

Math Alliance News December 2020 Volume 8, Issue 9

A publication of the Corporation for the National Math Sciences Alliance



OURFA²M² Virtual Dec. 19, 2020

Math-To-**Industry Boot** Camp Virtual Jan. 4-15, 2021

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

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

ENAR Fostering Diversity in Biostat Workshop Virtual 1 4 1 Mar. 13-14, 2021

Thoughts from the Director...



David Goldberg Executive Director of the Math Alliance

New year...couldn't come soon enough

I hope everyone in the Math Alliance community is doing well, keeping safe, taking care of themselves, and their (extended) families. As we come to the end of the semester, I am hearing a lot from colleagues about how things have gone on campuses this semester, and it is clearly a mixed bag. Not unlike the current state of affairs for us all – we approach holidays knowing we shouldn't (and most won't) celebrate them as we usually do while also seeing that there is some hope that by sometime next year our lives will be something that more closely resembles what we would call normal. Of course, there is a very wide range of what normal means to people, and some

parts of those disparate senses of normality come from the underlying conditions that organizations like us are working to address. As we have remarked before in these columns, COVID-19 has accentuated many issues for people, from the personal to the societal, and it will be important that we take our enhanced understanding of those things forward as we, hopefully, move to a post-pandemic world sometime in the next year.

The Joint Math Meetings are coming up as a virtual event in January, and the schedule for our fourth annual Math Alliance special session (January 6&7) appears elsewhere in this newsletter. (NOTE: Those times are all Mountain Standard (MST)). Let's start 2021 off by supporting our recent and soon to be Math Alliance doctorates who will be speaking in this session!! It would be great to have a strong turnout from our community in attendance, so please come to at least a few of these talks if you can. I hope to see you there.

I want to call your attention to the website of our partners at the Institute for Mathematics and its Applications (IMA) which houses the videos of content from the 2020 Virtual Field of Dreams Conference, and especially recommend to you the Fields of Success panel, and the Plenary Conversations with Ranthony Edmonds, and Donald Cole. As I mentioned in last month's newsletter, the conversation with Professor Cole, which was our closing event, has been cited by several as particularly outstanding. Also, a reminder about our YouTube channel, where you can find nine in depth interviews with Math Alliance Scholars who hold doctorates conducted by the very same Donald Cole! There are also videos from past Field of Dreams Conferences, and look for more content coming soon.

While 2020 has certainly been a trying year for almost all of us (in fact it is hard to imagine anyone would rank this year very highly) we should remember that not all the news was bad. In fact, the Math Alliance continues to grow and strengthen in our mission throughout the pandemic – growing in size, scope, and impact. This is largely due to you, our community, who support us so strongly and who engage in the hard and necessary work of bringing about change. Thanks to all of you for this gift to me, as it is the accomplishments and good thoughts so many of you share with me as we proceed through this time that keep my spirits up, or at least quite a bit higher than they would be otherwise.

I will take the liberty of speaking for the Math Alliance leadership, in wishing you a safe, festive, and rewarding holiday season, and we surely wish you a great 2021. I am hopeful that when we write next December's newsletter, we'll be looking at 2022 with renewed optimism

A good holiday and Happy New Year to all!!

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

NOTE: These times are all Mountain Standard (MST)

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
- <u>10:30 a.m.</u> <u>Decompositions of Ehrhart h- Polynomials for Rational Polytopes.</u> **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.

- <u>2:15 p.m.</u> <u>Non-uniform continuous dependence for Euler equations in Besov space.</u> **José D Pastrana Chiclana***, Northwestern University
- <u>2:45 p.m.</u> <u>Translation covers of platonic solids and their monodromy groups.</u> **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
- <u>5:15 p.m.</u> <u>Maximal Metrics for the Conformal Laplacian</u>. **Samuel Pérez-Ayala***, University of Notre Dame
- <u>5:45 p.m.</u> 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)

NOTE: These times are all Mountain Standard (MST)

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 **Talita Perciano**, Lawrence Berkeley National Laboratory



Things to note in the AMS Notices

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

2021 WAM (Women and Mathematics) Program

The 2021 WAM (Women and Mathematics) program is accepting applications for their one week math and mentoring program May 22-28, 2021. It is open to undergraduates, grads, postdocs and new faculty.

