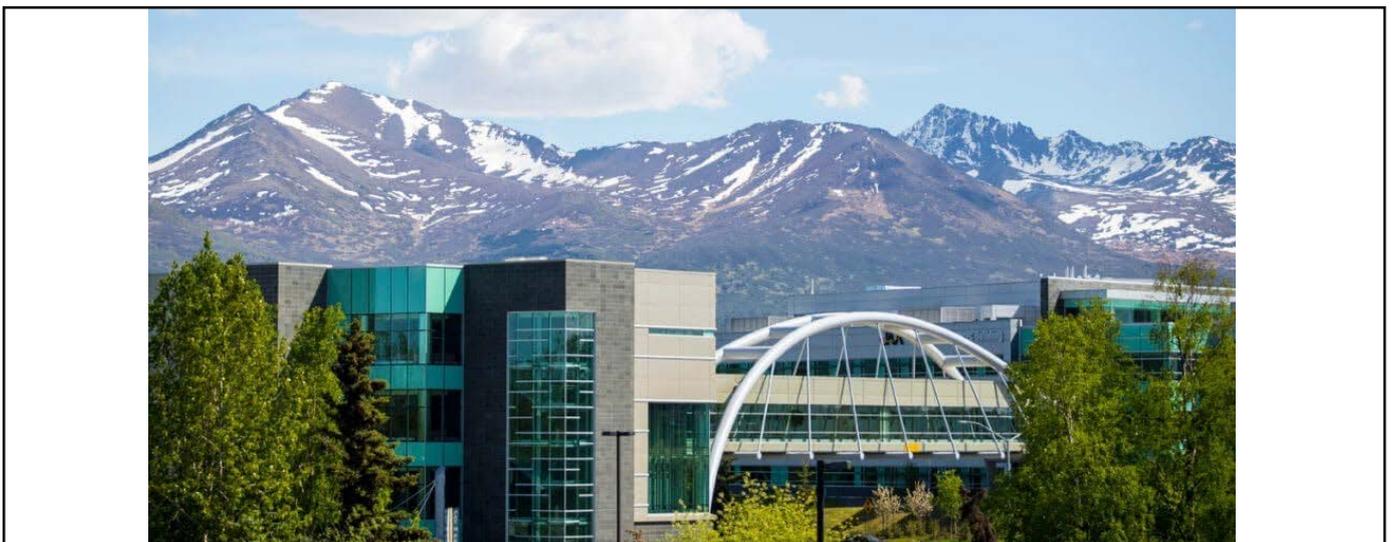
In addition to serving as MAA president Michael Dorff is a founder of PIC Math (Preparation for Industrial Careers in Mathematics).

Matthew Richey is the Mildred and Paul Hardy

Distinguished Professor of Science at St. Olaf College.

Christopher Wrather is co-founder of SavvyAviation--a company that uses crowd sourced data to predict maintenance needs.

Section NExT activities, mini-courses, and contributed paper sessions are being planned. Expect the meeting website with additional details in January.



University of Alaska Anchorage

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PNW MAA Section Officers

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Newsletter Editor - Kelly McKinnie

Web Manager - Aaron Montgomery

Section NExT director - Megan Buzby

Section NExT assoc. director - Hans Nordstrom

Student Program Coordinator - David Hartenstine

Future Section Meetings

2020 University of Alaska Anchorage

2021 Western Washington University

(tentative)

PNW MAA Publications

Check out the Monthly Article by PNW's own Allison Henrich (Seattle U.), Kate Kearney (Gonzaga) along with Colin Adams (Williams College) and Nicholas Scoville (Ursinus College).

[Knots Related by Knotoids, The American Mathematical Monthly, 126:6, 483-490.](#)

PNW MAA Section NExT Director

Welcome to our new PNW Section NExT Fellows! This past year we had quite a few faculty members apply to be PNW Section NExT Fellows, including several Project NExT National Fellows that wanted to be more active in our section. Thank you all for your enthusiasm and contributions to our April meeting at the University of Portland. The 2020 meeting will be held on June 25, the first day of the PNW Section meeting at the University of Alaska Anchorage. Ideas for sessions are welcome at any time!

New PNWMAA NExT Fellows:

Brent Hancock at Central Washington University

Angela Siple at Seattle University

Joseph Stover at Gonzaga University

New Section Fellows from Project NExT:

Ben Cote at Western Oregon University

Emilie Hancock at Central Washington University

Eric Hogle at Gonzaga University

Leanne Merrill at Western Oregon University

If you or any of your colleagues are interested in becoming a part of Section NExT (New Experiences in Teaching), please don't hesitate to contact me (Megan Buzby) at mbuzby1@alaska.edu. You can also find an application on the NExT tab of the PNW MAA homepage.

Upcoming Events and Conference in the PNW MAA section

A list of upcoming events in the PNW section of the MAA is available at the PNW section MAA website:

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

Check out the link for the latest information about the annual section meeting, NUMS, Kryptos, Pi-muc, the Great Puzzle Hunt, Data Science Conference and the Distinguished Teaching Award.

