Mathematics Opportunities

Proposal Due Dates at the DMS

The Division of Mathematical Sciences (DMS) of the National Science Foundation (NSF) has a number of programs in support of mathematical sciences research and education. Listed below are some of the programs and their proposal due dates for the year 2011. Please refer to the program announcement or contact the program director for more information.

December 15, 2010 (full proposal): Computational Mathematics

January 2, 2011 (letter of intent): Industry/University Cooperative Research Centers Program (I/UCRC)

January 10, 2011 (full proposal): Algorithms for Threat Detection (ATD)

January 13, 2011 (full proposal): Mathematical Biology January 27, 2011 (full proposal): Scientific Computing Research Environments for the Mathematical Sciences (SCREMS)

February 4, 2011 (full proposal): Mathematical Sciences Research Institutes

February 10, 2011 (full proposal): Interdisciplinary Training for Undergraduates in Biological and Mathematical Sciences (UBM)

March 6, 2011 (full proposal): University/Industry Cooperative Research Centers Program (I/UCRC)

June 3, 2011 (full proposal): Research Experiences for Undergraduates (REU)

June 15, 2011 (full proposal): Workforce Program in the Mathematical Sciences

June 26, 2011 (letter of intent): Industry/University Cooperative Research Centers Program (I/UCRC)

August 24, 2011 (full proposal): Research Experiences for Undergraduates (REU)

September 13, 2011 (full proposal): International Research Fellowship Program

September 26, 2011 (full proposal): Industry/University Cooperative Research Centers Program (I/UCRC)

October 3, 2011 (letter of intent): ADVANCE: Increasing the Participation and Advancement of Women in Academic Science and Engineering Careers

October 3, 2011 (full proposal): Joint DMS/NIGMS Initiative to Support Research at the Interface of the Biological and Mathematical Sciences (DMS/NIGMS)

October 4, 2011 (full proposal): Algebra and Number Theory; Analysis; Combinatorics; Foundations

For further information see the website http://www.nsf.gov/funding/pgm_list.jsp?org=DMS&ord=date. The mailing address is Division of Mathematical Sciences, National Science Foundation, Room 1025, 4201 Wilson Boulevard, Arlington, VA 22230. The telephone number is 703-292-5111.

—From the DMS website

NSF Algorithms for Threat Detection

The Division of Mathematical Sciences (DMS) at the National Science Foundation (NSF) has formed a partnership with the Defense Threat Reduction Agency (DTRA) to develop the next generation of mathematical and statistical algorithms for the detection of chemical and biological threats. Proposals are solicited from the mathematical sciences community in two main areas: mathematical and statistical techniques for genomics and mathematical and statistical techniques for the analysis of data from sensor systems. The deadline for full proposals is January 10, 2011. For more details, see http://www.nsf.gov/pubs/2010/nsf10540/nsf10540.htm.

-From an NSF announcement

National Academies Research Associateship Programs

The Policy and Global Affairs Division of the National Academies is sponsoring the 2011 Postdoctoral and Senior Research Associateship Programs. The programs are meant to provide opportunities for Ph.D., Sc.D., or M.D. scientists and engineers of unusual promise and ability to perform research at more than 100 research laboratories throughout the United States and overseas.

Full-time associateships will be awarded for research in the fields of mathematics, chemistry, earth and atmospheric sciences, engineering, applied sciences, life sciences, space sciences, and physics. Most of the laboratories are open to both U.S. and non-U.S. nationals and to both recent doctoral recipients and senior investigators. Amounts of stipends depend on the sponsoring

laboratory. Support is also provided for allowable relocation expenses and for limited professional travel during the period of the award.

Awards will be made four times during the year, in February, May, August, and November. The deadline for application materials to be postmarked or for electronic submissions for the February 2011 review is February 1, 2011. Materials for the May review are due May 1, 2011; for the August review, August 1, 2011; and for the November review, November 1, 2011. Note that not all sponsors participate in all four reviews. Applicants should refer to the specific information for the laboratory to which they are applying.