The plan is to have an e-program this year due to the pandemic.

Information about this year's program, including prerequisites and the application link, can be found here:

https://www.ias.edu/math/wam/2021

Paid Summer Research Programs!

PathwaysToScience.org

Most programs offer both a stipend and housing and travel support. Programs range across all STEM disciplines and all areas of the country! Deadlines are coming right up for most programs!

550+ programs for undergraduates

50+ programs for graduate students

Use our advanced search page to filter programs by multiple criteria

Contact us with your level of study and disciplinary interests for help finding a program: ldetrick@ibparticipation.org

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/doe-scholars-flier.pdf

Questions? 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.

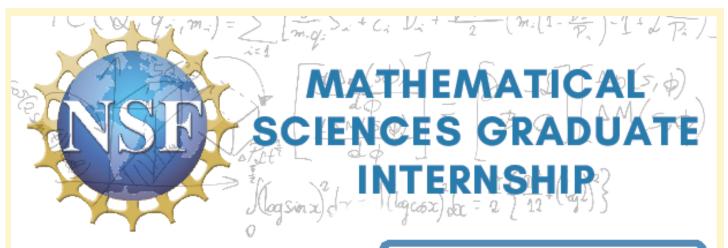
If you would like to talk about these opportunities, discuss your personal statement for your application, or any questions, feel free to email us at Adam.Sheffer@baruch.cuny.edu or sim1@williams.edu.

Graduate School GRE Requirements

Are you applying to Graduate School?

We have added an updated list of schools with their updated GRE requirements to our webpage. Here is the <u>link</u> to find that information. The information was compiled and provided by Emily Winn of Brown University.

We have other <u>resources</u> available on our webpage to help you with your applications.



Application Deadline:

January 13, 2021

4:00 PM EST

Learn the application
of advanced
mathematical and
statistical techniques
to "real world"
problems, whether
you plan to pursue an
academic or
nonacademic career!

U.S. citizenship not required.

Benefits:

- \$1200 per week stipend
- Relocation up to \$2,000 Eligibility:
- Full-time doctoral student pursuing mathematics, statistics or applied math
 Minimum 3.00 GPA

Location:

Various locations across U.S.

APPLY NOW!

https://zintellect.com/ Opportunity/Details/NSF-MSGI-2021





ASPIRE Medical Research Experience

Spend your next summer preparing for a professional, graduate-level program in the allied health field. The Ohio State University's ASPIRE medical research experience offers laboratory research and professional development, along with a generous stipend, to prepare students to be competitive in an MD, MD/PhD, or other health field.

Why ASPIRE?

Communities across the U.S. continue to be impacted by disparities in healthcare access and health outcomes related to social determinants, implicit bias and inadequate access to translational research and culturally competent health care. Research experience and training for students from communities affected by healthcare disparities are keys to improving workforce diversity and unlocking collaborative solutions to these complex problems.

Program Overview

Students will begin the program with meetings once or twice a week in a research lab during the spring semester, followed by eight to 10 weeks of experience in a research lab during the summer, and monthly meetings throughout the fall and spring semesters. Students enrolled in the program will be assigned to a principal investigator, working on a National Institutes of Health-funded grant. The principal investigator (PI) and the student may choose to extend the experience to two summers. (Stipend amounts for the PI, instructors and undergraduate students will be determined accordingly.)

Learning Experiences

- Completion of a geographic opportunity map of the neighborhood and city where the undergraduate student lived to help identify social determinants of health
- Attendance at quarterly Group on Health Equity conferences
- Attendance at implicit bias awareness and mitigation classroom instruction
- Membership in a minority student organization, e.g., Society for the Advancement of Chicanos/ Hispanics and Native Americans in Science (SACNAS), Student National Medical Association Minority Association of Pre-medical Students (SNMA-MAPS)
- Mentoring by a medical student or biomedical science graduate student



Who Should Apply?

