



Upcoming Events

Young Mathematicians Conference
Ohio State Univ.
Columbus, OH
Aug. 9-11, 2019

NYC Alliance Meeting
New York City
September 14,
2019

Women in Statistics and Data Science Conference
Bellevue, WA
Oct. 3-5, 2019

Pacific Alliance Meeting
CSU, East Bay
October 12, 2019

2019 FOD Conference
St. Louis, MO
Nov. 15-17, 2019

Thoughts from the Executive Director...



David Goldberg
Executive Director
of the Math Alliance

I've watched with interest the events to commemorate the 50th anniversary of the Apollo 11 moon landing. There was even more activity here at Purdue than many other places, because Neil Armstrong received his BS in Aeronautical Engineering here. Turning 58 this year, I am of just the right age to have the early NASA missions as among my earliest memories, and like most kids my age I was fascinated by the space race. I am just a bit too young to have been aware of what it meant in geopolitical terms, and to have an understanding of the challenge set forth by President Kennedy to achieve the feat of successful moon missions by the end of the 1960s. Let alone, how daunting that challenge was. I marvel at the ingenuity involved, especially given the capacity of the computational equipment they had access to at the time. The book and movie *Hidden Figures* illuminated the important contributions of African American women to the effort. While it is a sad legacy of racism and segregation that these heroic efforts were not recognized contemporaneously, it also reinforces the sense for someone my age (who was in the most idealistic phase of my life) that it was a shared cause, and that we succeeded *because* all the diverse strands of our nation contributed to the effort. I also recently heard the story of Ed Dwight, who in the early 60s was on track to be the first African American Astronaut, but was not, in the end, selected, probably largely for racial politics, and who resigned from the Air Force and the space program due to these forces. He had a whole new, long, and very successful career as a sculptor. But, it is a sad commentary on our past that even in our greatest national achievement, the stain of our racist past prevented even greater achievements. As Charles Bolden, a former astronaut who became the first African-American administrator of NASA recently said in [a New York Times article on Dwight](#) "*To see an Ed Dwight walking across the platform getting into an Apollo capsule would have been mind-boggling in those days...It would've had an incredible impact.*". This makes me think about our Math Alliance Scholars. While individually they may not have anything like the impact Bolden is imagining, their accomplishments and successes will have tremendous impact, especially on those young people they come in contact with. The Times article says Dwight saw a newspaper photograph of an African American pilot serving in the Korean War who was taken as a prisoner of war, and realized the Air Force was accepting African American pilots. The importance of having the mathematical professional work force reflect the diversity of our country should be understood. Our colleague, and Associate Director for Undergraduate Education, Bill Vélez, has a wonderful article coming out in the September Notices of the AMS where he makes this case better than I ever could. I encourage you to look for that soon!

*In fact, more NASA astronauts have degrees from Purdue than any other institution, which is why we are known as *the Cradle of Astronauts*.

*To hear more about this story and hear Dwight himself, who is still alive at 85, there is an accompanying [podcast](#) on from NY Times.

The 2019-20 F-GAP Program still accepting applications!



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."](#))



It'll be here before you know it..

The 2019 Field of Dreams Conference

Nov. 15-17, 2019 in St. Louis, MO

**In Partnership with Washington University
in St. Louis*



- [Nominate your students to attend!](#)
- [Do you want more information about the Conference?](#)
- *Registration website is coming soon!*

[Thoughts on Helping Students to Feel Included by Jessica Sidman*](#)

[Why Do We Teach? by Colin Adams*](#)

[Report on the 2016–2017 New Doctorate Recipients & Employment Experiences](#)

[Doctoral Degrees Conferred, 2017–2018](#)

[Waves, Spheres, and Tubes](#), by Betsy Stovall*

[Alliance Mentors Russel Calfisch and Karen Smith elected to National Academy of Sciences](#)

*designates Math Alliance Mentors

2019 Field of Dreams Conference Featured Speakers Announced

We are pleased to announce the three featured speakers for the 2019 Field of Dreams Conference,
November 15-17 in St. Louis, MO

Banquet Keynote Address: Roselynn Williams, Associate Professor of Mathematics, Florida A&M University

Mathematical Sciences Lecture: David Hummels, Dr. Samuel R. Allen Dean of the Krannert School of Management and Distinguished Professor of Economics, Purdue University

Connections Lecture: Sylvester James Gates, Jr., Director of the Theoretical Physics Center, Ford Foundation Professor of Physics, Affiliate Mathematics Professor, and Watson Institute for International Studies & Public Affairs Faculty Fellow, Brown University

Alliance Panel Session at JSM



The National Alliance for the Doctoral Studies in Math Sciences will have a session during the 2019 Joint Statistical Meetings in Denver, Colorado for graduate programs interested in becoming Alliance Graduate Program Groups (GPGs). The session, number 218957, entitled “Math Alliance Workshop on Becoming a Graduate Program Group” will be held on **Wednesday, July 31, 2019, from 2:00 PM- 3:30 PM**, in the Colorado Convention Center H-Centennial Ballroom B, and is organized by Leslie McClure (Drexel, Alliance Associate Director for Statistics) with panelists David Goldberg (Purdue, Alliance Executive Director), and Donald Martin (North Carolina State University).

