



**Upcoming  
Events**

**JMM Special  
Session  
Virtual  
Jan. 6-7, 2021**

**Joint Math  
Meetings  
Virtual  
Jan. 6-9, 2021**

## Thoughts from the Director...



**David Goldberg**  
Executive Director  
of the Math Alliance

### A virtual success

The past two months saw a flurry of activity for us, much of which I described in my October column. The big event, of course, was our Virtual Field of Dreams Conference, which took place on November 6&7. We have to thank again those who made the event happen at all, let alone come off as an unqualified success. There are so many, and I am sure we'll leave someone out, but I particularly want to thank our partners at Institute for Mathematics and its Applications (IMA) for hosting and doing much of the organizational lifting, our partners at Arizona State University for their significant staff support, Rebecca Lank for keeping everything we do on track, and Slang Productions, whose expertise made the experience more than just a series of big zoom meetings. We are also indebted to our Agenda Committee, Kellie Archer, Pamela Harris, Angela Hicks, and Phil Kutzko who did a spectacular job, well above and beyond what should have been asked of them.

Since at least April, if not even earlier, we discussed the likelihood that we would have to cancel the planned Field of Dreams Conference in Minneapolis. We also knew we should try to do something in an online format. One of the interesting discussions was whether or not we should put the name "Field of Dreams" on this event. On the one hand, we were concerned that associating the online event with our signature meeting might bring about unreasonable expectations.

On the other hand, the name *is* a draw, and attendance would certainly be better, or at least easier to generate, if we had the name attached. In the end, wanting to use the online conference to accomplish one of the major themes of our annual conference, community building, we opted to use the name. Plus, as one of our leadership team pointed out "It doesn't matter what *you* call it, everyone else is going to call it Virtual Field of Dreams". Looking back, I am so glad we used the name and feel we did it proud. We think around 400 people participated in the conference. I will be very interested in comparing the follow up survey results to the surveys from the past conferences. I will also be interested in hearing from people, especially students, about which parts of the meeting were most impactful.

While I thought the quality of the programming was outstanding throughout, the closing event, an interview of Donald Cole was truly exceptional. First, the interview was conducted by a first-year graduate student, Fabrice Ulysse of Notre Dame, who was perfect for this role. Many have mentioned how impressed they were with how Fabrice conducted the discussion. Secondly, the interview illuminated what those of us who have admired Professor Cole for a long time have known, that his accomplishments and contributions to our profession and our country are prodigious, and only outsized by his grace and humility. We were so pleased to learn that the University of Mississippi is renaming a building in his honor, which is a well-deserved tribute.

I came away from the Virtual Field of Dreams Conference with a renewed sense of the strength of our community, a sense of the passion we share for our mission, and a commitment to keep building on our successes. I also think Math Alliance Scholars got valuable information and insights which will help them chart their paths towards doctoral degrees. In short, we accomplished a lot of the same things we try to accomplish every year. As I said, I am looking forward to hearing your takeaways.

I am concluding this note on the eve of Thanksgiving, and I know a lot of us are reflecting on what we are thankful for, but also looking back on a year that has thrown up so many challenges. The most prominent of those, are our continued systemic racism and the pandemic (with the latter only further highlighting the former through its impact on our black and brown citizens). Many of us are baffled that our collective response to COVID-19 has led to the uncontrolled growth we are seeing right now, and stupefied that over 265,000 of our citizens have died (many needlessly). This has personally impacted some who are close to us, and it will make so many Thanksgivings a somber occasion. But we also see hope that if we can refocus our collective sense of duty to each other, to our global community, we can bring about effective mitigation. We are cautiously optimistic that with more effective leadership and continued good news on the vaccine front, there is an end in sight, though it is a speck of land almost beyond the horizon. There is a long way to go, but we can get there together.

# AMS Special Session on If You Build It They Will Come: Presentations by Scholars in the National Alliance for Doctoral Studies in the Mathematical Sciences

Organizers: **David Goldberg**, Purdue University and **Phil Kutzko**, University of Iowa

## Wednesday January 6, 2021, 8:00 a.m.-10:50 a.m.

- 8:00 a.m. *Discussion*
- 9:00 a.m. *Automorphic Hamiltonians, Epstein zeta functions, and Kronecker limit formulas.* **Adrienne I Sands\***, University of Minnesota Twin Cities/ MIT Lincoln Laboratory
- 9:30 a.m. *Plus-Minus Davenport Constant on Finite Abelian Groups.* **Darleen S Perez-Lavin\***, University of Kentucky
- 10:00 a.m. *A Look into the Abstract Theory of Operator Systems and Some Applications to Quantum Information Theory.* **Roy Araiza\***, Department of Mathematics, Purdue University **Travis Russell**, Army Cyber Institute, United States Military Academy
- 10:30 a.m. *Decompositions of Ehrhart  $h$ - Polynomials for Rational Polytopes.* **Matthias Beck**, San Francisco State University **Benjamin Braun**, University of Kentucky **Andres R Vindas Melendez\***, University of Kentucky

## Wednesday January 6, 2021, 2:15 p.m.-6:05 p.m.

- 2:15 p.m. *Non-uniform continuous dependence for Euler equations in Besov space.* **José D Pastrana Chiclana\***, Northwestern University
- 2:45 p.m. *Translation covers of platonic solids and their monodromy groups.* **Anthony Sanchez\***, University of Washington
- 3:15 p.m. *Complements of smoothed toric divisors of centered toric 4-manifolds.* **Orsola Capovilla-Searle\***, Duke University
- 3:45 p.m. *Discussion*
- 4:15 p.m. *The Up Topology for Mirror Topological Posets.* **Ulysses A Alvarez\***, Binghamton University **Ross Geoghegan**, Binghamton University
- 4:45 p.m. *On the dependence of the component counting process of a uniform random variable.* **Joseph Paul Squillace\***, University of Rhode Island
- 5:15 p.m. *Maximal Metrics for the Conformal Laplacian.* **Samuel Pérez-Ayala\***, University of Notre Dame
- 5:45 p.m. *On a Sharp Isoperimetric Inequality for a Constrained Region.* **Pedro Valentin De Jesus\***, The University of Iowa

# AMS Special Session on If You Build It They Will Come: (con't)

Thursday January 7, 2021, 8:00 a.m.-11:50 a.m.

- 8:00 a.m. *Discussion*
- 9:00 a.m. *Identification of optimal dosing schedules of dacomitinib and osimertinib for a phase I/II trial in advanced EGFR-mutant non-small cell lung cancer.* **Kamrine Poels\***, Department of Biostatistics, Harvard T.H. Chan School of Public Health **Adam J Schoenfeld**, Department of Medicine, Thoracic Oncology Service, Memorial Sloan-Kettering Cancer Center **Alex Makhnin**, Department of Medicine, Thoracic Oncology Service, Memorial Sloan-Kettering Cancer Center **Yosef Tobi**, Department of Medicine, Thoracic Oncology Service, Memorial Sloan-Kettering Cancer Center **Yuli Wang**, Oncology Research and Development, Pfizer Inc **Aaron Hata**, Massachusetts General Hospital Cancer Center **Scott L Weinrich**, Oncology Research and Development, Pfizer Inc **Helena A Yu**, Department of Medicine, Thoracic Oncology Service, Memorial Sloan-Kettering Cancer Center **Franziska Michor**, The Ludwig Center at Harvard; Center for Cancer Evolution, Dana Farber Cancer Institute
- 9:30 a.m. *A-I-(don't)-C the Future: A New Class of Selection Criteria Geared Towards (Better) Prediction.* **Javier E Flores\***, University of Iowa **Joseph E Cavanaugh**, University of Iowa
- 10:00 a.m. *Statistical Topology of Genome Analysis in Three Dimension.* **Maxime G Pouokam\***, University of California Davis **Javier Arsuaga**, University of California Davis **Prabir Burman**, University of California Davis
- 10:30 a.m. *Multi-Perspective, Simultaneous Embedding.* **Raymundo Navarrete\***, University of Arizona
- 11:00 a.m. *Sparse Partial Least Squares Regression to Model the Relationship Between Correlated Diet Data and Risk of Heart Disease Events.* **Natalie C. Gasca\***, University of Washington **Robyn L. McClelland**, University of Washington
- 11:30 a.m. *Image Segmentation via Hypergraph-based MRF Models.* **Jessica C De Silva\***, California State University, Stanislaus **Darcy Brunk**, California State University, Stanislaus **Juan Valencia**, California State University, Stanislaus **Talita Perciano**, Lawrence Berkeley National Laboratory

