Departments Coordinate Job Offer Deadlines

For the past fourteen years, the American Mathematical Society has led the effort to gain broad endorsement for the following proposal:

That mathematics departments and institutes agree not to require a response prior to a certain date (usually early in February of a given year) to an offer of a postdoctoral position that begins in the fall of that year.

This proposal is linked to an agreement made by the National Science Foundation (NSF) that the recipients of the NSF Mathematical Sciences Postdoctoral Fellowships would be notified of their awards, at the latest, by the end of January.

This agreement ensures that our young colleagues entering the postdoctoral job market have as much information as possible about their options before making a decision. It also allows departmental hiring committees adequate time to review application files and make informed decisions. From our perspective, this agreement has worked well and has made the process more orderly. There have been very few negative comments. Last year one hundred sixty-five mathematics and applied mathematics departments and four mathematics institutes endorsed the agreement.

Therefore we propose that mathematics departments again collectively enter into the same agreement for the upcoming cycle of recruiting, with the deadline set for Monday, February 3, 2014. The NSF’s Division of Mathematical Sciences has already agreed that it will complete its review of applications by January 24, 2014, at the latest, and that all applicants will be notified electronically at that time.

My Summer at NPR

Each year the AMS sponsors a fellow to participate in the Mass Media Fellowship program of the American Association for the Advancement of Science (AAAS). This program places science and mathematics graduate students in summer internships at media outlets. In this article the 2013 Fellow, Anna Haensch, describes her experiences during her fellowship at National Public Radio. For information about applying for the fellowship, see the “Mathematics Opportunities” section in this issue of the Notices or visit the website http://www.ams.org/employment/postdoc-offers.html.

Correction

Due to a typesetting error, the announcement of the 2013 Simons Investigators (Notices, October 2013, page 1181) misspelled the name of Ngô Bao Châu of the University of Chicago. The Notices apologizes for this error.

Inside the AMS

With a Ph.D. in hand and a tenure-track job drawing near on the horizon, I set out for ten weeks at National Public Radio headquarters in Washington, D.C. What could be better? I was finally off my graduate student leash, and I was on my way to learn the fine art of science communication at NPR, the greatest bastion of mainstream intellectualism—the mother ship. I couldn’t wait to talk shop with Richard Harris, swap stories with Joe Palca, and probe the insightful mind of Shankar Vendantam.
On the first day I was directed to my spacious intern desk and attendant intern sofa. Almost immediately I got to work scanning the journals for the hottest new research to cover in NPR's science blogs.

I quickly and firmly planted my flag in the ground at “Shots”, the NPR health blog. This felt like the place for me, and I was surprised at how fluidly my ability to read technical math papers translated to an ability to read complicated papers in genomics and bioinformatics—further evidence of the fact that higher education is all about learning how to learn.

What started as a carefree jaunt through the world of science journalism quickly became an exploration of the darker and deeper questions of the nature of science reporting. On the health beat, I soon realized that there are essentially only two types of stories being hawked by public information officers of the major research institutions: type I, in which scientists find that disease x is caused by y, and type II, in which scientists find a possible cure for disease x. That's it. And I wasn't comfortable writing about either type.

Stories of the first type exemplify the worst genre of news. These are the nightly news stories that try to convince you that too much sleep will make you obese or that your toaster oven is emitting dangerous cancer-causing nanoparticles. Although irresistibly clickable, these stories are sensationalized, typically based on pretty flimsy research, and serve no purpose other than to shock and alarm the reader. Furthermore, there is a fine line between reporting on developments in health research and advising readers on how to manage their own health, and I was not keen to cross this line.

Stories of the second type, by contrast, are more often based on sound science. The rub is that news coverage of these stories tends to lean towards speculation and interpretation, and is prone to hype. Science, by nature, moves forward very slowly. A real breakthrough is the culmination of years of effort, yielding dozens of papers about each minuscule step of the research. One of these steps might lend itself to a catchy news release, which then lands on the desks of reporters.

The reporter then faces the challenge of how to describe this tiny epsilon-sized piece of a gigantic puzzle. Often the only choices are to bore people with the minutiae or to blow the result just a teeny bit out of proportion. I would err on the side of the former, but people are more likely to read the latter. For a reporter, these types of stories present somewhat of a minefield in the never-ending battle between maintaining rigorous scientific truth and creating an exciting science communication dialogue.

To be clear, this is not intended as an indictment of health reporters, but rather a commentary on the difficulty of the task at hand. Paradoxically, this task was made more difficult by my own background in research.

Research, whether mathematical or medical, has two components: process and outcome. The process is the time spent banging your head against the chalkboard proving dull technical lemmas that provide the critical stepping stones to the end result. The outcome is the main theorem, which is usually stated neatly at the end of ten pages of gruesome-looking mathematics. But, often, it is the auxiliary lemmas and techniques in their proofs, not the main theorems themselves, that give us new insight into the result.