For further information and application materials, see the National Academies website at http://sites.nationalacademies.org/PGA/RAP/PGA_050491 or contact Research Associateship Programs, National Research Council, Keck 568, 500 Fifth Street, NW, Washington, DC 20001; telephone 202-334-2760; fax 202-334-2759; email rap@nas.edu.

-From an NRC announcement

AMS-AAAS Mass Media Summer Fellowship

The American Mathematical Society provides support each year for a graduate student in the mathematical sciences to participate in the American Association for the Advancement of Science (AAAS) Mass Media Science and Engineering Fellows Program. In past years, the AMS-sponsored fellows have held positions at *Scientific American, Business Week*, Voice of America, Discovery Channel Online, National Geographic Television, *Popular Science, The Chicago Tribune, Milwaukee Journal Sentinel, Time* magazine, and WOSU-AM Radio.

Fellows receive a weekly stipend of US\$450 plus travel expenses to work for ten weeks during the summer as reporters, researchers, and production assistants in media organizations. They observe and participate in the process by which events and ideas become news, improve their ability to communicate about complex technical subjects in a manner understandable to the public, and increase their understanding of editorial decision making and of how information is effectively disseminated. Each fellow attends an orientation and evaluation session in Washington, DC, and begins the internship in mid-June. Fellows submit interim and final reports to AAAS. A wrap-up session is held at the end of the summer.

Mathematical sciences faculty are urged to make their graduate students aware of this program. The deadline to apply for fellowships for the summer of 2011 is **January 15, 2011**. Further information about the fellowship program and application procedures is available online at http://www.aaas.org/programs/education/MassMedia; or applicants may contact Stacey Pasco, Manager, Mass Media Program, AAAS Mass Media Science and Engineering Fellows Program, 1200 New York Avenue, NW, Washington, DC 20005; telephone 202-326-6441; fax

202-371-9849; email spasco@aaas.org. Further information is also available at http://www.ams.org/policy/government/fellow-awards/fellow-awards and through the AMS Washington Office, 1527 Eighteenth Street, NW, Washington, DC 20036; telephone 202-588-1100; fax 202-588-1853; email amsdc@ams.org.

—AMS Washington Office

CAIMS/PIMS Early Career Award

The Canadian Applied and Industrial Mathematics Society (CAIMS) and the Pacific Institute for Mathematical Sciences (PIMS) sponsor the Early Career Award in Applied Mathematics to recognize exceptional research in any branch of applied mathematics, interpreted broadly. The nominee's research should have been conducted primarily in Canada or in affiliation with a Canadian university. The prize is to be awarded every year to a researcher less than ten years past the date of Ph.D. at the time of nomination.

The award consists of a cash prize of C\$1,000 and a commemorative plaque presented at the CAIMS Annual Meeting. The recipient will be invited to deliver a plenary lecture at the CAIMS Annual Meeting in the year of the award. A travel allowance will be provided. The deadline for nominations is **January 31, 2011**. For more information see http://www.pims.math.ca/pims-glance/prizes-awards.

-From a PIMS announcement

AMS von Neumann Symposium

The AMS is sponsoring the von Neumann Symposium: Multimodel and Multialgorithm Coupling for Multiscale Problems to be held in Snowbird, Utah, July 4–7, 2011. Plenary talks will be given by Aleksandar Donev, Courant Institute, New York University; Weinan E, Princeton University; Nicolas Hadjiconstantinou, Massachusetts Institute of Technology; George Karniadakis, Brown University; Rupert Klein, Freie Universität, Berlin; Petros Koumoutsakos, ETH Zurich; Tinsley Oden, University of Texas at Austin; and George Oster, University of California, Berkeley. There will also be a series of shorter presentations. The organizers are John B. Bell (chair), Alejandro L. Garcia, and Francis J. Alexander.

Participation in this program is limited. Visit www.math-programs.org to apply for an invitation and to request limited support funds. All requests will be reviewed and considered by the organizing committee. The application deadline is February 1, 2011. For more information, see www.ams.org/meetings/amsconf/symposia/symposia-2011.

