Upcoming Events

Thoughts from the Executive Director...

David Goldberg
Executive Director of the Math Alliance

I know that I open this column almost every month by remarking how busy we've been at the Alliance that month, but April has been really, really busy! At the beginning of the month the Gateway Regional Alliance held their first conference!! They are now our fourth region which features a conference for students (along with the Pacific Regional Alliance, the Gulf States Math Alliance, and the New York City Math Alliance). The Gateway Conference was held at Harris-Stowe State University and the atmosphere was really positive and energetic. All the talks were truly inspirational and I think the region is off to a great start!! A week later, we held our Alliance Executive Council meeting and our Partners Council meeting, at Purdue University. I really appreciate the ideas and contributions of our wonderful Council members (Donald Cole, Phil Kutzko, Leslie McClure, Helena Noronha, and Bill Vélez) our advisor, Rodrigo Bañuelos, and the continual support of our partner campuses (Purdue, U. Iowa, U. Minnesota, Washington U. in St. Louis, and our newest partner, Penn State U!!). We discussed a lot of topics, and I think it will make a real difference for our students in several ways, including what happens at the Field of Dreams, and how we run F-GAP. Speaking of F-GAP there are still some spots available for F-GAP students to attend the workshop, Career Paths in the Mathematical Sciences, at the Institute for Mathematics and its Applications (IMA) in Minneapolis, June 6-8. Mentors, you **must** nominate your students for F-GAP **soon** ASAP for them be considered for this workshop. We think this will be a great event, and we plan to follow up with a session at the Field of Dreams in November (**remember – Nov. 15-17, St. Louis, MO!!!).**

I want to thank all the faculty who have agreed to mentor F-GAP students. This year 200 faculty have signed up to be Faculty Facilitators!! This is a tremendous commitment by doctoral faculty to one fundamental principle of the Alliance – that every student with the talent and desire to succeed in a PhD program should have the best opportunity to pursue one. Thank you, thank you thank you to all our F-GAP Facilitators!! We have been hearing great things about our F-GAP students who applied to grad school for 2019, and we will be collecting the data soon (F-GAP students, **please** fill out the surveys when they come). One great story we heard is that Kean University's news service has a news release about four of our students' success in the application process!!! Now we're coming to the end of the month – working on putting together the Field of Dreams Conference, and the workshop at IMA, next year's F-GAP program, preliminary planning for the 2020 Field of Dreams, and lots of other projects on our plate this summer. You can rest assured the Alliance will continue to be busy next month too!

IMA- Alliance Summer Workshop

Alliance Workshop at Institute for Mathematics and its Applications (IMA):

The Alliance and IMA will be hosting a workshop on the campus of University of Minnesota, St. Paul, **June 6-8, 2019**. This workshop will bring in 60 F-GAP students and their mentors to learn about opportunities for math science majors in areas outside of pure mathematics.

Mentors, be sure to nominate your students for F-GAP in a timely way so that we can bring them and you to this workshop!

Here is the link for more information: https://www.ima.umn.edu/2018-2019/SW6.5-8.19

The 2019-2020 F-GAP
Nomination Process has Begun!

The Facilitated Graduate Applications Process (F-GAP) is an Alliance program that provides undergraduate juniors, seniors, and Master's students with the advice and assistance needed to begin the application process as they apply to graduate programs.

F-GAP will help students choose departments that are most appropriate to their goals and aspirations. The Alliance Community will work with the student as they prepare their applications to graduate programs and will assist in tracking the progress of their applications through the admissions process. The Alliance Community will assist in maximizing the chances that Alliance Scholars will be admitted, with support, to a department or program where they will thrive. We will pair each eligible student with one of our Doctoral Alliance Mentors who will work with the students local mentor to create a mentoring team that will aid in the application process.

If you know of an undergraduate or Master's student who will be graduating in the Spring of 2020 and will be applying to graduate programs for Fall 2020, **submit student nominations here**: https://mathalliance.org/2019-fgap-nomination-form/.

As part of this submission, you will be asked to check a box stating that you have read the document, "Selecting students for the F-GAP program: FAQs.")

Things to note in the AMS Notices

Below are some links to recent items which may be of interest to our Alliance Community in the Notices of the American Mathematical Society.

- Women and Mathematics Program wins the [2019 Mathematics Programs that Make a Difference Award](#).