So when someone is reporting on a new medical paper, what's the most important thing to say about it? The result or how it was obtained?

Clearly this dilemma extends well beyond health reporting and deep into the realm of general math and science reporting. Are we interested in telling stories about science being done? Or are we in the business of selling results? This really gets to the heart of one of the principal questions in science reporting: should the science reporter be teaching science?

Largely, I think that the answer is no and that the role of a reporter is to deliver results in a neatly contextualized black box. But of course the notion of handing over results without giving the backstory and logical underpinnings is at tremendous odds with my own chosen career path: professor.

What I thought would be a summer spent in leisurely scientific inquiry turned out to be spent in inquiry of a more metaphysical nature. This was indeed an enriching pursuit, but not in the way that I had initially thought.

The upshot is that I have never been more sure in my life that I want to be a mathematician. Examining the “doing” of science and interviewing experts to hear them speak so passionately about their own work only fanned the flames of my own desire to reach the upper echelon of my own research field.

The exposure to the complex world of science reporting left me with an appreciation of the difficulty of communicating science. It also highlighted for me the need for talented scientists and deep thinkers to consider a career, or at least a brief summer sojourn, in the newsroom.

—Anna Haensch, Duquesne University

Project NExT Fellows Chosen

Five mathematicians have been selected as AMS Project NExT fellows for the 2013–2014 academic year. Their names, affiliations, and areas of research are: Susan Durst, Rutgers University, associative rings and algebras; John Engbers, Marquette University, graph theory/discrete mathematics; Rebecca Glover, University of Rochester, complex geometry/symplectic geometry; Andrew Greene, Manhattan College, functional analysis; and Mitchel Keller, Washington and Lee University, combinatorics of partially ordered sets.

Project NExT (New Experiences in Teaching) is a professional development program for new and recent Ph.D.'s in the mathematical sciences (including pure and applied mathematics, statistics, operations research, and mathematics education). It addresses all aspects of an academic career: improving the teaching and learning of
mathematics, engaging in research and scholarship, and participating in professional activities. It also provides the participants with a network of peers and mentors as they assume these responsibilities. The AMS provides funding for a number of the fellowships.

—From an MAA announcement

2013 Trjitzinsky Memorial Awards Presented

The AMS has made awards to eight undergraduate students through the Waldemar J. Trjitzinsky Memorial Fund. The fund is made possible by a bequest from the estate of Waldemar J., Barbara G., and Juliette Trjitzinsky. The will of Barbara Trjitzinsky stipulates that the income from the bequest should be used to establish a fund in honor of the memory of her husband to assist needy students in mathematics.

For the 2013 awards, the AMS chose seven geographically distributed schools to receive one-time awards of US$3,000 each. The mathematics departments at those schools then chose students to receive the funds to assist them in pursuit of careers in mathematics. The schools are selected in a random drawing from the pool of AMS institutional members.

Waldemar J. Trjitzinsky was born in Russia in 1901 and received his doctorate from the University of California, Berkeley, in 1926. He taught at a number of institutions before taking a position at the University of Illinois, Urbana-Champaign, where he remained for the rest of his professional life. He showed particular concern for students of mathematics and in some cases made personal efforts to ensure that financial considerations would not hinder their studies. Trjitzinsky was the author of about sixty mathematics papers, primarily on quasi-analytic functions and partial differential equations. A member of the AMS for forty-six years, he died in 1973.

Following are the names of the selected schools for 2013, the names of the students receiving Trjitzinsky awards, and brief biographical sketches of the students.

Kean University: JOHN DOUGLAS HELBIG JR. Helbig was born in New Jersey to a mother who had immigrated from Colombia; neither his mother nor his father completed high school. His father passed away when John was in fifth grade but had already instilled in him the importance of studying mathematics and computers. He is studying mathematics at Kean and plans to pursue a master’s degree in instruction and curriculum.

State University of New York, Binghamton: CHAOREN LIN. Lin is carrying a double major in mathematics and computer science and has research experience in programming language design and computer graphics. He is strongly interested in algebra and number theory and is preparing for graduate study in cryptography.

Vanderbilt University: PAUL PONMATTAM. Ponnattam carries a 4.0 GPA in mathematics and has already taken and excelled in beginning-level graduate courses.

Winthrop University: RUTH MARIKO FUJINO. Fujino grew up in Japan, where her parents were missionaries. Her future plans include working among marginalized people in other countries, and she believes that the foundational thinking and problem-solving skills she gains from studying mathematics will help her to realize her dreams.

University of North Dakota: PAIGE FERGUSON. Ferguson’s passion for mathematics began at an early age and was nourished by encouraging, energetic teachers. She is majoring in mathematics with a secondary teaching certification and a minor in middle school education. She especially enjoys logic and seeing how a problem can be viewed and solved in many different ways.