—AMS announcement

PIMS IGTC Fellowship for 2011-2012

The PIMS International Graduate Training Centre in Mathematical Biology invites applicants for the IGTC fellowship for the 2011–2012 academic year. Fellowships are worth up to C\$10,000 a year and are for students working in mathematical biology at the Pacific Institute for Mathematical Sciences (PIMS) universities (Alberta, British Columbia, Calgary, Regina, Saskatchewan, Simon Fraser, and Victoria).

If you have excellent students, either potential students applying now or current students, please encourage them to apply.

There are also opportunities for students to enroll in the program. All students can benefit from IGTC graduate training elements, including annual research summits, summer courses, new term-time courses, seminars, graduate student exchanges, and international visitors.

Full details of the IGTC Program and application process can be found at: http://www.pims.math.ca/scientific/graduate-training-igtc/mathematical-biology. If you have further questions, please contact the IGTC coordinator, Maryna Yaskina (igtcmathbio@math.ualberta.ca) or Program Director Mark Lewis (mlewis@math.ualberta.ca).

Application deadline is February 8, 2011.

—PIMS announcement

Inside the AMS

Trjitzinsky Memorial Awards Presented

The AMS has made awards to seven 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 2010 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 2010, the names of the students receiving Trjitzinsky awards, and brief biographical sketches of the students.

California State University, Bakersfield: VIANEY CAROLINA LEOS BARAJAS. Barajas was born in Mexico and came to the United States when she was one year old. After graduating from high school, she studied for two years in Madrid, Spain. She is president of the math club at California State and is minoring in computer science. She is currently pursuing research in nonparametric regression. She is a tutor in the Math Tutoring Center and is a Louis Stokes Alliance for Minority Participation scholar. She also works for the Migrant Education Program in the Bakersfield City School District. She intends to pursue graduate studies in applied statistics.

University of Cincinnati: LANGSTON W. JOINER. Joiner is pursuing an undergraduate degree in mathematics and performed excellently in his first year at the University of Cincinnati. He plans to pursue a career in actuarial science. He is a volunteer and advocate for people with developmental disabilities in the Cincinnati community and is active in his church, in which he serves as a mentor to the youth group.

Emory University: MICHELLE CHU. Chu is a senior with a GPA of 3.94 who is actively engaged in mathematical research. During the summer of 2010 she conducted research in physical knot theory at the Williams College SMALL Research Experience for Undergraduates (REU); she is currently writing a paper based on her project. She is an active member of the Gamma Phi Beta sorority and currently serves as president of the Reformed University Fellowship at Emory.

Kansas State University: PERLA SALAZAR. Salazar is a first-generation college student who was born in Mexico. She graduated with honors from Dodge City Community College after receiving a presidential scholarship for her studies and then transferred to Kansas State. With help from the Bridges Program of the National Institutes of

Health and from the Developing Scholars Program at Kansas State, she has performed undergraduate research and is currently a McNair Scholar, which will allow her to continue research during the summer. She plans to attend graduate school in mathematics.

University of Oklahoma: DANA C. HAYMON. Haymon is a mathematics major with a minor in history and is a member of the National Society of Scholars. She has a GPA of 3.93 and is a hard and dedicated worker. She is also an experienced musician. She hopes to work in the defense industry and to encourage other young women through her example to enter the field of mathematics

Rochester Institute of Technology: James S. Wratten Jr. Wratten is a senior majoring in applied mathematics and has a 4.0 GPA. In the spring of 2010 he studied in Hungary under the auspices of the Budapest Seminars in Mathematics program. He has served as a teaching assistant and tutor at Rochester, and he attended the Gene Drive Systems REU program at Texas A&M University during the summer after his freshman year. During the past two summers he has worked and tutored mathematics at two orphanage schools in India. He plans to study for a Ph.D. in mathematics.

York College: BEBI Z. G. RAJENDRA. Rajendra was born in Guyana, the oldest of nine children. She began teaching directly out of high school in order to help support her family. She is now a mother of three studying for a bachelor's degree in mathematics. While still living in Guyana, she completed the Edexcel GCE A-Level mathematics program, which solidified her desire and determination to seek higher education. She intends to pursue a teaching career in mathematics.