PNW Section NExT

By Brent Hancock
Department of Mathematics
Central Washington University

The April 2019 Section NExT meeting at the University of Portland was a wonderful opportunity to interface with folks whom I have seen at various conferences previously, but had not yet gotten a chance to talk with at length. In this more intimate setting, there were also numerous sessions related to teaching and teaching resources. A particularly helpful session for me was Tien Chih's talk about Open Educational Resources (OERs) in which he showcased numerous examples of inexpensive or free textbooks and online homework systems. I have been thinking a lot lately about our population of students at CWU and how most students here need to work full time jobs in addition to taking a full load of coursework. This puts an immense amount of financial strain on these students, and we as faculty should be continually looking for new ways to support students' equitable access to quality learning resources.

I also really enjoyed the panel discussion on Cycles of Reflective Practice in the College Mathematics Classroom. Something that really stood out to me in that discussion was that Tevian Dray argued how we as educators should seek out coherence with respect to our mathematical curriculum. Specifically, he mentioned how he grew as a professor by being able to view the mathematical content in his courses as different manifestations of a core group of ideas as opposed to a long list of seemingly disparate tools in a toolbox. Other sessions offered timely advice about how to maintain a scholarly program amidst the responsibilities of teaching, service, and other commitments; as well as strategies for (re)creating good rapport in the classroom, which we all agreed can be very difficult once momentum has built in a negative direction. In reflecting on the aforementioned sessions, I greatly look forward to applying these ideas to my own teaching and career at large.

Dolciani Mathematics Enrichment Grant Proposals

Dolciani Mathematics Enrichment Grants provide funding for projects designed to develop mathematical enrichment programs for talented students in middle school or high school. The goal of the program is to interest students who are ready for more challenge in the study of mathematics and encourage them to further their mathematical studies.

Projects should provide enrichment and extension activities for students which lead to heightened interest in and appreciation of mathematics. The projects should encourage students to continue studies of mathematics in high school and college and should better prepare them for those studies. Projects are designed to provide active enrichment

activities, beyond classroom coursework, for students who show promise or interest in mathematics and are not intended for remedial help for students who need assistance in order to succeed in their coursework in mathematics. Projects must be open to all talented students in the applicant pool. Undergraduate and graduate students may provide role models and work directly with students under the tutelage of faculty from both the college or university and middle or high school.

Applications Close February 12, 2020.

The full announcement can be found at this [MAA link](#).

News from the MAA Section Rep

By Christopher Hallstrom

Greetings from your friendly neighborhood MAA Section Representative! This past August, I had the pleasure of seeing many of you at MathFest. One of my duties at MathFest is to represent our section at the MAA Congress. Here are some the highlights.

We were very excited to hear about MAA plans to introduce two new visiting lecture series to bring speakers from the Association for Women in Mathematics (AWM) and the National Association of Mathematicians (NAM) to sections. Each section will be eligible for each of these once every three years. The MAA also plans on making the Polya lecturers available once every three years rather than the current five years. The details are still being worked out, but look for announcement about these new lecturers soon. These additions to the pool of speakers will really help as we begin planning for future section meeting and is a great example, I think, of how MAA is looking to better support the sections.

Another highlight was news of expanding support for BIG career activities within the

sections through grants of up to \$2000. Suggestions for supported activities include inviting BIG speakers to section meetings, organizing a PIC math panel/session, or hosting career panels. Click on [this MAA webpage](#) for more information. The next deadline for proposals is March 1.

In their efforts to make the MAA more accessible to a broader range of members, we heard about some new membership categories that are now available or are coming soon:

- transitional student (2 years post graduation) for \$59
- Ancillary instructors (adjunct and other part time) for \$79.
- 2 yr college departmental (\$375)
- lifetime (\$2500)

Hopefully these new options will help increase the types of members represented in our section.

Finally, acknowledging that it can be challenging keeping track of all the different MAA programs, the handy dandy chart on the next page was shared with us. I found it useful and perhaps you will too!

MEET THE MAA PROGRAMS!



If you want to...

Join a professional network with resources to help you train your graduate teaching assistants



Develop a math enrichment program for middle or high school students



Use a toolkit to share information with students (and reveal common myths) about high school teaching as a profession



Use and share the evidence about active, student-centered teaching



Introduce applications attending to knowledge for secondary-level teaching within traditional mathematics major courses



Broaden representation in summer research experiences for undergraduates



Connect your undergraduate students with real problems from local industry



Connect your calculus teaching and learning practices with evidence from a nationwide study



Support early career mathematicians to develop their teaching and leadership



Bring data science ideas into your introductory statistics course



Develop a program to strengthen underrepresented minority mathematics achievement



Develop a program to encourage college and university women and pre-college girls to study and persist in mathematics



Build Business, Industry and Government (BIG) career activities in your department or section



Then check out...