## October

[Math as Social Endeavor: Groupwork and the Blackboard](#), Steven Frankel and Matt Kerr\*

[Talking about leaving revisited](#), book review by David Bressoud

[Open Algorithms, Social Justice, and Predictive Policing](#), by Daniel Krashen

[Statistics on Women in Mathematics](#)

[Tatiana Toro\\*](#) Awarded Blackwell–Tapia Prize

[Thomas Hales\\*](#) awarded Prize of London Math Society

[Mathematical Moments Podcasts](#), including *Winning the Race*, with Christine Darden. Featured speaker at 2017 Field of Dreams

## November

[A word](#) from Karen Saxe\*

[An Overview of the Obstacle Problem](#), by Donatella Danielli\*

[The Next Generation of Mathematicians](#) features Math Alliance Predoctoral Scholars Dwight Williams II, Andres Vindas Melendez, and Anthony Sanchez

[Applying for jobs outside the US](#), by Daniel J. Thompson\*

[Mentoring for Tenure Track Interviews](#), By Anthony Várilly-Alvarado\*

[Remembrances of Edward G. Effros](#), Edited by Palle Jorgenson\*

[2018 Fall Departmental Profile Report](#)

[Presidential Awards](#) to Overtun Jenda\* and Cristina Villalobos\*

## December

[A word from Francis Su](#)

[Instability and Bifurcation](#), by Renato Bettiol\* and Paolo Piccione

[Widening the pipeline](#), by Julia Hartmann and Mona Merloing\*

[Math SWAGGER: Building a virtual community](#), Student Authors: Alberto Alonso, Jasmine Camero+, Alejandra Castillo+, Fabrice O. Ulysse+, Victoria Uribe, and Andrés R. Vindas Meléndez+; Organizer Authors: Alexander Diaz-Lopez,\*+ Pamela E. Harris\*, Vanessa Rivera Quiñones+, Luis Sordo Vieira, Aris Winger, and Michael Young\*

[Organize a Laid-Back Conference in the Rocky Mountains that Participants Want to Return to Year after Year](#), By Dany Krashen and Kelly McKinnie\*

[Memorial Tribute to Roger Alperin](#), by Benson Farb\* and Peter Shalen

Suzanne Weekes\* Named SIAM Executive Director

\* *designates status as a Math Alliance Mentor*

# Items of interest in the AMSTAT NEWS

## September

President's Corner, [Everyone Counts: Data for Public Good](#), by Wendy Martinez

[Statcom at Purdue University: How we do good](#)

## October

President's Corner, [Justice, Equity, Diversity, and Incusion](#) – Alliance Associate Director for Industrial Relations, Adrian Coles named co-chair of ASA Anti-Racism Task Force. Also serving on this task force are Alliance mentors Emma Benn, Susan Halabi, Ofer Harel, and Miles Ott. Adrian and co-chair David Marker discuss the task force and its work in this column.

[New Fellows of the ASA](#) named, including Alliance Mentors Rebecca Roberts Andridge, Ching-Ti Liu, Sherri Rose, and Daniela Witten. Congratulations to all!!

[Highlights from a JSM 2020 Virtual Panel on Professional Development in Statistical Organizations](#), panelists include Alliance Mentor René Moore.

## November

[Strong growth for statistics and biostatistics degrees continue through 2019](#)

[Beyond Big Data: Shaping the future](#)

[Government statistics mentoring program is under way](#)

[Applications sought for ASA student paper competition](#)

## The 2021 Class of Fellows for the AMS Announced

The 2021 Class of Fellows of the AMS was announced on the AMS website. Below is a list of the selected that are also Math Alliance Mentors:

- **Ricardo Cortez**- Tulane University
- **Michael Hill**- University of California, Los Angeles
- **Yannick Sire**- Johns Hopkins University
- **Bianca Viray**- University of Washington
- **Talitha Washington**- Clark Atlanta University and Atlanta University Center

To see the full list of fellows, visit the [AMS website](#).

## Society for Industrial and Applied Mathematics Welcomes New Executive Director

According to the SIAM News, SIAM has announced the appointment of Dr. Suzanne Weekes, Professor of Mathematical Sciences at Worcester Polytechnic Institute (WPI), to the position of Executive Director. Suzanne will begin her new role on January 1, and she succeeds Dr. James M. Crowley, who served SIAM for 25 years as Executive Director and recently retired.

Congratulations to Suzanne, who we are honored to say is a Math Alliance Mentor as well! Here is the link to the [full announcement](#).

## Pathways to Science Resources For Students

Thanksgiving break is a great time to work on applications! [PathwaysToScience.org](https://www.pathwaystoscience.org) is an excellent resource for finding both paid summer research programs and fully funded STEM graduate programs. Use the website to search:

- 630 paid summer research programs for undergrads and grad students, including opportunities funded by NSF, NASA, NOAA, etc.
- 138 fully funded STEM masters programs  
160 fully funded STEM PhD programs

For help finding programs, view this quick video tutorial on how to use the advanced search page:  
<https://www.youtube.com/watch?v=FxKsAGk8dAw&t=16s>

## DOE Scholars Program Now Accepting Applications

The DOE Scholars Program introduces students and recent college graduates to the U.S. Department of Energy (DOE) mission and operations.

### Being selected as a DOE Scholar offers the following benefits:

- Stipends starting at \$600 per week for undergraduates and \$650 per week for graduate students and post graduates during the internship period
- Limited travel reimbursement to/from assigned location
- Direct exposure to and participation in projects and activities in DOE mission-relevant research areas
- Identification of career goals and opportunities
- Development of professional networks with leading scientists and subject matter experts

### Eligibility

- Be a U.S. citizen.
- Be an undergraduate, graduate student, or recent graduate of an accredited institution of higher education. Must be pursuing a degree or have received a degree within 5 years of their starting date in a science, technology, engineering or mathematics (STEM) discipline **or** field that supports the DOE mission.

**How to Apply:** Applications and supporting materials must be submitted at <https://www.zintellect.com/Opportunity/Details/DOE-Scholars-2021>

**Deadline:** January 4, 2021 11:59:00 PM Eastern Time Zone

**For more information:** Visit <https://orise.orau.gov/doescholars>  
Download program flyer: <https://orise.orau.gov/doescholars/files/doescholars-flier.pdf>

**Questions?** [doescholars@orise.orau.gov](mailto:doescholars@orise.orau.gov)

*DOE has partnered with the Oak Ridge Institute for Science and Education (ORISE) to administer this program.*

## REU Opportunities

We wanted to tell you about opportunities for doing undergraduate mathematical research. In summer REUs (Research Experiences for Undergraduates), you spend 6-10 weeks doing research, get paid, and sometimes even get to have your name on a paper. Due to the pandemic, the programs may run virtually (as they did last summer). If you add your name to [this list](#) and we will send you updates. You can find more information about some of [these programs](#).

If you would like to talk about these opportunities, discuss your personal statement for your application, or any questions, feel free to email us at [Adam.Sheffer@baruch.cuny.edu](mailto:Adam.Sheffer@baruch.cuny.edu) or [sjml@williams.edu](mailto:sjml@williams.edu).

## Graduate School GRE Requirements

We have added an updated list of schools with their updated GRE requirements to our webpage. Here is the [link](#) to find that information.

The information was compiled and provided by James Guillochon.

## 2020 SACNAS Presidential Service Awards

The Society for the Advancement of Chicanos/Hispanics and Native Americans in Science (SACNAS) honored Arizona State University Professor **Erika T. Camacho, PhD** and Associate Dean of the University of Texas Rio Grande Valley College of Sciences, **Cristina Villalobos, PhD** with the 2020 Presidential Service Awards at its annual conference in October. Both Professors are Math Alliance Faculty Mentors.