The Ohio State University ASPIRE program encourages students from the following groups to apply:

- Students from groups underrepresented in medicine and biomedical sciences: African American, Hispanic or Latino, Native American or Alaska Native, Native Hawaiian or other Pacific Islander
- Students with disabilities, defined as those with a physical or mental impairment that substantially limits one or more major life activity
- Students from economically and/or educationally disadvantaged backgrounds
- Others whose backgrounds and experiences would bring diversity to the field

Additional Inclusion Criteria:

- Undergraduate students in their sophomore or junior year at Ohio State
- A letter of recommendation from at least one science professor
- Undergraduate transcripts
- A minimum GPA of 3.0

APPLICATIONS WILL BE ACCEPTED UNTIL JANUARY 29, 2021

For more information, call 614-685-9764 or email aaron.thomas@osumc.edu.go.osu.edu/medicine_aspire

The Ohio State University College of Medicine

ASPIRE Medical Research Experience 1072 Graves Hall 333 W. 10th Ave., Columbus, OH 43210 614-685-9764

medicine.osu.edu



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 Postering 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 bere: 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

Loni Phillip Tabb, PhD

Associate Professor

Department of Epidemiology and Biostatistics

Drexel University Phone: (267) 359-6217

Email: lpp22@drexel.edu





Join us for this Winter Program!

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.
- Work on team projects with an industry mentor.
- Learn about
 exciting math
 problems and job
 opportunities.



FOR MORE INFORMATION
AND APPLICATION



ima.umn.edu/2020-2021/SW1.4-15.21







2020 INDUSTRIAL SPONSORS

D-Wave Systems / Exxonmobil / Gro Intelligence / ITM TwentyFirst LLC / World Wide Technology



University of Minnesota

Driven to Discover*



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 <u>is.gd/ourfa2m2</u>

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 with questions.

University of Minnesota Master of Financial Mathematics (MFM) Two Fully Covered Fellowships for the Incoming Class of 2021

We are pleased to let you know about the University of Minnesota's Master of Financial Mathematics (MFM) program. We are now accepting applications for the incoming class of fall, 2021. Oftentimes STEM students are not aware that they are a great fit for the field of quantitative finance. We invite you to consider our MFM and the many opportunities we provide, which include two special, fully funded fellowships, each with an approximate value of \$94,000 to cover tuition and living costs for the two-year MFM.

What is the MFM?

The MFM will prepare you to enter the high-paying, fascinating and satisfying field of quantitative finance, where you can combine skills in mathematics, statistics and data science to do detailed risk modeling. Examples of "quant" jobs include derivatives traders, quantitative risk analysts, investment research analysts, model validators, actuaries, risk regulators, data scientists and academics with a focus on quantitative finance and related domains.

Benefits of the MFM:

- Ninety percent placement rate over the past 5 years
- Highly supportive, tight-knit community of students and alumni
- The MFM program's curriculum, combining theory and practice, is designed by practitioners
- The MFM is housed in the U of MN School of Mathematics, rated 9th in the U.S. for Applied Mathematics
- Strong alumni network—they work in wide variety of firms-The Federal Reserve Bank, Amazon, Slack, Citi, Travelers, Morgan Stanly, and Allianz. They also move on to PhD programs that further support their interest in quantitative finance.

Learn more: MFM homepage, MFM Fellowships, Attend an Information Session

- First Round of Applications are due by 2/1/21;
- We accept applications after this date for the second round of applications reviewed between March and May of 2021
- You should apply for the MFM and the MFM Fellowships simultaneously



An AMS Fellowship Selection Committee will select the AMS Congressional Fellow. The Fellowship stipend is US\$86,335 for the Fellowship period, with allowances for relocation and professional travel and a contribution toward health insurance.