Everyone is welcome, and we especially encourage faculty interested in learning more about the Alliance and GPGs. If you have any questions, please feel free to contact us.

Recent Awards and Achievements



Alliance Mentor, Sara Maloni of the University of Virginia, has been awarded an NSF CAREER Grant for her work at the intersection of geometry and low-dimensional topology. She studies deformation spaces of geometric structures on low-dimensional manifolds through their geometric, topological and dynamical properties. Congratulations Sara!

Math Alliance Mentors named Simons Fellows

Math Alliance Mentors Federico Ardila, Vyjayanthi Chari, and Gheorghe Craciun were named Simons Fellows in Mathematics. [Read the article here](#)

Math Alliance Scholars awarded 2019 NSF GRF Awards

- **Sofia Martinez Alberga** will be attending Purdue University this fall.
- **Tristan Reynoso** will be attending this Louisiana State University fall.
- **Scott Mahan** is attending the University of California, San Diego.
- **Allen Alvarez-Loya** is attending the University of Colorado, Boulder.
- **Sabrina Enriquez** is attending the University of California, Davis.
- **Rebekah Loving** will be attending California Institute of Technology in the fall.

Congratulations to all of these scholars! This is quite an achievement.

Three Math Alliance Scholars that were MSRI-UP students in Summer 2018 received honors on their research posters at JMM in January.

- **Cameron Hooper** from California State University, Fullerton
- **Nathalie Huerta** from California State University, Channel Islands
- **Skylyn Irby** from The University of Mississippi

Congratulations to all three of these scholars on your research and a job well done.

Data Science and Image Analysis Conference of the Pacific Northwest

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 for information on applying for a travel award for students, postdocs, and early career researchers, as provided for in a National Science Foundation (NSF) conference grant.

For more info, please visit datascienceandimageanalysis.com.

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)**



CIMAT 2019



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

IAS School of Mathematics Accepting Applications

2019-2020 MEMBERSHIP

THE SCHOOL OF MATHEMATICS

THE IAS SCHOOL OF MATHEMATICS

welcomes applications from mathematicians and theoretical computer scientists at all career levels, and strongly encourages applications from women, minorities, and mid-career scientists (5-15 years from Ph.D.). Competitive salaries, on-campus housing, and other resources are available for periods of 4-11 months for researchers in all mathematical subject areas. The School supports approximately 40 post-docs per year.

In 2020-2021, there will be a special-year program, **GEOMETRIC AND MODULAR REPRESENTATION THEORY**, led by Geordie Williamson of the University of Sydney; however, Membership will not be limited to mathematicians in this field.

PROGRAMS

EMERGING TOPICS
math.ias.edu/emergingtopics

WOMEN & MATHEMATICS
math.ias.edu/wam/2020

SUMMER COLLABORATORS
math.ias.edu/summercollaborators

MID-CAREER

Are you 5-15 years from your Ph.D?
Ask us about funding!

To apply, submit your application at mathjobs.org
For more info, please visit: math.ias.edu

DEADLINE: DECEMBER 1, 2019 • MATHJOBS.ORG



MATH ALLIANCE MEMBER INSTITUTION

Director and Professor in Math at Arizona State University

The School of Mathematical and Natural Sciences (SMNS) in the New College of Interdisciplinary Arts & Sciences at Arizona State University (ASU) invites applications for School Director. This is an opportunity to take a leadership role in a rapidly growing School; one embedded in the truly interdisciplinary and innovative environment of New College.

We are seeking exceptional candidates eligible for appointment at the rank of Full Professor to become SMNS Director; a position made open by an internal promotion. The successful candidate should complement, without duplicating, the expertise of the Associate Director (a Marine Biologist) in the breadth of disciplines within MNS, and be prepared to lead SMNS in its next phase of expansion. The SMNS Director will continue to advance:

- **high-quality research** among a rapidly growing community of tenured and tenure-track researchers;
- **student enrollment**, building on multi-year double-digit percent growth;
- **impactful education** through undergraduate research and innovative programmatic development and funding;
- **interdisciplinarity** within SMNS and New College;
- inclusion, at the student and faculty level and across all aspects of the school's operations;
- **collegiality**, by developing transparent processes and clearly communicating and building consensus around shared objectives.