**Professor Camacho**



**Professor Villalobos**

The [official award announcement](#) can be read on the SACNAS website. **Congratulations to both Erika and Cristina!**

## University of Mississippi Building to be Renamed after Donald Cole



The University of Mississippi is renaming a campus building in honor of Professor Donald Cole, who retired from teaching in 2019 after a long and successful career from the university. You can read the entire University of Mississippi News article [here](#).

Donald is a founding member of the Math Alliance, and longtime mentor, and still serves on our Elder Advisory Council. **Congratulations Donald on this well deserved honor!**





## Join us for the 2021 Fostering Diversity in Biostatistics Virtual Workshop

The Eastern North American Region (ENAR) of the International Biometric Society will be hosting the 2021 Fostering Diversity in Biostatistics Virtual Workshop. The workshop will focus on connecting underrepresented minority students interested in biostatistics with professional (bio)statisticians in academia, government and industry.

**Dates: March 13 and March 14**  
**Saturday: 3/13/21**  
**Times: 11:00am-2pm EST**  
**Sunday: 3/14/21**  
**Times: 11:00am-2:45pm EST**



**Keynote Speaker:**  
**Dr. Adrian Coles**  
*Senior Research Scientist*  
*Eli Lilly and Company*

The workshop will feature:

- Hands-on computing activities for high school and undergraduate students.
- Roundtable discussions for professionals focusing on supporting, recruiting, and retaining students.
- Panel discussions between students and professionals focusing on career opportunities and mentoring.
- Panel discussions between undergraduate students and graduate students focusing on preparing for a graduate degree in biostatistics.
- An interactive virtual networking expo among undergraduates and graduate students and representatives from schools offering MS and PhD degrees in Biostatistics.
- An interactive virtual networking expo among undergraduates and graduate students and representatives regarding summer programs and job opportunities.

Register here: <https://www.enar.org/meetings/FosteringDiversity/>



2019 Workshop Attendees

To learn more, please contact the workshop co-chairs:

**Felicia Simpson, PhD**  
Assistant Professor  
Department of Mathematics  
Winston-Salem State University  
Phone: (336) 750-2489  
Email: [griffinfr@wssu.edu](mailto:griffinfr@wssu.edu)

**Loni Phillip Tabb, PhD**  
Associate Professor  
Department of Epidemiology and Biostatistics  
Drexel University  
Phone: (267) 359-6217  
Email: [lpp22@drexel.edu](mailto:lpp22@drexel.edu)



## Looking for a new Editor-in-Chief for the AMS Inclusion/Exclusion blog

The AMS [Inclusion/Exclusion blog](#) is in need of a new Editor in Chief. This blog increases awareness of the experiences of marginalized and underrepresented groups in the mathematical sciences, with the goal of building a more inclusive, supportive, and diverse mathematical community.



Given the Editor-in-Chief's central role in providing leadership and vision for the blog, mathematical scientists who identify as members of marginalized or underrepresented groups are especially encouraged to apply. Editors are asked to commit to a three-year term, with an opportunity for both the editor and the AMS to review the commitment each year. AMS blogs are hosted on [blogs.ams.org](https://blogs.ams.org) and maintained in WordPress, an editorially-independent platform that amplifies the voices of members of the mathematical community and furthers the AMS mission of creating connections among mathematicians and advancing research.

With sincere thanks to the current Editor-in-Chief of the Inclusion/Exclusion blog, applications for a new Editor-in-Chief will be reviewed beginning on October 26, 2020. To apply, please submit a writing sample from a blog or a piece written for a similar audience, a CV, a biographical sketch of no more than 200 words, and a statement describing your reason for interest in this role and your vision for the blog (such as examples of topics for blog posts). Applications and questions should be submitted to [education@ams.org](mailto:education@ams.org).

# University of Minnesota Master of Financial Mathematics Fellowship for Opportunity and Advancement

## APPLY NOW!

Do you want a high paying job that uses your mathematics, statistics, and data science skills? Are you intrigued by a career path that will allow you to continually advance and innovate in a field with high demand for people with strong mathematics skills? This fellowship covers all costs to complete the [Master of Financial Mathematics](#) (MFM) at the University of Minnesota's School of Mathematics in 2 years!

The Fellowship value is approximately \$97,000 and is within the established cost of MFM attendance:

- Fully paid tuition
- Annual living stipend of \$25,000 per year
- Subsidized health and dental insurance coverage for up to two years while in the MFM
- Many opportunities for paid summer internships at donor, local, and other national firms

This Fellowship is made possible by the generous gifts from inaugural leadership donors [Cargill Risk Management](#) (CRM) and [Allianz Investment Management](#) (AIM). They frequently hire MFM alumni and are committed to increasing diversity in the University of Minnesota's MFM student body.

The Master of Financial Mathematics prepares students to enter the high paying and fascinating field of quantitative finance which merges the disciplines of mathematics, statistics, economics, data science and finance. The program has a strong academic curriculum and a multifaceted career development support. MFM students develop a foundation in mathematical and statistical modeling, data science and risk analysis within the specific domain of quantitative finance.

Our [alumni](#) work in a wide range of quantitative finance and data science jobs. While in the program get involved with a tight-knit group of classmates, professors and advisors. Interact with our involved alumni and practitioner network in Minneapolis-St. Paul, nationwide and globally. All courses are held at night so full time students can engage in additional academic and career activities during the day.

[Click Here](#) and Apply Now! <https://cse.umn.edu/mcfam/mfm-fellowship-opportunity-and-advancement>

Stop by the University of Minnesota Virtual Booth at the Field of Dreams 2020 Conference on 10/24/20

UNIVERSITY OF MINNESOTA  
Driven to Discover®

JANUARY 4-15, 2021

# MATH-TO-INDUSTRY VIRTUAL BOOT CAMP

The Math-to-Industry Boot Camp is an intense six-week session designed to provide graduate students with training and experience that is valuable for employment outside of academia.

The program is targeted at Ph.D. students in pure and applied mathematics.

## PROGRAM HIGHLIGHTS

- 1 Gain technical and professional skills.
- 2 Work on team projects with an industry mentor.
- 3 Learn about exciting math problems and job opportunities.



FOR MORE INFORMATION  
AND APPLICATION



[ima.umn.edu/2020-2021/SW1.4-15.21](http://ima.umn.edu/2020-2021/SW1.4-15.21)



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World Wide Technology

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# OURFA<sup>2</sup>M<sup>2</sup>

## Online Undergraduate Resource Fair for the Advancement in Academia of Marginalized Mathematicians

For marginalized, underrepresented, and underserved undergraduate mathematicians, it can feel difficult to gather the information you need to build your research career. We've been there, and we've got your back.

*December 19, 2020 on Zoom*

*11:00 am - 7:00 pm Eastern / 8:00 am - 4:00 pm Pacific*

*Registration and information at [is.gd/ourfa2m2](https://is.gd/ourfa2m2)*

This free event will include:

- Panel of directors of summer and semester opportunities
- Panel of students who've participated in such programs
- Crash courses in common undergraduate research fields
- Personal stories of mathematicians' undergrad experiences
- Other talks and activities to network and share resources

*Please register by 11:59 pm Pacific on December 11 to join us!*

*Contact [ourfa2m2@gmail.com](mailto:ourfa2m2@gmail.com) with questions.*

# 2021-2022 MEMBERSHIP

# IAS

INSTITUTE FOR  
ADVANCED STUDY

## PROGRAMS

WOMEN & MATHEMATICS

[math.ias.edu/wam/2021](http://math.ias.edu/wam/2021)

SUMMER COLLABORATORS

[math.ias.edu/summercollaborators](http://math.ias.edu/summercollaborators)

## MEMBERSHIPS

**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 2021-2022, there will be a special-year program, **h-Principle and Flexibility in Geometry and PDEs**, led by Camillo De Lellis and László Székelyhidi, Jr., Distinguished Visiting Professor; however, Membership will not be limited to mathematicians in this field.