University of New Mexico: MICHAEL W. BROWN and SHALAINE L. BUCK. Brown carries a dual major in mathematics and physics. He is president of the undergraduate Mathematics and Statistics Club and recently visited local high school students to encourage them to consider college majors in mathematics. He plans to study for a Ph.D. in mathematics. Buck is majoring in applied mathematics with a minor in statistics. She is a Native American from the Navajo tribe. She mentors other students in math and statistics with the STEM program at the University of New Mexico. She plans to earn a graduate degree in statistics and eventually to return to the Navajo Nation to work in data collection and analysis.

Idaho State University: MICHAEL VANDYKE. VanDyke has served in the United States Army and worked as a civilian air traffic controller. After deciding to return to college, he discovered a passion for mathematics. He hopes one day to teach mathematics at the college level.

—Elaine Kehoe

Altmetric

Powerful New Tool Allows Authors and Researchers to Measure Digital Footprint of Intellectual Output

The American Mathematical Society has incorporated a new tool for monitoring article-level metrics into a selection of its mathematical journals. The metrics, which are provided by London-based startup Altmetric, allow authors and readers to track and measure online attention surrounding selected scholarly works. The innovative Altmetric system aggregates and links to mentions of journal articles from social networking sites, blogs, reviews, mainstream news outlets, magazines, and other sources. Results are then compiled into reports that may be used by authors, researchers, readers, librarians, and publishers to analyze the societal and digital impact of these works.
The implementation is consistent with the Society’s efforts to address current trends and best serve the mathematical community during this burgeoning technological era.

The Altmetric tool has currently been integrated into four AMS journals: Journal of the American Mathematical Society, Mathematics of Computation, Proceedings of the American Mathematical Society, and Transactions of the American Mathematical Society. Individual article pages within these journals now contain Altmetric icons, which, when clicked, link the user to a corresponding article details page that provides a granular breakdown of exactly where and how often the article is being shared across the Web. Users can also click the “Track This Article” link on the metrics page to receive email alerts when a particular article has been shared or discussed.

“In keeping with the AMS mission, as we move into an increasingly digital era, the American Mathematical Society is committed to providing its authors and readers with the most current tools for tracking the impact of scholarly research,” said Robert M. Harington, Associate Executive Director of Publishing at the American Mathematical Society. “As the mathematical community continues to embrace online media and social channels as a means for sharing research interests, our partnership with Altmetric will allow us to bring our community with detailed article-level social metrics. Authors and readers will be able to track and quantify, in real-time, the online impact and reach of selected pieces of scholarly work. This service will be of great benefit to authors and researchers across mathematics and related disciplines.”

Altmetric founder Euan Adie also weighed in on the partnership, saying: “We’re delighted to be working with the AMS. This marks the first time we’ve delivered altmetrics for the mathematical sciences, and their expert knowledge of the field has been invaluable help.” For more information about Altmetric and how the product works, please visit www.altmetric.com. Users interested in viewing the metrics in context can visit the journal pages referenced above at www.ams.org/journals.

—Donald McClure
AMS Executive Director

Deaths of AMS Members

Simmie S. Blakney, of Toledo, Ohio, died on July 15, 2013. Born on June 1, 1928, he was a member of the Society for 44 years.

Franki Dillen, professor, KU Leuven, Belgium, died on April 17, 2013. Born on March 15, 1963, he was a member of the Society for 20 years.

Harley Flanders, of Ann Arbor, Michigan, died on July 26, 2013. Born on September 13, 1925, he was a member of the Society for 66 years.

Frank N. Huggins, of Arlington, Texas, died on July 10, 2013. Born on October 25, 1926, he was a member of the Society for 49 years.

C. J. Scriba, of Hamburg, Germany, died on July 26, 2013. Born on October 6, 1929, he was a member of the Society for 42 years.

Dorothy B. Shaffer, of Stamford, Connecticut, died on April 3, 2013. Born on February 12, 1923, she was a member of the Society for 64 years.

—Annette Emerson and Mike Breen
AMS Public Awareness Officers
paoffice@ams.org

From the AMS Public Awareness Office

Visual Insight: Mathematics Made Visible. This blog by John Baez is a place to share striking images that help explain advanced topics in mathematics. He invites those who have created images to share them on the blog. Early posts are “[6,3,3] Honeycomb in Upper Half Space”, “Algebraic Numbers”, and “Tübingen Tiling”. Baez, professor of mathematics at the University of California Riverside, also works at the Centre for Quantum Technologies in Singapore and started the Azimuth Project, an international collaboration to create a focal point for scientists and engineers interested in saving the planet. He continues to enjoy explaining mathematics, and Visual Insight is one way to do that: http://blogs.ams.org/visualinsight/.

2014 Calendar of Mathematical Imagery. To request a complimentary copy of the 2014 calendar featuring selected images from Mathematical Imagery (www.ams.org/mathimagery), please email paoffice@ams.org with the subject line “2014 calendar-notices”. Please limit your order to three copies so that others may also have the opportunity to receive a copy.

—Donald McClure
AMS Executive Director