

## Upcoming Events

### Statistical and Computational Challenges in Omics Data Integration Workshop

Research Triangle Park  
February 16-17, 2015

### UMaRch Puerto Rico 2015

University of Puerto Rico, Mayaguez  
February 27, 2015

### Interuniversity Seminar on Research in the Mathematical Sciences (SIDIM)

University of Puerto Rico, Mayaguez  
February 27-28, 2015

### SAMSI Undergraduate Workshop

Research Triangle Park  
February 26-27, 2015

### Infinite Possibilities Conference

Oregon State University  
March 1-3, 2015

### Bioinformatics: Discovering Patterns in Human Microbiome Data (HMD)

Research Triangle Park  
March 16-18, 2015

### Annual Outreach Conference to Increase Diversity in Mathematical Modeling & Public Health

Harvard School of Public Health  
March 29-30, 2015

### Latina/os in the Mathematical Sciences Conference

UCLA  
April 9-11, 2015

### Graduate Workshop on Current Issues in Statistical Ecology

University of Tennessee, Knoxville  
April 15-17, 2015

### Research Experiences for Undergraduate Faculty (REUF)

Providence, RI  
July 20-24, 2015

**SAVE THE DATE**  
2015 Field of Dreams Conference

November 6-8, 2015  
Birmingham, AL

## Research Experience for Undergraduates (REU)



Every summer, hundreds of students from across the country participate in mathematics Research Experiences for Undergraduates (REUs) and similar programs. The benefits of participating in an REU are numerous. First and foremost, students have the opportunity to work closely with peers and faculty conducting original research in mathematics. In doing

so, they develop a better understanding of what it means to do mathematics and to be a mathematician. REUs often provide students the opportunity to develop their written and oral communication skills by writing about and presenting their work to various audiences. In addition, REUs allow students to build lasting professional relationships—and many times friendships—with students and faculty outside their home institutions.

Many students who participate in REUs go on to graduate school and consider their REU experiences to be an invaluable part of their preparation for advanced study in mathematics. As an example, here are just a few comments from past participants in REUs:

- “The program helped me develop mathematical writing and speaking skills that I have found useful, especially now that I am in graduate school.”
- “This summer definitely helped me make some decisions about my future. I am now more motivated and have determined that I would like to go to graduate school and possibly on to a doctorate. I would then be the first in my family, and I feel like this goal is more achievable than I had viewed it in the past.”
- “My REU gave me a much better appreciation of how different parts of mathematics connect, as well as insight into the excitement of delving into a topic.”

Many REU application deadlines are in early/mid February so now is the time to research and apply for a summer program!

1. A list of some REU programs that are affiliated with the Math Alliance can be found on our website by [clicking here](#).
2. A pdf file of some REUs and their prerequisites for application can be [found here](#).
3. We have also included a listing with application deadlines as well as highlighted a few REUs throughout this issue.



## *Summer Programs for Undergraduates*

### Deadline– January 31, 2015

Arizona State University Department of Mathematics- [Mathematical and Theoretical Biology Summer Program](#)  
Park City Mathematical Institute- [Undergraduate Summer School](#)

### Deadline– February 1, 2015

California State University, Channel Islands- [Summer Research Experiences for Undergraduates](#)  
Harvard School of Public Health- [Summer Program in Quantitative Sciences](#)  
The Leadership Alliance- [Summer Research- Early Identification Program \(SR-EIP\)](#)  
University of Nebraska at Lincoln Department of Mathematics- [Summer REU](#)

### Deadline– February 11, 2015

Williams College Department of Mathematics- [SMALL Undergraduate Research Project](#)

### Deadline– February 13, 2015

Brown University- [SUMMER@ICERM Computational Dynamics and Topology](#)  
Winthrop University- [Bridging Applied and Theoretical Mathematics](#)

### Deadline– February 15, 2015

Grand Valley State University Department of Mathematics- [The REU Program in Mathematics](#)  
Mathematical Sciences Research Institute (MSRI)- [MSRI-UP Summer Program](#)  
North Carolina State University Department of Mathematics- [REU in Modeling and Industrial Applied Mathematics](#)  
North Carolina State University Department of Mathematics- [REU+ program for under-represented undergraduate students](#)  
Washington University in St. Louis- [Joint Post-baccalaureate Program](#)

