

Math Alliance News

April 2013

Volume 1, Issue 3

Upcoming Events:

Field of Dreams Conference—
Phoenix, Arizona
November 1-3, 2013

REU Opportunity

PURDUE
UNIVERSITY

Purdue Research in Mathematics
Experience (PRiME)
Application Deadline— April 26th

Mentor Spotlight

Dr. Aloysius (Loek) Helminck



This month we are pleased to feature Dr. Aloysius (Loek) Helminck. Loek is a Co-Director of the National Alliance for Doctoral Studies in the Mathematical Sciences and serves as both an

undergraduate and graduate mentor. Over the past 10 years Loek has mentored approximately 52 undergraduate students from underrepresented minority backgrounds nationally, 18 graduate students at North Carolina State University and an additional 45 female students from non-minority backgrounds. Furthermore Loek has mentored 19 doctoral students, nine of who are either women or from minority backgrounds. Loek finds time to spend with each student, personally mentoring them and providing guidance.

He is a productive scholar who is regularly asked to speak at conferences and receives external funding for many of the programs he creates. In 2005 Loek became Head of the Mathematics Department at North Carolina State University.

As he became more involved with administration he became more aware and troubled by the small number of minority students who entered the mathematics field. He recognized two basic impediments to the success of these students. First, that these students often had little information about life as a mathematician. Second, that the cultural context in which mathematics was

taught was a narrow one (male and European) and that there were often unspoken assumptions that had negative effects on students unfamiliar with this culture. With this in mind Loek set out to develop programs that would provide entry for talented students into the world of mathematics.

In 2005 Loek obtained support to develop a research experience for undergraduates (REU) aimed at bringing undergraduate scholars to the campus during the summer to participate in research activities. This program has been highly successful and has grown exponentially. There are approximately 45 student participants each summer making it the largest mathematical sciences REU program in the country.

Loek has also developed a REU+ program that aids in the preparation of underprepared minority students for the North Carolina State REU program. One key feature of the REU+ program is intensive mentoring by a community of mentors. This group of mentors is unique; being made up of a mentor the student brings with them, a NCSU faculty member, a graduate student mentor and Loek, who serves as the primary mentor. To date all students who have participated in the REU+ program have continued to graduate programs in the mathematical sciences, or intend to do so.

Loek is passionate about his work and his students, spending everyday mentoring underrepresented students to see that they achieve their goals. We would like to thank Loek for all his dedication and passion and wish him many more successes in the future!

Coming Soon

-New Website!

Our website is currently undergoing a facelift! The website will feature a new look and easier navigation. A special thanks to Patrick Riepe and Patricia O'Neill for working so hard on the new website and IBP for maintaining our previous website.

Why You Need a Mentor

-Gina Stewart

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Do you have a mentor? Not an academic adviser, but a true mentor—someone who has an interest in helping you develop your career path, combined with the seniority and perspective to be helpful. In my opinion, every college student and every professional needs one, and it's preferable if you don't report directly to your mentor. A mentor can explain the subtleties of your chosen career path to you, and can help you navigate rough spots along the way.

I called my undergraduate mentor when, in my second year of graduate school, I suddenly didn't have Ph.D. candidacy, even though I had jumped through every hoop successfully. "Sounds like an adviser problem," my mentor said. "You need to ask your adviser specifically why you didn't get candidacy, and then you need to ask at least two other professors in the department to be honest with you."

I followed his advice and found that my adviser had, in fact, sabotaged my candidacy (and as I looked at the professor's history, I found that he had a very poor record of graduating female Ph.D. candidates). So it was clear that I needed to change advisers.

Again I called my mentor and asked him about the professor whose group I wanted to join. "Oh, that one is a rock star and will become chancellor one day," he said. "Excellent choice, but make sure you'll have time to finish."

I transferred groups, and, sure enough, the following year my adviser was promoted to vice president for research. I was able to finish my degree before my adviser accepted a chancellor position.

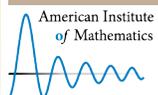
Since then I have had several other mentors. How did I find them? I looked for someone who was in a position I wanted to achieve or for someone who shared my academic background. I asked for mentoring. I was respectful of the mentor's time and didn't expect the mentor to solve my problems, but simply to help me see my situation from another perspective or to offer insight only a more-experienced person would have.

What's in it for the mentor? Most are willing to help because they are kind and because someone mentored them. It's payback, in a sense ... though it's nice to treat your mentor to meals if you are in a position to do that. So if you don't have a mentor, I encourage you to look for one. As my father once told me, "Success is about finding your mentors and avoiding your tormentors."

-*The Chronicle of Higher Education*, April 18, 2013

Gina Stewart has a Ph.D. in organic chemistry from the University of Texas at Austin. She is the chief executive and a founder of Arctic Inc., which develops sustainable methods of weed control for turf and agriculture. She is writing a series of posts about nonacademic careers for Ph.D.'s in the sciences.

Math Institute -Opportunities



American Institute of Mathematics (AIM)
[SQuREs\(Structured Quartet Research Ensembles\)](#)



Statistical and Applied Mathematical Sciences Institute (SAMSU)
[Summer 2013 Program: Neuroimaging Data Analysis](#)



Mathematical Sciences Research Institute (MSRI)
[MSRI-UP 2013: Algebraic Combinatorics](#)