Iowa State University Department of Mathematics: A leader in URM graduate students

Since their involvement with the Alliance, the Iowa State University Department of Mathematics has been a strong ally for, & has displayed tremendous success in, mentoring under-represented minorities (URM) in their PhD program.

Dio Lewis Holl Chair in Applied Mathematics & Professor of Mathematics Dr. Leslie Hogben talked about ISU’s involvement with the Alliance & their current group of URM graduate students. “Prior to 2008 I don't think ISU math ever had more than one underrepresented minority student enrolled in our graduate programs at any one time.” Today the ISU Department of Math has 16 under-represented minority graduate students (11 PhD, 5 MS) enrolled, 10 of whom are Alliance Scholars.

The Alliance saw much of its growth in the late 2000’s “dramatically expanding the pool of students eligible to participate,” Hogben explained. From 2007-2008 the number of Alliance Scholars doubled, with an even larger spike in numbers at the end of 2009. “A lot of things came together in 2008-2009 that created a substantial change & led to the current success of our math department,” Hogben stated. Hogben became the Midwest Regional Director for the Alliance & in summer 2008 became the ISU Math Department Diversity Director.

In November 2008 ISU hosted the 2nd Annual Field of Dreams Conference with over 40 Alliance Scholars in attendance. ISU’s Mathematics and Computing Research Experience for Undergraduates (REU) also saw an increase in enrollment for their 2009 program with 21 participants, up from 13 participants in 2006. Many Alliance Scholars were exposed to ISUs Math Department through these programs, introducing them to the wonderful community of minority scholars the math department at ISU was beginning to build. ISU takes great care of their students, many of which go on to receive distinguished recognition. Alliance Scholar Saulo Orizaga is completing his PhD this summer & has been awarded a prestigious Alliance for Building Faculty Diversity Postdoctoral Fellowship.

With the combination of a strong summer program, hosting the Field of Dreams Conference, & receiving significant support from the department, including then Department Chair Wolfgang Kliemann & current Chair Clifford Bergman, it is no wonder Iowa State is a front runner in under-represented minority graduate students. “In many ways the Department of Mathematics at ISU is a model for our Graduate Program Groups. Their program has broad faculty participation, they do a great job of mentoring their students, & they have the support & encouragement of the leadership of their department. It is no surprise that they have been so successful. The Department of Mathematics at ISU is one of the founding members of the Alliance & we are deeply appreciative of the role they have played throughout the years,” Phil Kutzko, Alliance Director.
This month the Math Alliance Research Study is sharing some of their findings about Alliance Scholars’ academic journey with a fantastic infographic!

A full page version of the infographic can be found on page 4 of the newsletter. Make sure to visit the Math Alliance Research Study website to learn more about the research they are doing on the Alliance Community.

The APS Bridge Program is now accepting applications. The program provides 1-2 years of research experience, coursework, mentoring, and application coaching to students interested in pursuing a PhD in physics. African American, Hispanic, and Native American students are strongly encouraged to apply. Students must be U.S. Citizens or Permanent Residents, and have received a bachelor's degree in physics (or a related discipline) by summer 2014 to be eligible. Take a look at the website for more information on student eligibility and APS Bridge Sites. Application deadline is March 21, 2014. The application can be completed online here.

The mathematical sciences including engineering, statistics, computer science, physics, econometrics, psychometrics, epidemiology, and mathematics qua mathematics are increasingly being applied to advance our understanding of the causes, consequences, and alleviation of obesity. These applications do not merely involve routine well-established approaches easily implemented in widely available commercial software. Rather, they increasingly involve computationally demanding tasks, use and in some cases development of novel analytic methods and software, new derivations, computer simulations, and unprecedented interdigitation of two or more existing techniques. Such advances at the interface of the mathematical sciences and obesity research require bilateral training and exposure for investigators in both disciplines. This five day course on the mathematical sciences in obesity research features some of the world’s finest scientists working in this domain to fill this unmet need by providing nine topic driven modules designed to bridge the disciplines.

For full details of the course, please visit the website at http://www.soph.uab.edu/energetics/shortcourse/first. You may also apply online at http://www.soph.uab.edu/energetics/shortcourse/first/application. Limited travel scholarships are available to young investigators.
Recruiting & Retaining Graduate Students in the Statistical Sciences & Applied Mathematics
Research Triangle Park, NC
June 5-6, 2014
Application Deadline: March 28th

This workshop is aimed at faculty & administrators from PhD granting Departments in the Applied Mathematical & Statistical Sciences. The overall goal is to discuss current and successful strategies for enhancing success for U.S. students, and particularly members of underrepresented groups.

The workshop is designed for teams of three participants from each registered institution, including at least two faculty representatives from a mathematical sciences department and at least one departmental or campus-level administrator (Department Chair or Director of Graduate Studies, or Dean). These teams will work closely with faculty who have had significant previous experience with implementing changes in their own departments and will also have the opportunity to discuss their programs with other participating institutions. Specific topics will center on improving outcomes for graduate students in terms of recruitment, retention, graduation, career development, and placement, with a focus on broadening access and enhancing success for U.S. students, particularly women and members of underrepresented groups. Click here to learn more and register!
Math Alliance
Pre-Doctoral Scholars' Academic Journey

We surveyed undergraduate students involved with the Math Alliance about
their degree decisions and their plans for the future.
This is what they had to say...

Who Took The Survey?

Why Math?

What influenced you to pursue a degree in math?

- Good at Math: 81%
- Career Opportunities After Graduation: 53%
- Interest in Solving Problems: 78%
- Enjoy Math Courses: 80%
- Recommended by Academic Adviser: 92%
- Recommended by a Faculty Member: 32%
- Recommended by Family or Friends: 19%

The vast majority (94%) are pursuing a degree in Mathematical Sciences (pure math, applied math, statistics, and biostatistics).

Some are pursuing a degree in Computer Science, Engineering, Health Sciences, Education, Physics, Spanish, Economics, and Biochemistry.

Current Major

Long Term Goals

What are your long-term (5+ years) career goals in the mathematical sciences?

- Academia
- Research
- Teaching
- Industry
- Government
- Continue Education
- Other

Graduate School Plans

Which Degree

What degree do you plan to pursue?

- Ph.D.: 67% of Students
- Master’s: 30% of Students
- Not Sure Yet: 3% of Students

Which Field

What area do you plan to earn a degree in?

- Pure Math
- Applied Math
- Statistics
- Biostatistics
- Not Sure Yet

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If you have any questions or comments, please contact the Math Alliance Research Team at the University of Illinois at Urbana-Champaign at stem@education.illinois.edu

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The National Alliance for Doctoral Studies in Mathematics is a national network of students and faculty who work together to try to make the discipline of mathematics more inclusive to traditionally underrepresented populations. The aim is to change the culture of mathematics by informing math departments and universities.

For more information, visit mathalliance.org