### Deadline– February 23, 2015

Valparaiso University- [The Valparaiso Experience in Research by Undergraduate Mathematicians \(VERUM\)](#)

### Deadline– February 28, 2015

Iowa State University Department of Mathematics- [Mathematics Research Experiences for Undergraduates](#)

### Deadline– March 1, 2015

Harvard School of Public Health- [Summer Program in Epidemiology](#)  
University of Iowa Departments of Biostatistics and Statistics- [Iowa Summer Institute in Biostatistics \(ISIB\)](#)

### Deadline March 2, 2015

Mathematical Biosciences Institute (MBI)- [Undergraduate Summer Research Program](#)  
Harvey Mudd College EDGE Program- [EDGE: A Mathematics Program for Women](#)  
Texas State University- [Multidisciplinary Research Experiences for Undergraduates in Internet of Things](#)

### Deadline– March 6, 2015

North Carolina State University Department of Mathematics- [Summer Institute for Training in Biostatistics](#)

### Deadline– March 15, 2015

University of California, Merced- [Applied ResearCH In ModEling and Data-Enabled Science \(ARCHIMEDES\)](#)  
University of Nebraska at Lincoln Department of Mathematics- [Nebraska IMMERSE \(Intensive Mathematics: a Mentoring, Education and Research Summer Experience\)](#)

### Deadline—March 23, 2015

California State Polytechnic University, Pomona—[California State Polytechnic University, Pomona \(PUMP\)](#)



# SEATTLE UNIVERSITY

## Seattle University Summer Research Opportunity

The Seattle University **Mathematics Early Research (SUMmER)** program is an opportunity for students with diverse backgrounds to work collaboratively on projects at the frontiers of current mathematical knowledge. We especially encourage applications from students who are currently enrolled at a community college, four-year college, or university where there are limited resources for undergraduates to engage in mathematics research. We aim to foster a community of researchers that includes students from historically underrepresented groups who can bring different perspectives which may inspire creative new ideas for solving problems.

- The SUMmER program will take place from June 22nd through August 14th, 2015.
- Applicants must be citizens or permanent residents of the United States or its territories and full-time undergraduate students in 2015-16.
- It is expected that all applicants will have completed the calculus sequence. A course in linear algebra is encouraged, but not required.
- Each student participant will receive a \$4000 stipend and shared on-campus housing.
- Student participants will have access to funds for travel to present their work at conferences.

**Click here to learn more and apply!**

## Harvard School of Public Health Summer Program & Internship Opportunities



# HARVARD UNIVERSITY

The Department of Biostatistics has exciting summer opportunities for undergraduate and post-baccalaureate students. We are seeking students who love math, are curious about public health, and want to make a difference. Check out the [Summer Program in Biostatistics and Computational Biology](#) and the [Post Baccalaureate Internship!](#)

### Summer Program

- 6-week comprehensive experience at Harvard.
- Take a course in Biostatistics and Epidemiology.
- Learn statistical software packages (e.g. R, Stata).
- Participate in a collaborative research project at Harvard guided by a graduate student and mentored by a faculty member.
- Attend research talk about hot topics in public health (e.g. Nutrition, social behavior) by internationally renowned speakers.
- Present research findings at the Annual Symposium in July 2015.
- Receive directed mentoring, support for graduate school applications, and selection, and GRE prep.
- Travel, housing, and food provided.

### Post-Baccalaureate Internship Program

- 3-month research experience at academic and clinical centers at Harvard, guided by a Harvard faculty member and graduate student mentor.
- Conduct biostatistics, epidemiology, or computational biology research.
- Present research findings at the Annual Symposium in July 2015.
- Receive directed mentoring and support for graduate school applications/ selection.
- Travel and salary provided.



# Cornell University

## Cornell University | LSAMP Summer REU Opportunity

CU LSAMP-REU is a paid summer research opportunity that provides undergraduate participants with the opportunity to work with distinguished faculty and staff as well as network with others in their field of interest through weekly luncheons.