- [WAM: Fostering Excellence in Mathematics Research for Twenty-Five Years](#)

- [Building the Alliance of Indigenous Math Circles](#)

- [Addressing Mathematical Inequity in Indigenous Education: Efforts by Mathematicians and Educators in Western Canada](#)

- [Report from the Committee on Education](#)

- [A Letter from the AMS Committee on Human Rights of Mathematicians](#)

- [Alliance Mentor Steven Miller reviews the book Maker of Patterns](#)

- [The Amazing Variety of Public Math](#)

- [Alliance Mentor, and AMS Associate Executive Director, Karen Saxe, gives a Washington Update](#)

- [Alliance Mentors Suzanne Weekes and Jennifer Switkes win MAA Awards](#)

Professor Donald Cole Retires from Ole Miss!

Professor Donald Cole, a long time Executive Councile Member of the Math Alliance; officially retired from the University of Mississippi this past December. Don has had a long and successful career at Ole Miss and we are happy to report that he has agreed to continue to lend his expertise to the Math Alliance as a member of the Executive Council.

The University of Mississippi News published a great article on Don's retirement; you can read the article here: https://news.olemiss.edu/don-cole-retires-storied-history-ole-miss/.

Congratulations Don!

Penn State becomes an Alliance Partner!!!

The Math Alliance, and the Center for the National Math Sciences Alliance, is pleased to announce that Pennsylvania State University is the latest university to become a Partner in the Center. The agreement was announced at the April 12 Executive Council and Partners meeting at Purdue University. Penn State joins Purdue University, University of Iowa, University of Minnesota, and Washington University in St Louis as partners in the Center. Partnerships represent an institutional level commitment to supporting the work of the Alliance and for bringing the principles and best practices of the Alliance to other STEM disciplines on their campuses.

Through the support of these five Partners, and our Member Departments we have been able to continue and grow the work of the Alliance in helping provide opportunities for traditionally underrepresented students to pursue doctoral studies in mathematical sciences. Partner organizations also provide us with advice regarding all aspects of the Alliance and its activities. The Center is expecting to have more partnership announcements in the near future.

If you think your campus or organization is a good candidate for a partnership, contact Phil Kutzko or David Goldberg for more information. Thanks Penn State!!! We are very excited to have you as a Partner in the Center for the National Math Sciences Alliance.

North Carolina Central University and North Carolina State University Bridge-to-PhD Program

The Bridge-to-Ph.D. is a component of the NC State NSF Research Traineeship on Data-Enabled Science and Engineering of Atomic Structure (SEAS), which is designed to broaden the participation of students from underrepresented populations in doctoral degrees in the physical sciences, mathematical sciences, and engineering disciplines. Students matriculate through a Master's degree program at NCCU and engage in co-advised, data science-related thesis research, special seminars, workshops, and lab rotations with NC State faculty and students. Upon completion of the M.S. at NCCU, SEAS Bridge-to-Ph.D. trainees are expected to transition to Ph.D. studies at NC State or another Ph.D.-granting institution.
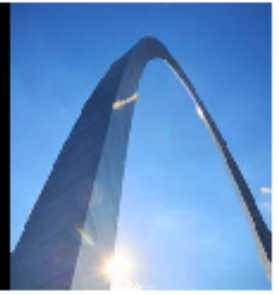
The Bridge-to-Ph.D. is open to students in materials science, engineering, statistics, mathematics, chemistry, physics and other related science and engineering disciplines. Interested students will need to be admitted to a Master's program in physics, mathematics, or chemistry through the NCCU School of Graduate Studies for participation in the Bridge-to-Ph.D. program. **Deadline for Fall 2019 admission is July 1, 2019**.

Fellowship funding includes a stipend (up to $34,000) plus cost of attendance, tuition and fees. The Bridge-to-Ph.D. receives support from the National Science Foundation. As a result, program fellowships are only open to US citizens and permanent residents. Regular department assistantships are open to all other graduate students who are selected as SEAS Bridge trainees.