**To apply, submit your application  
at [mathjobs.org](http://mathjobs.org) by December 1, 2020.**

**For more information, please visit: [math.ias.edu](http://math.ias.edu)**

# DOE Scholars Program Now Accepting Applications

The DOE Scholars Program introduces students and recent college graduates to the U.S. Department of Energy (DOE) mission and operations.

## Being selected as a DOE Scholar offers the following benefits:

- Stipends starting at \$600 per week for undergraduates and \$650 per week for graduate students and post graduates during the internship period
- Limited travel reimbursement to/from assigned location
- Direct exposure to and participation in projects and activities in DOE mission-relevant research areas
- Identification of career goals and opportunities
- Development of professional networks with leading scientists and subject matter experts

## Eligibility

- Be a U.S. citizen.
- Be an undergraduate, graduate student, or recent graduate of an accredited institution of higher education. Must be pursuing a degree or have received a degree within 5 years of their starting date in a science, technology, engineering or mathematics (STEM) discipline **or** field that supports the DOE mission.

## How to Apply

Applications and supporting materials must be submitted at

<https://www.zintellect.com/Opportunity/Details/DOE-Scholars-2021>

## Deadline

January 4, 2021 11:59:00 PM Eastern Time Zone

## For more information

Visit <https://orise.ornl.gov/doescholars>

Download program flyer: <https://orise.ornl.gov/doescholars/files/doe-scholars-flier.pdf>

Questions? [doescholars@orise.ornl.gov](mailto:doescholars@orise.ornl.gov)

*DOE has partnered with the Oak Ridge Institute for Science and Education (ORISE) to administer this program.*

# Postdoc Positions at the Department of Homeland Security

## Threat Detection Technology Postdoctoral Research Scientist

<https://www.zintellect.com/Opportunity/Details/DHS-TSL-PostDoc-Fellowships-2021>

### Seeking Qualified Candidates Now

The U.S. Department of Homeland Security (DHS) is offering postdoctoral fellowships for their *Visiting Scientist Program* cohort at the Transportation Security Laboratory (TSL). You will join a cohort of postdocs in a new endeavor in threat detection technology and applied research, specifically related to synthetic data generation, testing, and evaluation.

**The program is seeking postdocs that have experience in modeling and large data sets and have a foundational knowledge of the physics or engineering** applicable in learning to create high-fidelity synthetic data. Within the proposed project, there are multiple opportunities available to engage in your applied research and evaluation interests. These include, but are not limited to,

- Deep learning algorithm testing
  - Synthetic signature and/or image generation
  - Data manipulation and quality assurance
- Threat analysis testing and evaluation

**Location:** Atlantic City, NJ

**Anticipated Start Date:** TSL is ready to make appointments immediately. Applications are reviewed on an ongoing basis and fellowships will be filled as soon as qualified candidates are identified.

### Benefits

Stipend starting at \$80,000 based on your academic level and experience

Health Insurance Allowance

Relocation Allowance up to \$5,000, if you are located more than 50 miles one way from the hosting facility.

### Qualifications

Have received or expect to complete all requirements for a Doctoral degree by the anticipated start date.

Applicants currently pursuing a doctoral degree must provide proof of completion of all degree requirements before the fellowship start date.

Be a U.S. Citizen

**Interested in this research opportunity? To learn more and apply, visit:**

<https://www.zintellect.com/Opportunity/Details/DHS-TSL-PostDoc-Fellowships-2021>





# Visiting Internship Project Developer Position Announced at INMAS

## Visiting Internship Project Developer Department of Mathematics University of Illinois

Do you thrive on new challenges and taking responsibility in a collaborative environment? Do you take a strategic approach to your work?

The University of Illinois at Urbana-Champaign, Department of Mathematics seeks applicants for the position of Visiting Internship Project Developer with Inmas, a new program funded by the NSF, with twin hubs at the University of Illinois and Johns Hopkins University.

The Internship Network in the Mathematical Sciences (Inmas) will aid industry, government and non-profit partners in solving strategic challenges by developing internship projects that transform graduate students' career readiness and strengthen the nation's innovation ecosystem.

Your role will be to establish a network of companies and government hosts in Illinois and neighboring states, to recognize project opportunities at these organizations where the mathematical sciences can make a positive impact, and to work with Inmas partner universities to match their talented and enthusiastic students with the Inmas-funded internship positions. Location: Champaign-Urbana, Illinois. Crucial skills: a PhD or ABD in Mathematics, Applied Mathematics, Statistics, or a closely related field, curiosity about the world, and a willingness to learn.

This is a full-time, benefits eligible, visiting academic professional position appointed on a 12-month service basis. Deadline to apply is December 15, 2020. **The expected start date is as soon as possible after the closing date.** For complete details visit <https://jobs.illinois.edu>.

### **Position at Johns Hopkins University in Maryland**

Will be announced soon.

Please keep an eye on the [News & Events](#) page at Inmas.

# MSRI Director Search



**The Mathematical Sciences Research Institute (MSRI) in Berkeley, California invites applications for the position of Director. This appointment is for a five-year term beginning July 1, 2022, with the possibility of renewal.**

MSRI is one of the world's preeminent centers for research in the mathematical sciences and has been advancing knowledge through mathematical research since 1982. Located in the hills above the University of California, Berkeley campus, MSRI hosts some 2,000 mathematicians each year, for stays of up to one academic year. MSRI is independent of UC Berkeley but enjoys a close relationship with the mathematics department and the campus at large. To learn more, visit our website at [msri.org](https://msri.org) or watch this introductory film: [Introduction to the Mathematical Sciences Research Institute \(MSRI\)](#).

MSRI also serves the wider community through activities in mathematics education, public outreach and films for general audiences. Through its public outreach programs, MSRI makes mathematics visible and attractive to those outside the field. MSRI is also widely known for its events highlighting the fundamental role played by mathematics in our cultural heritage. It has been supported from its origins by the National Science Foundation, now joined by the National Security Agency, over 100 Academic Sponsor Institutions, by a range of private foundations, and by generous and farsighted individuals.

The incoming director has a unique opportunity to build on these successes and to lead MSRI in the advancement of its multifaceted mission.

**[View full position details and apply at msri.org](https://msri.org)**

**This is a full-time, exempt position with a competitive compensation, benefits package.** This position is partially funded through a grant from the National Science Foundation (NSF).

## Tenure-track Assistant Professor of Mathematics at Bowdoin College

Bowdoin College's Department of Mathematics invites applications for a tenure-track position at the rank of assistant professor beginning July 1, 2020. A Ph.D. is preferred, but advanced ABDs will be considered. Our search will focus on the fields of probability and combinatorics, areas which complement the research interests of our current faculty. We seek a candidate with the expertise and interest in teaching courses in both probability and elementary statistics as part of their teaching duties. We are particularly interested in mathematicians whose research programs include both theoretical and computational aspects. Bowdoin is building an environment in which students and faculty from across disciplines can employ computational approaches to enrich their work. We welcome applicants who can contribute to this effort.

Bowdoin requires a strong commitment to research and a promise of long-term successful scholarly engagement as well as a dedication to teaching excellence in a liberal arts environment. The College offers internal funding in support of research, a fully-funded, year-long junior sabbatical leave (after three years of teaching and successful reappointment), regular, generously funded, post-tenure sabbaticals as well as conference and travel support. The teaching load is two courses per semester.

Bowdoin is a community that warmly welcomes people of all backgrounds. We encourage applications from candidates committed to the instruction and support of a diverse student population and from those who will enrich and contribute to the College's multifaceted diversity.

We recognize that recruiting and retaining faculty may involve considerations of spouses and domestic partners. To that end, where possible, the College will attempt to accommodate and respond creatively to the needs of partners and spouses of members of the faculty.

Bowdoin College accepts only electronic submissions. Please visit <http://www.MathJobs.org> to submit:

- AMS application cover sheet;
- a cover letter in which you elaborate on your suitability for and interest in this position at Bowdoin College;
- curriculum vitae;
- statement on research;
- statement on teaching;
- statement describing your potential contributions to fostering a diverse and inclusive learning environment
- at least three letters of recommendation, at least one of which must address teaching.