College Mathematics Instructor Development Source (CoMinDS) NSF DUE-1432381

Dolciani Mathematics Enrichment Grants

Get the Facts Out: Changing the Conversation around Teacher Recruitment NSF DUE-1821710

Instructional Practices Guide (IP Guide) NSF DUE-1544324

The Mathematical Education of Teachers as an Application of Undergraduate Math (META Math) NSF DUE-1726624

National REU Program (NREUP) NSF DMS-1652506

Preparation for Industrial Careers in Mathematics (PIC Math) NSF DMS-1722275

Progress through Calculus NSF DUE-1430540

Project NExT, Early Career Mathematician Network, Section NExT, VITAL Faculty Development NSF EHR-1903992

Stat PREP NSF DUE-1626337

Tensor - SUMMA Grants

Tensor - Women Grants

Tondeur BIG Career Initiatives

Data Science and Image Analysis Conference of the PNW



February 29–March 1 2020: Washington State University, Pullman, WA
[Website](#)

The Department of Mathematics and Statistics at Washington State University, in cooperation with the Association for Women in Mathematics (AWM), will host the Data Science and Image Analysis Conference of the Pacific Northwest in Pullman, Washington, February 29th and March 1st, 2020. Please visit the Student Proposals page of the website below for information on applying for a travel award for students, postdocs, and early career researchers, as provided for by a National Science Foundation (NSF) conference grant.

The conference will promote close collaborations on current and ongoing areas of research through a highly interactive and open format. The first day will have professionals from industry, government, and academia in the fields of data science and image analysis come together, along with students and post-doctoral researchers, to collaborate on open

problems through short talks and in-depth group discussions. The second day will consist of professional development activities for students and junior researchers, such as data science workshops and career panels, and will feature presentations from members of this group, with direct feedback provided from professionals. The conference will provide a unique opportunity for students and junior researchers to participate and will encourage future collaborations among all levels of researchers. Possible topics include topological data analysis, bioinformatics, learning from remote sensing data, financial & economic prediction, image segmentation and filtering in biomedical imaging, hyperspectral imaging, pattern recognition, shape analysis, image reconstruction, and more. For more info, please visit www.datascienceandimageanalysis.com.

Contact Laramie Paxton at datascienceconference@gmail.com for more information.

News and Notes from the PNW MAA section

Montana

The University of Montana

The University of Montana is pleased to announce that Javier Perez-Alvaro has joined our department as an assistant professor of mathematics. Javier received his doctorate in Mathematical Engineering in June 2015 at Universidad Carlos III of Madrid, where he solved certain structured matrix perturbation problems related with the polynomial root-finding problem. Prior to the appointment at

the University of Montana, Dr. Pérez held post-doctoral positions at the University of Manchester (UK) and the University of Leuven (Belgium), where he devised and analyzed numerical algorithms for solving Nonlinear Eigenvalue Problems and as a visiting professor at UM. His research interests are in matrix theory and numerical linear algebra, fundamental parts of the field of numerical analysis.



Dr. Perez-Alvaro

Oregon

Western Oregon University

In February the department hosted our 15th annual Sonia Kovalevsky day, with around 75 participants. Additionally, our Math Club has hosted some new activities this year, including a very successful Estimathon.

Washington

Seattle University

Retired Seattle University Mathematics Professor André Yandl passed away Feb. 15, 2019. He was a native of Algeria and began his teaching career at SU in 1956. He served on the faculty for nearly 55 years. Dr. Yandl received the first Associated Students of Seattle University Outstanding Teacher Award in 1981 as well as the first award by the Pacific Northwest section of the Mathematical Association of America for Distinguished College and University Teaching of Mathematics in 1992. He authored six textbooks and coauthored two additional books and other publications. He served as Chair of the Mathematics Department from 1966 to 1979. Dr. Yandl was named professor emeritus in 2001 and taught for another decade before finally retiring in 2011.



André Yandl was a skilled table tennis player and coach. He won the Algerian national championship in 1949 and the Washington state championship in 1956. André coached

the Saudi Arabian table tennis team during the 1976 Olympics in Montreal.

A memorial service and celebration of his life was held on Saturday, March 2, in the Chapel of St. Ignatius, on SU's campus. Memorial gifts may be made in Andre's name to support students in the Mathematics Department at Seattle University through this link:

<https://connect.seattleu.edu/giving/math>

Washington State University

On September 30, Dr. Carlos Castillo-Chavez delivered the 2019 Calvin and Jean Long Distinguished Lecture in Mathematics. Dr. Castillo-Chavez is a Regents' Professor, a Joaquin Bustoz Jr. Professor of Mathematical Biology, and a Distinguished Sustainability Scientist at Arizona State University. He spoke on "Emergent and Re-Emergent Diseases in the Times of Ebola." He is renowned for his work in mathematical epidemiology. Professor Castillo-Chavez has had 49 Ph.D. students and is widely respected and honored for his mentorship of hundreds of students and his efforts to provide opportunities for underrepresented groups in mathematics.

On February 29 and March 1 of 2020, the Data Science and Image Analysis Conference of the Pacific Northwest will be held on the WSU Pullman campus and will feature researchers from industry, government, and academia. There will be presentations and discussion on current research and open problems, as well as professional development activities. The conference is structured to be interactive and collaborative. Please see datascienceandimageanalysis.com for information or registration. Students and those early in their careers are strongly encouraged to participate. Travel funding from the National Science Foundation is available.