Undergraduate students, interested in gaining a deeper understanding in an engineering-related field, have the opportunity to conduct and present research over a ten-week duration under the auspices of a Cornell Engineering faculty research mentor. Through this one-on-one partnership, participants will gain theoretical knowledge and practical training in academic research and scientific experimentation. CU LSAMP-REU was developed to aid in the retention of traditionally underrepresented minority groups in the sciences, technology, engineering and mathematics (STEM).

**Click here for more information and to apply!**



The **Biostatistics Epidemiology Summer Training Diversity Program (BEST)** was established to expand and diversify the behavioral and biomedical sciences' workforce by introducing undergraduates from underrepresented populations to biostatistics and cardiovascular and pulmonary disease research. Students representing racial and ethnic minority groups, disadvantaged backgrounds, and students with disabilities join the Department of Biostatistics at Columbia University's Mailman School of Public Health's for eight weeks of research, training, academic and career planning, and social activities around New York City.

Following the success of the seven-student, 4-week pilot in 2008, BEST received a five-year grant from the National Heart, Lung and Blood Institute to expand the program to host 10-15 students for eight weeks each summer. Participants receive housing and a \$2800 stipend as well as some funds to offset costs of food and travel to and from New York City. For more information and to apply visit: <http://www.mailman.columbia.edu/academic-departments/biostatistics/best-diversity-program>.

## Sam Houston State University REU Opportunity



Applications are now being accepted for the 2015 Sam Houston State REU Program in Mathematics. This nine-week summer program, supported by the National Science Foundation, will provide an opportunity for 12 undergraduate students, working in four teams of three students each, to study under a professor in an area of specific interest. The dates of the 2015 program are from June 1 through July 31. The participants will work with their professors to produce research results. Students participating in the REU program will also receive a stipend and provisions for housing for the duration of the program.

The Program will run from **Monday, June 1** through **Friday, July 31**. Students receive a \$4,500 stipend, roundtrip transportation to and from Huntsville, and paid housing. Project areas are **Mathematical Modeling of Ecosystems, Knots and Links, and Strongly Regular Cayley Graphs** (detailed project descriptions can be found at [here](http://www.mathprograms.org)). Applications can be submitted through [MathPrograms.org](https://www.mathprograms.org/db/programs/337) (<https://www.mathprograms.org/db/programs/337>). A completed application consists of the cover sheet, an unofficial transcript of all completed college level work, 2 faculty recommendations, a separate list of all Mathematics courses attempted with grades; and a no more than 500-word statement explaining your interest in the Program and how you believe participation will benefit your professional development. We are only able to accept applications from United States Citizens and Permanent Residents. **Deadline for receipt of all materials (including faculty references) is Friday, February 20, 2015, at 5 p.m.** More details and information on applying to the Program can be found at: <http://www.shsu.edu/academics/mathematics-and-statistics/research-experiences-for-undergraduates/>

## Central States Mathematics Undergraduate Research Conference (CeSMUR)

Kansas State University and Truman State University (in Kirksville, MO) are jointly organizing a new annual undergraduate conference in mathematics. The Central States Mathematics Undergraduate Research Conference (CeSMUR) will be a yearly event where undergraduates can present their research in the areas of mathematics, biomathematics, and applications of mathematics. The kickoff conference will take place on the Kansas State University campus in Manhattan, KS, February 27-28, 2015 (Friday afternoon and Saturday).

We have time slots for 20-24 undergraduate speakers. Talks will each be 15 minutes, with 5 minutes for questions. The organizers will provide written feedback to the students on their presentations. In addition to the talks by undergraduates, we will have a panel on graduate school, a panel on semester and summer long off-campus programs, as well as time set aside for students to interact with visiting graduate directors from universities in the region. Please encourage your students to participate.

We gratefully acknowledge support from the Mathematical Biosciences Institute (mbi) for our keynote speaker, James Keener, Distinguished Professor of Mathematics and Adjunct Professor of Bioengineering at the University of Utah.

This year we will not have funds to reimburse travel or housing expenses. However, special rates are available at nearby hotels and we will pick up participants arriving by air at Manhattan Regional Airport (MHK). In addition, lunch on Saturday will be provided. There will be no registration fee.