The Department also anticipates a visiting position at the rank of assistant professor, for a term of one year beginning July 1, 2020. Please indicate on the AMS cover sheet if you are also interested in being considered for a visiting position. In addition, please indicate whether you plan on attending the Joint Mathematics Meetings, and if you will be giving a talk.

Review of applications has begun and will continue until the position is filled. We expect to participate in the Mathematical Sciences Employment Center at the Joint Mathematics Meetings in Denver in January 2020.

Founded in 1794 on the Maine coast, Bowdoin is one of the oldest and most selective coeducational, residential liberal arts colleges in the country. Located in Brunswick, a 30-minute drive north of Portland, the College is in an area rich with natural beauty and year-round outdoor activities. Bowdoin's reputation rests on the excellence of its faculty and students, intimate size, strong sense of community, and commitment to diversity (32.7% students of color, 6% international students and approximately 15% first generation college students). Bowdoin College complies with applicable provisions of federal and state laws that prohibit unlawful discrimination in employment, admission, or access to its educational or extracurricular programs, activities, or facilities based on race, color, ethnicity, ancestry and national origin, religion, sex, sexual orientation, gender identity and/or expression, age, marital status, place of birth, genetic predisposition, veteran status, or against qualified individuals with physical or mental disabilities on the basis of disability, or any other legally protected statuses.

For further information about the College and our department, please visit our website: <http://www.bowdoin.edu>

## Tenure-Track Assistant Professor Position in Statistics/Data Science at San José State University

# SJSU | DEPARTMENT OF MATHEMATICS AND STATISTICS

The San José State University Department of Mathematics and Statistics has one faculty position starting August 2021 in Statistics/Data Science. See the complete position descriptions at <http://mathjobs.org>. PhD required by time of appointment. For full consideration, submit all application materials by December 30, 2020.

SJSU is an Affirmative Action/ Equal Opportunity Employer committed to the core values of inclusion, civility, and respect for each individual. A background check (including a criminal records check) must be completed satisfactorily before any candidate can be offered a position with the CSU.

# Faculty Position at Colorado School of Mines in Quantum Information, Electronic Materials and Devices



## Faculty Positions

### Quantum Information | Electronic Materials and Devices

#### Golden, Colorado



**#2**

combining scholarly research and classroom instruction by WSJ



**370**

tenured and tenure-track faculty, research faculty, teaching faculty



**#4**

best engineering college in the United States by Money Magazine in 2020

Colorado School of Mines (Mines) invites applications for multiple tenured/tenure-track faculty positions in three clusters: (1) Computational Science and Data Analytics, (2) Advanced Manufacturing and Materials, and (3) Quantum Information, Electronic Materials and Devices. These cluster hires are an integral part of Mines' strategic effort to grow in areas where we already have significant strengths or where our strengths are emerging. Mines is a great place to engage in education and research in each of these areas as they relate to our Earth, Energy and Environment mission. Mines is especially interested in qualified candidates who can contribute, through their research, teaching, and service, to the diversity and excellence of the academic community.

These tenured and tenure-track positions are anticipated to begin in August 2021. In addition, the new faculty hired could be hired into one of eight departments including the Department of Applied Mathematics and Statistics (AMS). Thus, qualified AMS candidates with research specialization in one or more of the following areas are encouraged to apply to cluster #3 on Quantum Information, Electronic Materials and Devices: quantum information theory; quantum computing, including algorithms and programming; quantum communication; quantum complexity; quantum statistical physics. Note that these positions represent only a fraction of the 12 positions that are being targeted in these three clusters. We seek candidates excited to share in our mission to address the challenges of creating a sustainable global society by educating the next generation of scientists and engineers.

Mines, Colorado's oldest public university, is located in Golden, Colorado, in the foothills of the Rockies, 13 miles west of Denver and 21 miles south of Boulder. Mines has 5,196 undergraduate students and 1,569 graduate students in a broad range of applied science and engineering disciplines. The School's proximity to Denver and Boulder provides opportunities for significant collaboration with government labs and industry as well as other universities. Mines is consistently [ranked](#) among the top engineering colleges in the United States.

**Contact Us**

View complete announcements at <https://jobs.mines.edu/>.

# Faculty Position at Colorado School of Mines in Advanced Manufacturing and Materials



## Faculty Positions

Additive Manufacturing | Biomanufacturing |  
Cybersecurity or Artificial Intelligence

### Golden, Colorado



**#2**

combining  
scholarly research  
and classroom  
instruction by  
WSJ



**370**

tenured and  
tenure-track  
faculty, research  
faculty, teaching  
faculty



**#4**

best engineering  
college in the  
United States by  
Money Magazine  
in 2020

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These tenured and tenure-track positions are anticipated to begin in August 2021. In addition, the new faculty hired could be hired into one of eight departments including the Department of Applied Mathematics and Statistics (AMS). Thus, qualified AMS candidates with research specialization in one or more of the following areas are encouraged to apply to cluster #2 on Advanced Manufacturing and Materials: (1) Additive Manufacturing: computational mechanics and materials; isogeometric analysis; multiscale, macroscale, and multi-physics simulation; and predictive and data-driven modeling, (2) Biomanufacturing: computational mechanics and materials; and high throughput/combinatorial discovery, (3) Cybersecurity or Artificial Intelligence: biosecurity and bioinformatics; data science; predictive modeling; machine learning, and (4) Advanced Manufacturing: modeling and optimization; statistical learning; statistical inference. Note that these positions represent only a fraction of the 12 positions that are being targeted in these three clusters. We seek candidates excited to share in our mission to address the challenges of creating a sustainable global society by educating the next generation of scientists and engineers.

Mines, Colorado's oldest public university, is located in Golden, Colorado, in the foothills of the Rockies, 13 miles west of Denver and 21 miles south of Boulder. Mines has 5,196 undergraduate students and 1,569 graduate students in a broad range of applied science and engineering disciplines. The School's proximity to Denver and Boulder provides opportunities for significant collaboration with government labs and industry as well as other universities. Mines is consistently [ranked](#) among the top engineering colleges in the United States.

View complete announcements at <https://jobs.mines.edu/>.

**Contact Us**

# Faculty Position at Colorado School of Mines in Computational Science and Data Analytics



## Faculty Positions

### Computational Science and Data Analytics

#### Golden, Colorado



**#2**

combining scholarly research and classroom instruction by WSJ



**370**

tenured and tenure-track faculty, research faculty, teaching faculty



**#4**

best engineering college in the United States by Money Magazine in 2020

Colorado School of Mines (Mines) invites applications for multiple tenured/tenure-track faculty positions in three clusters: (1) Computational Science and Data Analytics, (2) Advanced Manufacturing and Materials, and (3) Quantum Information, Electronic Materials and Devices. These cluster hires are an integral part of Mines' strategic effort to grow in areas where we already have significant strengths or where our strengths are emerging. Mines is a great place to engage in education and research in each of these areas as they relate to our Earth, Energy and Environment mission. Mines is especially interested in qualified candidates who can contribute, through their research, teaching, and service, to the diversity and excellence of the academic community.

These tenured and tenure-track positions are anticipated to begin in August 2021. In addition, the new faculty hired could be hired into one of eight departments including the Department of Applied Mathematics and Statistics (AMS). Thus, qualified AMS candidates with research specialization in one or more of the following areas are encouraged to apply to cluster #1 on Computational Science and Data Analytics: statistical learning and data science with particular interest in algorithm analysis and development; high performance computing; applications to scientific and engineering modeling as well as statistical and machine learning and data analysis; applications to geostatistics and other problems of societal relevance that address earth and environmental science. Note that these positions represent only a fraction of the 12 positions that are being targeted in these three clusters. We seek candidates excited to share in our mission to address the challenges of creating a sustainable global society by educating the next generation of scientists and engineers.

Mines, Colorado's oldest public university, is located in Golden, Colorado, in the foothills of the Rockies, 13 miles west of Denver and 21 miles south of Boulder. Mines has 5,186 undergraduate students and 1,569 graduate students in a broad range of applied science and engineering disciplines. The School's proximity to Denver and Boulder provides opportunities for significant collaboration with government labs and industry as well as other universities. Mines is consistently [ranked](#) among the top engineering colleges in the United States.