For more information, visit: https://www.mse.ncsu.edu/seas/ or email seas_graduate_nrt@ncsu.edu

PRIDE CVD-CGE

PRograms to Increase Diversity Among Individuals Engaged in Health-Related Research

CARDIOVASCULAR DISEASE COMORBIDITIES, GENETICS AND EPIDEMIOLOGY

Junior Faculty Apply Now for Summer 2019 (July 17-31, 2019)

Washington University in St. Louis School of Medicine offers an ***all-expense paid*** summer institute program, initiated and funded by the NHLBI, to increase diversity in the field of Cardiovascular Disease Comorbidities, Genetics and Epidemiology. Junior faculty and researchers (mentees) from under-represented backgrounds in the biomedical and behavioral sciences and/or with disabilities qualify. The program involves:

Two consecutive summers with 2-week all-expense paid summer institute, Mid -Year & Annual Meeting to:

- Establish partnerships between Mentors and Mentees based on mutual research interests
- Participate in training via lectures and workshops on various topics related to Cardiovascular Disease Comorbidities, Genetics, and Epidemiology
- Participate in special grant-writing sessions conducted by NHLBI scientific program staff and PRIDE faculty
- Compete for Small Research Project (SRP) funding for generating preliminary data for subsequent NHLBI grant applications
- Develop the skills needed to apply for research grants and promoting a sustainable independent research program for career development

Linda Schreier, PRIDE CVD-CGE Program Administrator, Division of Biostatistics
Campus Box 8067, 660 S Euclid Avenue, St Louis, MO 63110, PH: 314-362-1565
Email: schreierl@wustl.edu, https://biostatistics.wustl.edu/education/pridecge/

Washington University in St. Louis
SCHOOL OF MEDICINE

YOUNG MATHEMATICIANS CONFERENCE

August 09 – August 11, 2019 at Ohio State University, Columbus, OH

https://ymc.osu.edu

The Young Mathematicians Conference (YMC) is a premier annual conference for undergraduate research in mathematics. Accepted students (typically around 65) are invited with support to the conference during a weekend at the Department of Mathematics of the Ohio State University.

Plenary Speakers

- **Moon Duchin (Tufts University)**

- **Sam Payne (University of Texas at Austin)**

- **Tatiana Toro (University of Washington)**

Sampling Advanced Mathematics for Minority Students

Dates: July 8 - August 2, 2019

Place: Ohio State University, Columbus, Ohio

WWW: http://samms.osu.edu

Contact: samms@osu.edu

SAMMS

THE OHIO STATE UNIVERSITY

SAMMS is an innovative mathematics summer program that offers undergraduates from underrepresented minorities a cross-sectional view of life in graduate school. This is accomplished by incorporating graduate level course work, problem-solving and inquiry activities, professional development, and exposure to a large research institution. Invited participants will be provided with lodging and travel reimbursements. Specific activities include the following:

- Mini-courses in Analysis, Algebra, Topology, Combinatorics, Computation.

- Work with local research faculty via inquiry activities and presentations.

- Preparing for graduate school applications and professional development.

- Group studies, social events, and week-end trips.

The program has been developed in a partnership between the Department of Mathematics at The Ohio State University and the Department of Mathematical Sciences at the University of Puerto Rico at Mayagüez.

Visit the web page to apply and find more information. Applications will be considered through March and April until all positions are filled.

2016 DWMP Chicago, IL

10ᵗʰ Anniversary

2019 JOINT STATISTICAL MEETINGS
Diversity workshop and Mentoring Program

July 28- July 31, 2019,
Denver, Colorado

The JSM Diversity Workshop and Mentoring Program brings minority (African-American, Hispanic/Latino, and Native American) statisticians/data scientists at early to mid-career levels (i.e., graduate students, post-doctoral scholars, professionals from govt, private sector and academia) together with senior-level statisticians and faculty in academia, government and the private sector for a structured interactive program of career skills development, one-on-one mentoring, and networking for career success.

Information and Application Form:
https://community.amstat.org/cmis/events/dwmp/dwmp2019

Priority Registration Deadline: June 1 (Student travel awards available)
Applications received after June 1 are accepted as long as space is available.