Applicants must submit a statement expressing interest and qualifications for the AMS Congressional Fellowship as well as a current curriculum vitae. Candidates should also arrange for three letters of recommendation to be sent to the AMS by the February 1, 2021 deadline.



Federal employees are not eligible.

For more information and to apply, please go to https://bit.ly/2X5Yi3D.

Deadline for receipt of applications: February 1, 2021

Postdoctoral 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 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

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).

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.

Tenure-Track Assistant Professor of Mathematics Position at Drake University



Drake University seeks outstanding candidates for a tenure-track Assistant Professor of Mathematics, beginning August 2020. Applicants must have an active research program and a strong commitment to undergraduate teaching. The course load is 6 courses/year. Review begins January 4, 2021.

Drake University is an Equal Opportunity Employer dedicated to building a culturally diverse and pluralistic community. In the wake of the Black Lives Matter movement, it is especially important the candidate be attuned to issues involving students from under-represented backgrounds.

Details of the position as well as instructions on how to apply can be found at https://drake.hiretouch.com/home/search-all-jobs - use "mathematics" to search.

Contact: daniel.alexander@drake.edu.

Assistant Professor and Lecturer Positions in Mathematics, Statistics, and Data Science at Loyola University Chicago



Preparing people to lead extraordinary lives

The Department of Mathematics and Statistics at Loyola University Chicago (LUC) invites applicants for several Assistant Professor and Lecturer positions in Mathematics, Statistics, and Data Science. LUC has consistently provided transformative education in the Jesuit tradition and maintained a commitment to social justice. These searches seek outstanding researchers and teachers who reflect our diverse student body, as well as our commitment to interdisciplinarity and the pursuit of external grants. Of special interest are candidates who can further LUC's efforts to foster diversity, equity, and inclusion.

- Two (2) full-time tenure-track position at the rank of Assistant Professor in the area of data science. One of these will have a focus on applied statistics and the other on bioinformatics. Duties will include maintaining a strong research program, teaching both undergraduate and master's level classes, and participating in service at the department, college, and university levels. Our data science program is quite new, and we are particularly interested in candidates who will participate in building the program, and developing related classes,
- -One full-time tenure-track position at the rank of Assistant Professor in Mathematics. Duties will include maintaining a strong research program, teaching both undergraduate and master's level classes, mentoring students, and participating in service at the department, college, and university levels.
- Two (2) full-time lecture positions in Mathematics. These are continuing positions primarily focused on teaching. Duties will include teaching introductory and advanced courses and mentoring students, as well as participating in service at the department, college, and university levels.

All positions require a Ph.D. in mathematics, statistics, or a related area at the time of appointment. Position descriptions and application instructions can be found at http://mathjobs.org.

The department has some 35 full-time faculty members and several active research groups. We have recently introduced two majors (applied math and data science) and implemented numerous changes to our lower-level and service classes to better support our students.

For more information on these positions, please contact Dr. Peter Tingley (chair, department of mathematics and statistics): ptingley@luc.edu.



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 <u>CU Boulder Jobs.</u>



Postdoctoral Fellowship in Environmental Health Biostatistics at University of Rochester



The Department of Biostatistics and Computational Biology (DBCB) 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) heterogenous 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 (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 DBCB 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.



Tenure Track Faculty Position in Biostatistics at University of Rochester



The Department of Biostatistics and Computational Biology (DBCB) 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 DBCB 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 DBCB and Neuroscience can respectively be found at 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.

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 DBCB 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.



University of Massachusetts, Amherst Post-doctoral Researcher Position Announcement

University of Massachusetts

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.



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/





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.

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). 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-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).

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.



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

UNIVERSITY of

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 WASHINGTON 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

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,

promoting diversity.

- 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.

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.



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 WASHINGTON 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 <u>cncadmin@uw.edu</u>, please arrange to have 3 letters of reference sent to the same email address.

Please address any questions or inquiries to cncadmin@uw.edu as well!