**Contact Us**

View complete announcements at <https://jobs.mines.edu/>.



## MATH ALLIANCE MEMBER INSTITUTION

### Assistant Professor in Applied Mathematics at University of Colorado, Boulder Position Announcement

The Department of Applied Mathematics at the University of Colorado Boulder (CU Boulder) encourages applications for a tenure track faculty position at the Assistant Professor level to begin August 2021. We are looking for candidates in the area of computational mathematics, with possible areas of emphasis including numerical analysis of differential equations, randomized numerical linear algebra, optimization and inverse problems, scientific computing, and related areas.

This position requires a commitment to supporting the diverse student populations in our department and its associated campus educational mission, a dedication to teaching in our undergraduate and graduate programs, and developing and conducting an innovative independent research program. The department firmly believes that the effectiveness and creativity of a group is strengthened by contributions from a broad range of perspectives. As such, we particularly welcome candidates from groups that are historically underrepresented in our field and/or candidates that have demonstrated leadership toward building an equitable and inclusive scholarly environment.

The University of Colorado Boulder is committed to building a culturally diverse community of faculty, staff, and students dedicated to contributing to an inclusive campus environment. We are an Equal Opportunity employer, including veterans and individuals with disabilities.

**For more information:** <https://jobs.colorado.edu/jobs/JobDetail/?jobId=27537>

Applications submitted by **January 30, 2021** will receive full consideration. The position will remain open until filled.

Note: Application materials will not be accepted via email. For consideration, applications must be submitted through [CU Boulder Jobs](#).





## MATH ALLIANCE MEMBER INSTITUTION

### Postdoctoral Fellowship in Environmental Health Biostatistics at University of Rochester



UNIVERSITY of  
**ROCHESTER**  
MEDICAL CENTER

The Department of Biostatistics and Computational Biology (DBCBC) at the University of Rochester (UR) announces an opening for a postdoctoral traineeship in Environmental Health (EH) Biostatistics, funded by an NIEHS T32 training grant. The appointee will develop and apply novel statistical methodology for projects related to EH, under the mentorship of a Biostatistics faculty trainer (Drs. Sally W. Thurston, Matthew N. McCall, Brent Johnson, Tanzy Love, Michael McDermott, David Oakes, or Robert Strawderman). The specific methodological focus may be based in part on the trainee's interests, and will involve co-mentorship from a leading environmental health researcher. Examples of EH topics to which methodology may be developed and applied include studies of (a) the associations between air pollution exposure and biomarkers thought to indicate increased risk of future cardiac events; (b) effects of pre- and post-natal mercury exposure from fish consumption on multiple outcomes in childhood and adolescence; (c) heterogeneous responses to environmental exposures among a population of cells; and (d) changes in microglial morphology in response to exposure. Methodological expertise among T32 faculty trainers includes Bayesian MCMC methods, models for multiple outcomes, latent variable models, measurement error, missing data, causal inference, survival analysis, clustering, statistical genomics, molecular systems biology, and bioinformatics. The appointee will also receive training in advanced biostatistics and in toxicology, and be involved in other collaborative work with EH researchers. For more information see <https://www.urmc.rochester.edu/biostat/training-grant.aspx>.

**Position qualifications:** In accordance with NIEHS requirements, trainees must be a US citizen or permanent resident, and must have completed a doctoral degree in statistics or a related subject by the appointment start date. We seek a highly motivated candidate with a strong statistical background and excellent programming and communication skills.

**Appointment:** The position is available for 12 months initially with the possibility of renewal for a second year. We anticipate an early 2021 start date, but seek the best candidate even if the start date is delayed.

**To apply:** A cover letter describing research experience, a current CV and contact information for three references should be sent by email to [Sally\\_Thurston@urmc.rochester.edu](mailto:Sally_Thurston@urmc.rochester.edu) (please reference "NIEHS postdoctoral position" in the subject line).

*The UR and its Medical Center (URMC) are equal opportunity and affirmative action employers, and share a vision of cultivating a diverse and inclusive environment that guides and transforms its approaches to education, research, healthcare, and community partnerships. As a member of both institutions, the DBCBC is strongly committed to fostering and supporting a workplace culture inclusive of people regardless of their race, ethnicity, national origin, gender or gender identity, sexual orientation, age, physical abilities, religious beliefs, veteran status or any other factor that cannot lawfully be used as a basis for recruiting or hiring decisions. Any applicant that meets our stated position qualifications is strongly encouraged to apply.*



## MATH ALLIANCE MEMBER INSTITUTION

### Tenure Track Faculty Position in Biostatistics at University of Rochester



UNIVERSITY of  
**ROCHESTER**  
MEDICAL CENTER

The Department of Biostatistics and Computational Biology (DBCBC) at the University of Rochester (UR), in partnership with the Del Monte Institute for Neuroscience, is seeking highly qualified applicants for an open rank tenure-track faculty position. Academic rank will be commensurate with

credentials. The Department and Institute have a strong preference for attracting applicants with dual interests in the development of statistical methodology (theory and/or computation) and collaborative scientific research. This is a targeted search, with a focus on candidates with research interests in statistical or computational neuroscience, particularly brain imaging (including MRI) or neural signal data analysis, ideally along with training or expertise in areas such as high-dimensional data analysis, spatial temporal data analysis, machine learning, data integration and data visualization. An explicit expectation of this position involves engaging in collaborative research with investigators and trainees in the Del Monte Institute for Neuroscience, the Intellectual & Developmental Disabilities Research Center, the Center for Advanced Brain Imaging & Neurophysiology, and related groups that overlap with these constituencies.

The UR DBCBC currently has 17 tenure-track and 3 research track faculty; several postdoctoral fellows, masters-level statisticians, and programmers; and 28 graduate students, of which 26 are pursuing a PhD degree in statistics. Most department faculty have active independent methodological research interests and collectively we span a broad cross-section of topics in both biostatistics and statistics. In addition to outstanding potential for research, successful candidates must also demonstrate a strong commitment to graduate teaching and advising in Statistics. The Del Monte Institute for Neuroscience (DMIN) supports over 100 faculty across the UR campus and is home to the Neuroscience Graduate Program, with 55+ current PhD students enrolled. The successful candidate would be expected to actively participate in the activities of the Institute and to contribute to the graduate neuroscience program. More information about DBCBC and Neuroscience can respectively be found at <https://www.urmc.rochester.edu/biostat.aspx> <https://www.urmc.rochester.edu/del-monte-neuroscience.aspx>

**Position Qualifications:** Doctoral degree in biostatistics, statistics or strongly related discipline working in areas directly relevant to this targeted search. Candidates must have excellent oral and written communication skills. Candidates for Associate and Full Professor positions should also have an established track record of peer-reviewed publications in leading journals, demonstrated success in attracting extramural research funding, and evidence of teaching excellence at the graduate level.

**To apply:** Candidates should submit a brief cover letter, a current CV, and statements covering your current research and teaching interests and goals for the future. In addition, candidates are asked to submit a Statement of Contribution to Diversity, Equity and Inclusion with their application materials. Up to 3 published or submitted works can be included with your application. Assistant professor candidates should arrange for 3 letters of reference to be sent directly from the recommender; candidates for higher ranks should supply the contact information for at least 3 supporting references. The review of applications will begin immediately, and continue until this position is filled. Please submit all required materials by email to [BSTFacultySearch@urmc.rochester.edu](mailto:BSTFacultySearch@urmc.rochester.edu).