For more information or to register, email the organizers at [cesmur2015@ksu.edu](mailto:cesmur2015@ksu.edu) or go to <http://www.math.ksu.edu/events/conference/CeSMUR/2015/>

# Summer 2015 Employment Opportunities: Summer Program in Mathematical Problem Solving

## Summer Program in Mathematical Problem Solving: Faculty Positions



This summer, change the lives of talented 7th-grade students from underserved backgrounds: teach them what mathematics really is. The Summer Program in Mathematical Problem Solving, a project of the Art of Problem Solving Foundation, is seeking instructors for a program that gives everyone a chance to excel in mathematics. Faculty design and teach their own courses to bright but underserved middle school students. Courses can be pure math (such as number theory, combinatorics, graph theory, etc.); applied math (such as circuit design, astrophysics, or programming); or problem solving (both contest-based and more general). Our students have tremendous potential and a strong ability for abstract reasoning, but because of their schools and backgrounds they often have not had the same training as more affluent peers. They are devoted, doing seven hours of math per day (and loving it).

We seek:

- college or university professors who want to give back and expand the mathematics pipeline,
- outstanding school teachers with strong mathematics backgrounds,
- professionals with a strong background and an interest in sharing their work.

Additionally, this year we have created junior faculty positions intended for graduate students in STEM fields or early-career teachers. All instructors must be available July 2 through July 29 and must be available to prepare their classes prior to the program. We will provide mentorship, textbooks, and other resources as needed. The program runs at two college campuses, Bard College and Siena College, and you will have some flexibility in deciding which site you prefer. Food, housing, transportation, and a salary is provided. For more information and the application, contact Daniel Zaharopol: [dan\\_zaharopol@artofproblemsolving.org](mailto:dan_zaharopol@artofproblemsolving.org), or visit our website: <http://www.artofproblemsolving.org/spmps>

## Summer Program in Mathematical Problem Solving: Counselor/TA Positions

This summer, change the lives of talented 7th-grade students from underserved backgrounds. The Summer Program in Mathematical Problem Solving, a project of the Art of Problem Solving Foundation, is seeking undergraduate students or recent graduates to be counselors and TAs for a summer program that gives everyone a chance to excel in mathematics. The program will take place on two college campuses in summer 2015 and counselors will live with the students in the college dorms. You'll create a vibrant social experience for kids who are discovering for the first time that there are other people who like doing mathematics. As a counselor, you'll have both an academic and a non-academic role:

- Be a role model and mentor to the students,
- Supervise students and run activities each day for them to relax and socialize, and
- Assist in mathematics courses: guide students through challenging problems, assist instructors, and help give feedback to students on their work.

We're looking for counselors who have a lot of initiative and maturity, who will inspire the students to do better, and who are good at math. The camp's academics will be challenging to everyone, with courses on topics such as combinatorics, number theory, problem solving, graph theory, game theory, and more, so you'll get plenty of chance to stretch your mathematical muscles. (You do not need to know these specific topics to come.)

All counselors must be available July 2 through July 29. You will have a chance to take time off, but this is a very intense experience and you should be prepared for it! The program runs at two college campuses, Bard College and Siena College, and you will have some flexibility in deciding which site you prefer. Food, housing, transportation, and a salary is provided. For more information and the application, contact us at [spmps@artofproblemsolving.org](mailto:spmps@artofproblemsolving.org) or visit our [website here](#).



# Employment Opportunities: Reasoning Mind



Reasoning Mind is a non-profit organization with the mission of providing a first-rate math education for every child. To achieve this, the organization develops blended learning mathematics programs for elementary and middle school and works with schools to implement these programs in classrooms. This year alone, over 80,000 students will benefit from Reasoning Mind. The program is supported by hundreds of leading philanthropies, including the Bill & Melinda Gates Foundation, the Cockrell Foundation, the Michael & Susan Dell Foundation, the Heglund Foundation, and the Houston Endowment. Open positions include: Knowledge Engineer (Houston), Senior Implementation Coordinator (Houston), Implementation Coordinator (Dallas), Math Education Advocate (various cities). To read full job descriptions or apply, please visit our [site here](#). Please contact [jobs@reasoningmind.org](mailto:jobs@reasoningmind.org) with any questions!