Required Qualifications: The successful candidate must have: a) a Ph.D. in a field related to the academic programs currently within the School; b) a research record of excellence warranting appointment as a Full Professor with Tenure at ASU; c) an ongoing program of research and publication; d) demonstrated potential to support and develop new externally-funded projects; and, e) evidence of leadership in an academic context.

Desired Qualifications: a) an externally-funded research program in an area of expertise that complements existing strengths and needs of SMNS; b) the ability to promote new and existing interdisciplinary collaborations in research and teaching; c) enthusiasm for developing new initiatives, new programs, and/ or new curricula; d) evidence of leadership experience in an interdisciplinary program or Center, and/or administrative experience within a School, Department or College; e) demonstrated commitment to working successfully with a diverse student population, including students with disabilities and first-generation, non-traditional, low income, and underrepresented minority students, etc.; and f) an appropriate record of university and professional service. More information about ASU's School of Mathematical and Natural Sciences can be found at <https://newcollege.asu.edu/mns>; more information about ASU's New College of Interdisciplinary Arts and Sciences can be found at <http://newcollege.asu.edu>. ASU has a strong commitment to a racially diverse faculty; one that is reflective of the contemporary United States.

Deadline: August 16, 2019; if not filled, every two weeks thereafter until search is closed.

Application procedure: Please submit the following items, electronically, to Sara Cutrone via sara.cutrone@asu.edu.

- 1) A letter of application that describes: (a) the breadth of experience that will contribute to leading an interdisciplinary school; and (b) how the ASU Charter is reflected in past work and future plans; 2) a current curriculum vitae with contact information; 3) a research statement; 4) a statement on leadership philosophy that addresses the needs of faculty, staff, and students; 5) a statement on diversity; and, 6) the names and contact information for three references (references will not be contacted during initial review and will only be contacted after candidate notification).

ASU conducts pre-employment screening for all positions which includes a criminal background check, verification of work history, academic credentials, licenses, and certifications. Employment is contingent upon successful passing of the background check. In compliance with federal law, ASU prepares an annual report on campus security and fire safety programs and resources. ASU's Annual Security and Fire Safety Report is available online at <https://www.asu.edu/police/PDFs/ASU-Clery-Report.pdf> You may request a hard copy of the report by contacting the ASU Police Department at 480-965-3456.

Arizona State University is a VEVRAA Federal Contractor and an Equal Opportunity / Affirmative Action Employer. All qualified applicants will be considered without regard to race, color, sex, religion, national origin, disability, protected veteran status, or any other basis protected by law. ASU's full non-discrimination statement (ACD 401) and Title IX policy are located at <https://www.asu.edu/aad/manuals/acd/acd401.html> and <https://www.asu.edu/titleIX>.

Two Tenure-track Assistant/Associate Professor positions at Morgan State University

The Department of Mathematics at Morgan State University invite applications to fill two tenure-track Assistant/Associate Professor positions starting August, 2019 with an emphasis on Industrial and/or Computational Mathematics. Candidates in any of the following areas of study will be considered: Actuarial Science, Financial Mathematics, Mathematical Statistics, Risk Theory and Statistics, Computational Mathematics, or Applied Mathematics. A high level of scholarship and research accomplishments and/or evidence of outstanding research potential, and evidence of strong teaching should be demonstrated. Candidates will be expected to contribute to the expanding graduate programs within the department and the interdisciplinary research projects within the School of Computer, Mathematical and Natural Sciences (SCMNS). The applicant must also demonstrate a commitment to working with a culturally diverse student population. Duties of the position includes advising students, teaching department undergraduate and graduate courses, providing service to the department and SCMNS, developing a strong research profile, and securing external funding to support research and department programs.

A Ph.D. in the Mathematical Sciences from an accredited university, preferably with a focus in Industrial and/or Computational Mathematics, or Applied Mathematics; candidates should have a strong commitment to teaching and an established record of multidisciplinary and extramurally-funded research experience; experience with data science/analytics, machine learning, and algorithmic analysis and programming; experience in college teaching and evidence of ongoing scholarly activity in the field. Applicants with expected completion of the doctoral degree before May, 2019 will be considered.

The application can be found on the webpage at the link: <https://morgan.peopleadmin.com/postings/2282>

Tenure Track position in Statistics at Macalester College

Applications are invited for a tenure-track Statistics positions, at the assistant professor level, to begin Fall 2020 at Macalester College.

Candidates must have, or be completing, a Ph.D. in Biostatistics or Statistics (or a closely related field). They must have a strong commitment to teaching and research in an undergraduate liberal arts environment. Some areas of potential interest include machine learning, causal inference, and advanced modeling.

See <https://www.macalester.edu/academics/mcs/statisticstenure-trackjob.html> for details. Evaluation of applications will begin **October 1, 2019** and continue until the position is filled.