*The UR and its Medical Center are equal opportunity and affirmative action employers, and share a vision of cultivating a diverse and inclusive environment that guides and transforms its approaches to education, research, healthcare, and community partnerships. As members of both institutions, the DBCBC and DMIN are strongly committed to fostering and supporting a workplace culture inclusive of people regardless of race, ethnicity, national origin, gender or gender identity, sexual orientation, age, physical abilities, religious beliefs, veteran status or any other factor that cannot lawfully be used as a basis for recruiting or hiring decisions. Any applicant that meets our stated position qualifications is strongly encouraged to apply.*



# MATH ALLIANCE MEMBER INSTITUTION

## University of Massachusetts, Amherst Post-doctoral Researcher Position Announcement

University of  
Massachusetts  
Amherst

School of Public Health & Health Sciences  
Department of Biostatistics & Epidemiology

Biostatistics Post-doctoral Research Associate  
Reich Lab @ University of Massachusetts Amherst

Target start date: 1/4/2021

Application: <https://careers.umass.edu/amherst/en-us/job/506573/postdoctoral-research-associate>

### Job Description:

The Department of Biostatistics and Epidemiology at the University of Massachusetts Amherst is hiring a post-doctoral researcher. The post-doc will be responsible for developing forecasting models for infectious diseases including COVID-19 and influenza, as well as ensemble methods to combine forecasts from multiple models. Researchers at the Reich Lab (<http://reichlab.io/>) are leaders in this field; the lab is currently leading the COVID-19 Forecast Hub, a dynamic global collaborative research initiative (<https://covid19forecasthub.org/>), and we have previously led similar initiatives for forecasting influenza. We have close collaborative relationships with many academic groups and public health agencies at the state and national level.

Specific projects will be determined taking into account the post-doc's interests and experience. Possible topics include ensemble forecasting of novel pathogens; mechanistic or statistical time series models for forecasting disease progression; using hierarchical structure or copulas to capture dependence across time and space; and the use of digital surveillance data to improve forecasts. In addition, depending on their interest, the post-doc could take advantage of professional development opportunities in areas such as leading large collaborative projects, writing grants, mentoring undergraduate and graduate students, and, if desired, obtaining some classroom teaching experience.

### Requirements:

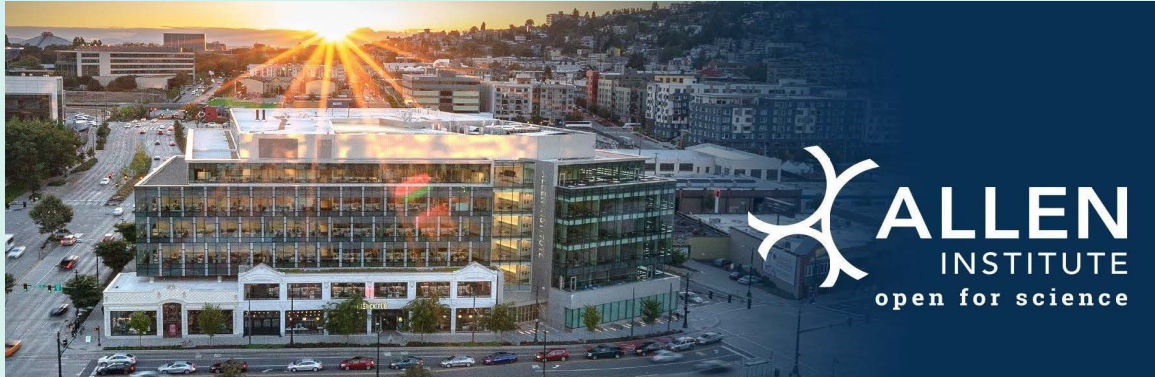
- Strong quantitative background and formal training in statistics, machine learning, data science, computational epidemiology, or a closely related field.
- Demonstrated proficiency with R or python is required.
- Doctoral Degree must be earned by time of appointment.

The target start date for this position is 1/4/2021, although earlier or later start dates could be negotiated. Review of applications will begin on 11/5/2020 and will continue until the position has been filled. The position would be for one year, with renewal based on available funding and performance. The University of Massachusetts Amherst is an Affirmative Action/Equal Opportunity Employer. Women and members of minority groups are encouraged to apply, and in assessing many qualifications of each applicant of any race or gender, we would favorably consider an individual's record of conduct that includes students and colleagues with broadly diverse perspectives, experiences and backgrounds in educational, research or other work activities.



# MATH ALLIANCE MEMBER INSTITUTION

## Postdoc Position at University of Washington



### JOIN OUR TEAM

#### **Scientist I/II – Machine Intelligence**

Understanding the brain constitutes one of the foremost scientific challenges we face. An important aspect of understanding cortical function is to connect the anatomical construction of neural networks with the physiological response characteristics as well as the overall computation performed by the circuit. This effort will draw upon techniques and knowledge from machine learning, computer science, and biology.

We seek an exemplary scientist to join our efforts in understanding the cortical basis of computation. The successful candidate will demonstrate a facility with modern machine learning approaches as well as a strong theoretical foundation in statistics and machine learning. The ideal candidate will also have a strong knowledge of neuroscience, both experimental and computational, and reinforcement learning.

The successful candidate will pursue the construction and analysis of anatomically constrained, task-trained artificial neural network models of cortical function, with the aim of understanding the computational strategies and function of cortex. They will perform data analysis on neurophysiological data and work closely with experimentalists to understand our data.

#### **Essential Duties**

- Develop and analyze task-trained, anatomically constrained artificial neural network models.
- In close collaboration with experimentalists and other analysts, work as a team member to analyze large-scale neurophysiological activity.
- Contribute scientific ideas based on the analysis results.
- Develop and maintain computational and associated software tools.
- Publish/present findings in peer-reviewed journals and at scientific conferences.
- Maintain clear and accurate communication with supervisor and other team members.
- Communicate effectively and appropriately to the research community inside and outside the organization.

#### **Required Education and Experience**

- PhD degree in Computer Science, Computational Neuroscience, or related discipline.
- 0-2 years of post-doctoral experience.
- Strong computational/data analysis skills; ideally programming in Python.
- Familiarity with PyTorch or TensorFlow.
- Track record of scientific excellence and independent thinking.

#### **Preferred Education and Experience**

- Excited about team science and open science.
- Ability to meet aggressive timelines and deliverables in a collaborative environment.
- Excellent written and verbal communication skills.
- Experience in systems neuroscience (especially *in vivo* neural measurements and/or sensory neuroscience).
- Excellent organizational skills and attention to detail.

**For more information or to apply, please visit:**

<https://alleninstitute.org/what-we-do/brain-science/careers/job-search/>



# MATH ALLIANCE MEMBER INSTITUTION



## Tenure-Track Assistant Professor Positions in Biostatistics at University of Washington

The Department of Biostatistics within the School of Public Health at the University of Washington (UW) is a leading center of excellence for the development and application of statistical methods and theory in health sciences. It has longstanding partnerships with many local research institutes and with the Department of Statistics, with which it shares core courses in its rigorous training programs. More information can be found at <https://www.biostat.washington.edu/about>.

**The Department of Biostatistics invites applications for two faculty positions at the rank of Assistant Professor (tenure-track).** These are full time (100% FTE), 12-month service period positions with an anticipated start date of Fall 2021. Salary will be based on qualifications and experience.

The successful candidates will be expected to:

- i. develop and maintain a high-impact statistical research program supported by external grants;
- ii. participate in collaborative research with members of the Department, its partners and/or the greater scientific community;
- iii. provide educational leadership in the Department's teaching program, including formal classroom teaching and mentoring of student research, with emphasis on innovative pedagogy and attention to equity, diversity and inclusion;
- iv. contribute to the departmental community by engaging in seminars and other departmental outreach activities including serving on key committees;
- v. actively promote diversity, equity and inclusion in the Department and the field of biostatistics;
- vi. play an active role in Department, School and/or University governance (and eventually leadership).

**QUALIFICATIONS.** Candidates must have a PhD (or foreign equivalent) in biostatistics, statistics, or a related field. Research areas of interest include but are not limited to: imaging, functional data analysis, and clinical trials. Candidates must also have a record of or strong potential for high-quality research, teaching, and independent funding.

**APPLICATION INSTRUCTIONS.** All applicants are asked to submit:

1. a cover letter describing what you see as your future potential contribution (e.g., scientific leadership, pedagogy, diversity) to the discipline and Department;
2. an up-to-date curriculum vitae detailing publication, teaching and (if applicable) funding history;
3. a statement describing demonstrated commitment and activity in support of diversity, equity and inclusion;
4. three (3) letters of recommendation.