-Elaine Kehoe

AMS Hosts Congressional Briefing

On October 12, 2010, the AMS hosted a briefing on Capitol Hill titled "The Gulf Oil Spill: How Can We Protect Our Beaches in the Future?" Andrea Bertozzi, professor of mathematics at UCLA, delivered the address to Congres-



Andrea Bertozzi, UCLA, speaks to Congressional representatives at the AMS Congressional briefing in Washington, DC.

sional representatives. She discussed how scientific modeling and basic research in mathematics is helping in the understanding of the impact of this major environmental problem. Her research examines the dynamics of oil-sandwater mixtures in an effort to provide more efficient cleanup and protection methods for oil spills such as the one that occurred in the Gulf of Mexico this year.

-AMS announcement

Erdős Memorial Lecture

The Erdős Memorial Lecture is an annual invited address named for the prolific mathematician Paul Erdős (1913–1996). The lectures are supported by a fund created by Andrew Beal, a Dallas banker and mathematics enthusiast. The Beal Prize Fund, now US\$100,000, is being held by the AMS until it is awarded for a correct solution to the Beal Conjecture (see www.math.unt.edu/~mauldin/beal.html). At Beal's request, the interest from the fund is used to support the Erdős Memorial Lecture.

The Erdős Memorial Lecturer for 2010 was Doron Zeilberger of Rutgers University, who delivered a lecture titled "3x+1" at the Spring Southeastern Section Meeting at the University of Kentucky in Lexington, Kentucky, on March 27, 2010.

-AMS announcement

From the AMS Public Awareness Office

The AMS hosted a hands-on exhibit, George Hart's "Sculpture Barn Raising", at the USA Science and Engineering Festival (USASEF), held in Washington, DC, October 23–24. Visitors of all ages stopped by to help build



AMS booth at the USA Science and Engineering Fair.

the modular equilateral triangles. The completed sculpture allows one to see a variety of patterns of tunnels from various directions. After the festival the sculpture was delivered to Towson University to be put on permanent display. Hart describes the sculpture in detail at http://www.georgehart.com/DC, and this work and others by Hart may be sent as

e-postcards from Mathematical Imagery at http://www.ams.org/mathimagery. The USASEF included hundreds of exhibitors—the MAA, SIAM, other scientific societies, companies, government agencies, and laboratories—and drew thousands of visitors. Read more about USASEF at http://www.usasciencefestival.org/.

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

My Summer at The Oregonian

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 the piece below, the 2010 Fellow, Benjamin Pittman-Polletta of the University of Arizona, Tuscon, describes his experiences during his fellowship at The Oregonian. 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/programs/ams-fellowships. The application deadline is January 15, 2011.

When I got the news that the AAAS wanted to ship me to Portland, Oregon, to write for *The Oregonian*, a world-class paper covering the Pacific Northwest, I was more than a little hesitant. Preparing writing samples for my application over a grueling and sleepless weekend was a vivid reminder of just how difficult writing can be. At the end of a six-year quest for a Ph.D., I wanted a break and time to look for a job. I was wary of traveling out of my comfort zone and across the country for a ten-week crash course in a new profession.

But part of me thought that a dose of contact with the world outside mathematics would be a balm for my dissertation-weary soul. As a liaison between journalism and science, I looked forward to learning not only about the culture of journalism but also what it feels like to be on the outside of science peering in. And while I knew there would be hard work, I hoped that the reward of making an immediate impact on other people would be worth it.

Because *The Oregonian* is primarily a local paper, only one of my stories was about an article appearing in a peer-reviewed journal. This was a blessing, because I learned that there are many ways to get science into the news even without a study or a researcher in sight.

For example, my most mathematical article was about the weather. It started with me wondering, "What is the hottest day of the year?" and ended with an article about Oregon weather. Published on August 8, historically the hottest day of the year in Portland, it contains some basic probability and statistics even if it only alludes to the differential equation that answers my question.¹

And while I was lucky enough to cover an evolutionary biology conference, Evolution 2010, I did not interview any conference participants about their research. Instead, I wrote a blog post about the kickoff talk and then published a number of short interviews with participants about the hottest trends in evolutionary biology.