ASA
AMERICAN STATISTICAL ASSOCIATION
Promoting the Practice and Profession of Statistics

Sponsored by the American Statistical Association's Committee on Minorites in Statistics

Celebrating
10 Years of

Mentoring
—
Skills Development
—
Networking
—
Developing Leaders
—
Growing Community
—
Ensuring a Diverse Profession

Research Opportunities in Mathematics for Minority Students at The Ohio State University

Location: The Ohio State University, Columbus, Ohio. **Web:** https://www.mathprograms.org/db/programs/796
Time: 8-10 period from June -August (exact dates TBD)
Contact: Sandy Masters masters@math.osu.edu 614-292-9932

The Department of Mathematics at the Ohio State University invites applications from undergraduate students, primarily from traditionally underrepresented minorities, to pursue research under the tutelage of experienced faculty members. Students work with a faculty member on a project of mutual interest for 8-10 weeks during the summer. The projects will be in the areas of *Topological and Geometric Data Analysis; Number Theory; Dynamics; Applied Mathematics; Algebraic Geometry; Operator Algebras; Ring Theory*.

Program participants are paid a stipend during the summer with additional support for travel and lodging. Exact dates will vary depending on faculty and student availability.

Applications are welcome from students from all schools with priority given to US citizens and Permanent Residents. Required application materials include a cover letter, vita, and reference letter and should be submitted at the link above as soon as possible. For further information and questions please contact Ms. Masters.

Central State Math Undergraduate Research (CeSMUR) 2019

If you wish to give a talk, include a abstract of about 1/4 of a page. Funding through a grant from the National Science Foundation is available to help defray participants' travel and lodging expenses. Priority will be given to students presenting talks. There will be no registration fee and we will negotiate special rates at nearby hotels. We ask students to share rooms in order to be able to benefit the largest number of students with travel and lodging assistance.

The Central States Math Undergraduate Research conference is a joint project of the Departments of Mathematics of : Kansas State University, University of Nebraska at Lincoln, Truman State University

For more information: https://www.math.ksu.edu/research/i-center/cesmur/2019/index.html
Inquiries or registration: E-mail cesmur@math.ksu.edu.To register, let us know if you wish to give a talk. Include the name of your school.

SUMaR 2019 at Kansas State University

During eight weeks, 10-12 undergraduate students will have the opportunity to visit K-State and carry out research projects under the mentorship of the mathematics department's faculty. This REU encourages applications from students preparing for graduate studies in mathematics, and those from community colleges who might otherwise not have an opportunity to experience mathematics work and consider graduate studies.

Since a subset of the student population we plan to recruit will be early in their studies, and hence expected to have limited experience with mathematical proof, the REU will feature a series of talks by Philosophy faculty Scott Tanona, and Graham Leach-Krouse on epistemology of mathematics and propositional logic.

SUMaR receives its support from the National Science Foundation. As such, according to NSF regulations, it is only open to US citizens and permanent residents. Participants in SUMaR 2019 will receive room and board, a research fellowship of $4000. Limited travel assistance may be available for students with financial hardship.
For more information visit: https://www.math.ksu.edu/research/reu/.

KYLEREC 2019
Sheafy Symplectic Topology

May 31- June 6, 2019
Truckee, CA

Format Kylerec is a student-led and student-run workshop. We will live in a communal setting, sharing cooking and cleaning responsibilities. Talks will be given by a majority of participants, with guidance from our mentors. Our vision is to foster a healthy, relaxed and creative atmosphere where we can learn mathematics together and make human connections in the process. Graduate students at any stage are encouraged to apply. We especially encourage applications from women, underrepresented minorities, and we are committed to providing assistance to students with disabilities or special needs

Description This year, we will investigate the relationship between the Fukaya categories of exact symplectic manifolds and sheaf theory. Fukaya categories are a central part of modern symplectic topology, mirror symmetry and low-dimensional topology, however they remain very difficult to compute. On the other hand, categories of constructible sheaves are much more concrete and tractable. In the case of a cotangent bundles, the work of Nadler-Zaslow identifies the wrapped Fukaya category with a certain category of sheaves on the zero-section. For more general Weinstein manifolds, it is conjectured that one can find a Lagrangian skeleton, generalising the zero-section of a cotangent bundle, with at worst singularities from Nadlerfls arboreal list. The wrapped Fukaya category is then expected to coincide with a category of sheaves on this skeleton. In particular, this suggests Fukaya categories should themselves exhibit sheafy properties: they might be reconstructed by breaking a symplectic manifold into pieces and gluing together local computations. One approach to doing this is provided by the work of Ganatra-Pardon-Shende, with many important structural implications for wrapped Fukaya categories.