This institution is using Interfolio to conduct this search. Applicants can submit all application materials free of charge via <https://apply.interfolio.com/79328>. Review of applications will begin on *December 1, 2020*, continuing until positions are filled. Submitting all required documents by *December 1, 2020* is strongly encouraged for full consideration.

**CONTACT INFORMATION.** For questions, please contact the Biostatistics HR Team at [bacadhr@uw.edu](mailto:bacadhr@uw.edu).

**COMMITMENT TO DIVERSITY.** The Department recognizes that health disparities stem from inequity, and encourages and supports the multiple identities of staff, faculty, and students including, but not limited to, socioeconomic status, race, ethnicity, language, nationality, sex, sexual orientation, gender identity and expression, culture, geography, spiritual practice, mental and physical disability, and age. It strives to develop and maintain increased representation and recognition of each dimension of diversity among its faculty, staff, and students. The department has an active Equity, Diversity and Inclusion committee. A summary of the mission and the activities of that committee can be found online ([www.biostat.washington.edu/about/diversity](http://www.biostat.washington.edu/about/diversity)). The UW School of Public Health is also committed to fostering a diverse academic community. Diversity, equity and inclusion are considered essential to its mission. Applications from faculty with demonstrated research, training and service experience in this area are welcome. More information is available online (<http://sph.washington.edu/diversity/>). The University of Washington is committed to building diversity among its faculty, librarian, staff, and student communities, and articulates that commitment in the UW Diversity Blueprint ([www.washington.edu/diversity/diversity-blueprint](http://www.washington.edu/diversity/diversity-blueprint)). Additionally, the University's Faculty Code recognizes faculty efforts in research, teaching and/or service that address diversity and equal opportunity as important contributions to a faculty member's academic profiles and responsibilities ([www.washington.edu/admin/rules/policies/FCG/FCCH24.html#2432](http://www.washington.edu/admin/rules/policies/FCG/FCCH24.html#2432)).

**EQUAL EMPLOYMENT OPPORTUNITY.** The University of Washington is an affirmative action and equal opportunity employer. All qualified applicants will receive consideration for employment without regard to race, color, creed, religion, national origin, sex, sexual orientation, marital status, pregnancy, genetic information, gender identity or expression, age, disability, or protected veteran status.



## MATH ALLIANCE MEMBER INSTITUTION

### Tenure-Track and Open-Rank Professor Positions in Applied Mathematics at University of Washington



The Department of Applied Mathematics at the University of Washington announces the availability of a tenure-track and an open-rank faculty position to start in September 2021. Candidates will be considered for the Assistant, Associate, or Full Professor rank, either tenure-track or tenured, depending upon experience and qualifications. Candidates with expertise in any areas of applied mathematics are encouraged to apply. Areas of emphasis within the department for these searches are (in alphabetical order) data science, dynamical systems, numerical analysis, scientific computing and stochastic analysis. Applicants should hold a PhD, or foreign equivalent, in (applied) mathematics or a related field of application by the start of the appointment. Applicants should demonstrate accomplishments in research and a commitment to excellence in teaching, service, and mentorship, and to promoting diversity.

The department has current research strength in scientific computing and numerical analysis, nonlinear waves and coherent structures, mathematical biology, atmospheric science and climate modeling, mathematical methods, mathematical finance, data-driven methods, optimization etc., and has a long tradition of interdisciplinary collaboration. Candidates can complement these existing strengths or they can bring in new areas of expertise. See <http://depts.washington.edu/amath/> for more details. The Department is committed to fostering a diverse and inclusive academic community: visit <https://amath.washington.edu/diversity>. All UW faculty members engage in teaching, research, and service.

To apply, applicants should upload all application materials to <http://apply.interfolio.com/78103>. Specifically, the following materials should be provided by November 1, 2020:

- Cover letter or AMS cover sheet,
- Curriculum vita,
- Research statement,
- Teaching statement (addressing your experiences, teaching and mentoring philosophy, and innovation) and evaluations (if available),
- Diversity statement (addressing how your professional experiences, background and philosophy demonstrate your commitment to promoting diversity, equity and inclusion), and by November 15, 2020.

At least four letters of reference, one of which addresses teaching, should be uploaded directly to Interfolio by the letter writers.

If you have any questions, contact Erica Coleman at [ecoleman@uw.edu](mailto:ecoleman@uw.edu).

*The University of Washington is building a culturally diverse faculty and staff and strongly encourages applications from women, minorities, individuals with disabilities and covered veterans. The University is the 2006 recipient of the Alfred P. Sloan award for Faculty Career Flexibility, and is committed to supporting the work-life balance of its faculty. Our NSF-supported ADVANCE program (<http://advance.washington.edu>) is dedicated to increasing the participation of women in STEM disciplines.*



## MATH ALLIANCE MEMBER INSTITUTION

### Postdoc Fellowship at University of Washington



The University of Washington Computational Neuroscience Center is seeking applications for a Postdoctoral Fellowship at the Swartz Center for Theoretical Neuroscience. The fellow will join the vibrant, collaborative UW theoretical neuroscience community. This fellowship provides the unique opportunity to work with any of the CNC's faculty members, with the freedom to design and develop projects and new collaborations.

Participating faculty members' research includes theory, computation and data analysis, and members interact extensively with colleagues in quantitative experimentation. Experimental work available for close collaboration at UW includes groups performing large-scale recording (electrophysiology, imaging) and neural manipulation (optogenetics) in diverse behavioral tasks. Collaborations with the Allen Institute for Brain Science are also possible.

The Fellowship is available with a starting date in fall 2020, and applications will be considered on a rolling basis until the positions are filled. The fellow will be able to work remotely. To apply please send your CV, a 1-2 page summary of research accomplishments, and a 1-2 page statement of research interests, to [cncadmin@uw.edu](mailto:cncadmin@uw.edu), please arrange to have 3 letters of reference sent to the same email address.

Please address any questions or inquiries to [cncadmin@uw.edu](mailto:cncadmin@uw.edu) as well!

## Equity in Action Presidential Postdoctoral Fellowship at Kean University

Kean University is a world-class, vibrant and diverse institution offering more than 50 undergraduate majors, 60-plus graduate options and six doctoral degree programs. Kean distinguishes itself through excellence in academics, strategic investments in both research and cultural facilities and initiatives and a commitment to the success of every student. Dedicated to preparing students for rewarding careers, lifelong learning and fulfilling lives, Kean offers a broad range of disciplines, the expertise of a diverse and world-savvy faculty and a student-centered learning environment and campus community. The University sits on three adjoining campus sites in Union County, New Jersey covering 180 acres, two miles from Newark Liberty International Airport and thirty minutes from New York City, with additional locations in Ocean County, New Jersey – *Kean Ocean* and Jefferson Township, New Jersey – *Kean Skylands*. Kean University also operates a unique, additional location in Wenzhou, China, where development of a full-scale campus is currently underway.

The Equity in Action Presidential Postdoctoral Fellowship is designed to increase the diversity of Kean University's research, teaching, and clinical faculty. Kean seeks to attract promising researchers, clinicians, and educators from different backgrounds, races, ethnic groups, and other diverse populations whose life experiences, research experiences, and employment backgrounds will contribute significantly to Kean's academic mission and enhance the environment and learning opportunities for all Kean students.

Fellowships may be awarded for postdoctoral training in any field of study at Kean. Successful candidates will receive a two-year lecturer appointment with a reduced course load designed to provide ample opportunities for highly mentored scholarly and research training. Courses and workshops will be available to enhance the research skills necessary for securing a tenure-track faculty position at Kean or elsewhere at the conclusion of the fellowship.

Applications will be accepted and reviewed on a rolling basis through January 15, 2021. Interviews and offers will be made through March 1, 2021. Start dates will be arranged in consultation with the faculty mentor and may begin as early as July 2021, but no later than September 1, 2021.

For more information on the Equity in Action Presidential Postdoctoral Fellowship and to apply, please visit: <https://www.kean.edu/equity>.