Debnath Endowed Professor in COS/SMSS at UTRGV

The School of Mathematical and Statistical Sciences (SMSS) at the University of Texas Rio Grande Valley (UTRGV) invites applications for the Debnath Endowed Professor position. The Debnath Endowed Professorship in the Mathematical Sciences (“Debnath Endowed Professorship”) will be an endowment that shall promote and support excellence in research in the mathematical sciences in the College of Sciences at UTRGV, in accordance with the Regents’ Rules and Regulations pertaining to endowed academic positions. It is encouraged that the applicant has experience teaching and conducting research and service with women and underrepresented minority groups and in integrating technology into instruction or teaching in various environments including alternative delivery models. In accordance with the UTRGV strategic plan, the applicant is expected to contribute to the dual-language program or to the creation of new doctoral programs in mathematics. Additionally, the applicant is expected to possess personal characteristics to serve as an example to students, faculty, and professional colleagues.

At UTRGV, the applicant will find numerous collaborative research opportunities with outstanding faculty in the SMSS as well as in other departments, including the newly established School of Medicine; the School of Earth, Environmental and Marine Sciences (SEEMS); the South Texas Diabetes and Obesity Institute; the Center for Advanced Radio Astronomy; and the Center for Gravitational Wave Astronomy. The School has an active research program in pure and applied mathematics, probability and statistics, and math education with over 40 tenured or tenure track faculty members. The appointment requires teaching at the undergraduate and graduate levels and also supervising research by undergraduate, graduate and high school students. The School has a BS program in Mathematics (over 300 majors), a newly approved BS program in Statistics (effective fall 2018) and a growing MS program in Mathematics. The BS program in Mathematics has concentrations in Applied Mathematics, Pure Mathematics, Economics, Science and Engineering, Statistics, Middle School and Secondary School, along with a UTeach program. The MS program in Mathematics has concentrations in Applied Mathematics, Pure Mathematics, Mathematics Teaching, and Statistics. The School welcomes excellent faculty to support the many endeavors and new initiatives in research/scholarship, teaching and student support.

Minimum Qualifications: PhD in Mathematical Sciences from an accredited university.

Discipline Specific Required Qualifications:

A successful candidate for the Debnath Endowed Professorship shall satisfy the criteria for the appointment at the rank of full professor with tenure developed by UTRGV and the School of Mathematical and Statistical Sciences (SMSS), which include, but are not limited to:

- Appointment at the rank of full professor with tenure at UTRGV;
- Distinguished record of research scholarship demonstrated through peer-reviewed original research publications in reputed journals in mathematical sciences and successful external grant awards;
- Demonstration of excellence in teaching and successful engagement of students in research and scholarly activities;
- Earned recognition as a result of academic accomplishments.

EEO Statement

UTRGV is an Affirmative Action/Equal Opportunity Employer that strives to hire without regard to race, color, national origin, sex, age, religion, disability, sexual orientation, gender identity or expression, genetic information or veteran status. UTRGV takes affirmative action to hire and advance women, minorities, protected veterans and individuals with disabilities.

Diversity Statement

UTRGV is a Hispanic-serving Institution dedicated to student success and building a diverse faculty committed to working in a multicultural environment. UTRGV has an NSF ADVANCE grant to increase the representation of women in STEM fields and to promote a positive, family friendly workplace for all faculty. We strongly encourage applications from women and minorities.

To Apply: <http://careers.utrgv.edu/postings/21541> . Applications are only accepted via the UTRGV website.

Tenure-track Position in Mathematics at Pomona College

Pomona College invites applications for a tenure track position in the Department of Mathematics, at the rank of Assistant Professor, beginning July 1, 2020. We are looking for candidates who are committed to excellence in teaching and research, and who will be excited about mentoring students and supervising student research. The department has directed much effort towards creating a supporting community for all students, and is particularly interested in candidates who have experience working with students from diverse backgrounds and a demonstrated commitment to improving access to and success in higher education for underrepresented students.

The department invites applicants in the areas of Analysis, Topology, Geometry, or Probability broadly construed. Those who display fluidity in crossing barriers between pure and applied mathematics and/or are comfortable working with real-world data are particularly encouraged to apply. Duties of the position include teaching four semester courses per year, and the direction of student senior projects on a wide range of topics.

Pomona College is a highly selective residential liberal arts college attracting an economically and geographically diverse student body, located 35 miles east of downtown Los Angeles. It is the founding member of the Claremont Colleges, a consortium of seven institutions with over forty active mathematicians. Pomona College is an equal opportunity employer and especially invites applications from women and members of underrepresented groups.

Applications are to be submitted at [Mathjobs.org](https://mathjobs.org). A complete application will include a curriculum vitae, graduate transcripts, at least three letters of recommendation (at least one of which evaluates teaching), a description, for the non-specialist, of research accomplishments and plans, a statement of teaching philosophy, and a [diversity statement](#). Applications completed by December 1, 2019, will receive full consideration.