This workshop will survey this circle of ideas. After covering the basics of Floer theory, the Fukaya category and sheaf theory, we will delve into the work of Nadler-Zaslow and Ganatra-Pardon-Shende. We hope to see lots of interesting examples, calculations and applications along the way, in particular the aforementioned arboreal singularities. This should be of great interest to both newcomers to the symplectic and contact geometry, and more advanced graduate students.

The workshop will be mentored by **Sheel Ganatra (USC), Xin Jin (Boston College), Laura Starkston (UC Davis), and Umut Varolgunes (Stanford)**.

Organizers Orsola Capovilla-Searle (Duke), Dahye Cho (StonyBrook), Cédric De Groote (Stanford), Tim Large (MIT), and Sarah McConnell (Stanford).

We are grateful to the NSF for their support. Local expenses (including lodging and food) and partial travel expenses will be covered for participants.

Contact: kylerec2019@gmail.com   Webpage: https://kylerec.wordpress.com/   Photo by Alvin Jin.

MATHEMATICAL SCIENCES SEMESTERS IN GUANAJUATO, MEXICO

Centro de Investigación en Matemáticas, A.C.

An innovative undergraduate program in data science, modeling, and more, combining mathematics, statistics and computer science at the Guanajuato Mathematics Research Centre (CIMAT).

The Mathematical Sciences Program in Guanajuato gives students from across the United States, Canada, and other countries the opportunity to spend up to two semesters in Guanajuato, Mexico, studying mathematical sciences, while exploring the rich culture of Mexico and learning Spanish as they go.

The program offers:

- **Fall Semester in Mathematical Tools for Modeling**
- **Spring Semester in Mathematical Tools for Data Science**
- **Summer Program in Partial Differential Equations**
- **Optional courses in Spanish and Mexican Culture**

All three programs are taught entirely in English. Students will learn the fundamental theoretical bases of pure mathematics, quantitative methods, statistical models, and computer science, equipping them with the ability to choose relevant and efficient algorithmic solutions for solving problems in data science and mathematical modeling. The summer program combines theory, numerical methods, and applications to mathematical finance.

GUANAJUATO, MEXICO

Capital of the state, the city is one of the architectural jewels of central Mexico and is listed by UNESCO as a World Heritage Site. Guanajuato is also the state's most important student city, home to the state's largest educational institution, the University of Guanajuato. Thousands of visitors from all over the world flock to the city each year, making this one of the liveliest and most cosmopolitan cities in all Mexico, famed for its cuisine, its nightlife, and its friendliness to visitors.

PARTICIPANT PROFILE

- Intended major in mathematics, statistics or computer science, or any major with a strong grounding in mathematics.
- At least one Linear Algebra course and Differential, Integral and Multivariate Calculus courses .
- Interested in exploring mathematics to a deeper, more sophisticated level.
- Eager to experience life in a different culture.
- The specific requirements for each semester and the summer program can be found at:

mathsciencesgto.cimat.mx

▶ ABOUT CIMAT

The program has been developed based on the strengths of CIMAT, one of Mexico's leading research centers in the fields of mathematics, statistics, and computer science, focusing particularly on enhancing the relationship between these disciplines. With four decades of experience, CIMAT is recognized both at home and abroad for its tradition of educational excellence and its contribution to the development of students from both Mexico and around the world. CIMAT is also well-known for its applied research projects, its technological and consulting services, and its training programs and initiatives for the dissemination of mathematical knowledge.

www.cimat.mx

List of other Position Announcements

University/Institution	Type of Position	Link for Applications
Clarkson University	Tenure-Track Assistant Professor in Mathematics	MathJobs
San Jose State University	Tenure-Track Assistant Professor position in Applied Mathematics	Apply Here
San Jose State University	Tenure-Track Assistant Professor position in Optimization	Apply Here
Scrips College	Fletcher Jones Foundation Scholar in Computation	Apply Here
Smith College	Tenure-Track Assistant Professor in Mathematics	Apply Here
St. John's University	Tenure-Track Assistant Professor in Mathematics or Computer Science	Apply Here
University of Washington, Tacoma	Tenure-Track Lecturer Positions in Math	Apply Here
University of Washington, Tacoma	Tenure-Track Assistant Professor in Statistics	Apply Here
University of Washington, Tacoma	Tenure-Track Assistant Professor in Mathematics	Apply Here
Villanova University	Tenure-Track Assistant Professor in Mathematics	MathJobs