Math Alliance Q and A

Q: What exactly is the Math Alliance??

A: The Math Alliance (formally, the National Alliance for Doctoral Studies in the Mathematical Sciences) is a community of more than **900** math sciences faculty ("Alliance Mentors") at more than **325** US colleges and universities with the common goal of ensuring that any underrepresented minority student with the talent, passion and ambition to earn a doctoral degree in a mathematical science is given the support, encouragement and mentoring to ensure that they achieve this goal. The Math Alliance has its roots in an initiative of the three Regents universities in the State of Iowa. The Math Alliance, in its present form, is celebrating its 12th anniversary this year. For a brief history of the Math Alliance, please go here.

Q: How does the Math Alliance find its students; how many are there?

A: Our Math Alliance Mentors are committed to finding every minority student at their school who has the potential to go to graduate school in a mathematical science. When they find such a student, they nominate them to be an Alliance Scholar. Since the Math Alliance was founded, more than **2000** students have held the designation of Alliance Scholar and there are presently about **850** currently enrolled undergraduate or Master's students who have this designation and who are actively involved in Math Alliance activities.

Q: How does the Math Alliance work?

A: The Math Alliance has two major objectives:

To ensure that its Scholars are placed in a graduate program that is a good fit for them;

To ensure that these students earn a doctoral degree.

The Math Alliance pursues these objectives in several ways. First, we have built a community of doctoral faculty who are willing to work to transform their programs so that they welcome, nurture and mentor our students. There are at the present time over **500** Alliance Doctoral Mentors and this number is growing rapidly. When a significant number of these faculty belong to a given department, they may apply to the Math Alliance to form a Doctoral Program Group (DPG) within that department. There are now 38 DPGs and we expect several more in the next few months. In order to ensure that our Scholars are carefully placed in graduate programs we have developed our Facilitated Graduate Admissions Process (F-GAP), a program that takes advantage of our large number of doctoral faculty to provide each of our graduating Scholars with a personal advisor who works with the student on all aspects of the transition to graduate school. **F-GAP has sent more than 350 students to graduate school in the last five years and, so far, the retention rate has been good.**

Q: What else does the Math Alliance do?

A: Here are some other ways in which the Math Alliance works to achieve its objectives:

We hold an annual conference, the Field of Dreams conference. This conference, which attracts about 200 students and about 150 faculty and other math science professionals, provides Alliance Scholars with the opportunity to become familiar with all aspects of our professions.

We are active in building regional alliances, partners that have the potential to vastly increase the populations we serve.

We partner with groups of faculty in math sciences departments that offer terminal Master's degrees. These Master's Program Groups all have good track records of sending students on to doctoral programs. They serve as bridging programs for our Scholars as they pursue the Ph.D.

We provide opportunities for our Scholars and their Mentors to learn about graduate education and career opportunities for students with excellent quantitative skills. One such opportunity is a workshop that was recently held at the Institute for Mathematics and its Applications.

We share our grounded knowledge and best practices throughout the math science professions and, increasingly, with professionals in other STEM fields.

Q: Sounds like a good idea. But are you getting results?

A: We are proud of what we have accomplished so far:

At least 80 Alliance Predoctoral Scholars have gone on to earn doctoral degrees, 57 in the last three years. Of these, 68 were in a math science. With one exception, these are all students who entered doctoral programs **before** the first year of F-GAP. With F-GAP in its sixth year now, we are anticipating as many as 80 new doctoral degrees in the next two years. To date we can confirm 31 Alliance Scholars hold faculty positions, including at least 24 tenure or tenure track positions.
An additional 35 Alliance Scholars presently hold postdoctoral positions. The institutions at which our Scholars hold positions represent the full range of mathematical science departments. At least two of our Alliance Scholars are now in upper administrative positions at U.S. institutions.

Q: Are all of these students minority students?

A: As mentioned above, the goal of the Math Alliance is to increase the number of US citizens and permanent residents from underrepresented minority groups (URMs) who earn doctoral degrees in the mathematical sciences. However, the Math Alliance has never been a program intended solely for minority students. Instead, our Scholars are selected by their mentors from what we call our *target group*. The definition of our target group is, by necessity, a work in progress. At present about 80% of our Alliance Scholars are URMs.

Q: This sounds like a great program! How can I get involved?

A: Here are some ways you can join our community:

- **Become an Alliance mentor!** It takes no time at all to sign up!
- **Spread the word!** Send this Q and A around to faculty you know who share our goals.
- **Attend the Field of Dreams Conference.** There is no better way to learn about the Math Alliance and its community than to witness it first-hand. The 2019 Field of Dreams Conference will take place in **St. Louis, MO, November 15-17**. Please get in touch with Rebecca Lank (lankr@purdue.edu) for details.

- **Form a Graduate Program Group or start a regional alliance.** We can make this easy! Just get in touch with David Goldberg (goldberg@purdue.edu) or Phil Kutzko (philip-kutzko@uiowa.edu) and we will get you started.