Writing for a local paper also gave me the time and space to write a number of articles about big, complex issues. My first story, inspired by a research paper upgrading estimates of American food waste to 40 percent of our food supply, touched on the obesity epidemic, agricultural policy, and American eating and consumption habits, in addition to food waste and food rescue in Portland.

Putting together all the pieces of this story was a challenge. One of the hurdles I had to jump was my own reluctance to draw a conclusion or state an opinion—evidence, I think, of my mathematical training: there is a taboo in mathematical culture against interpreting results too broadly. I was tempted at many points to say, "It's complicated!"—to throw up my hands, lay out the evidence, and let readers draw their own conclusions.

But complications have a hard time holding readers' attention. The responsibility of the journalist is to pick out the best-quality, most relevant information and deliver it to the reader in the most streamlined package possible. And this has to happen after researching a topic for as short a time as a week or a day!

This is in sharp contrast to the painstaking, time-consuming way scientists build expertise and draw conclusions. Many scientists I interviewed seemed genuinely afraid of talking about subjects "outside (their) area of expertise." As a researcher, I understand the importance of consulting the main expert—and not just anyone in your field—on a topic. But as a journalist representing laypeople, I found this academic turf minding to be alienating and confusing. There I was talking to evolutionary biologists at Evolution 2010 about evolutionary biology, and they were telling me that they weren't the experts!

One of the ways journalists make up for the short amount of time they have to develop each article is to start with a strong idea of where the article is going before they ever start reporting or writing. Decisions about the arc of a story and the larger themes that will run through it happen before the first phone call or trip is made. This is a technique that can also be fruitfully applied in mathematical research, provided you are flexible about how your "story" ends up.

Another piece of advice I have used in both journalism and research is the advice I was given about interviewing: play dumb. Even if you know what your source is talking about, don't show it. You will be sure to get the facts right, and your source may even explain things in a way your readers can understand. Then you can quote her and make her sound good, something she will appreciate far more than being impressed by your knowledge of her field. It makes perfect sense, but it is another way that journalists and scientists differ. I spent far too much time in graduate school playing smart and feeling dumb rather than the other way around.

Not surprisingly, the different pressures scientists and journalists feel can result in miscommunications and frustrations when they interact. Hoping to write an article about one of the talks at Evolution 2010, I attempted to interview a woman who spoke about predicting flu virus evolution. When I asked her a question after her presentation, she told me impatiently that I would have to take her freshman biology class if I was going to understand the answer. Before she stormed out, she shared

 $^{^1}$ In fact, the "easy" answer to the question is August 4. A simplified equation for the temperature T of a body being heated by a source of sinusoidally oscillating intensity is $dT/dt=T(t)-\sin(t)$. The solution to this equation is $T(t)=\cos(2t)$, which has a peak 1/8 of a cycle behind the peak heat intensity. Thus, three in the afternoon should be the hottest time of day, and August 4 should be the hottest day of the year.

the opinion that journalists want easy answers even when there are none and are not above distorting the truth to get them.

In my experience, journalists are very careful about getting right the details that are important to them. Fact checking takes on a new urgency when the facts are about a real person and destined for the morning paper. And journalists, like mathematicians, are expert at leaving just enough detail out of a statement to make it correct. For the most part, their sources and even their readers are appreciative of their efforts.

This was really my favorite part of the summer: the tangible sense I got that I was making a real difference in peoples' lives, whether by sharing their stories and their passions, by shedding light on new problems, or even occasionally by making a point or driving home a message. My article on food waste was basically about the dysfunctional food production and distribution system, and it started an online conversation about food purchasing and storage habits. My interviews from Evolution 2010 highlighted the fact that evolution has become a predictive science, providing overwhelming evidence of the theory's explanatory power. And one of my stories was not about math or science at all. Instead, it was about the product stewardship movement, which attempts to hold manufacturers responsible for helping to dispose of their products at the end of those products' useful life.

We live in a time when accurate and rational voices are sorely needed. One of the best reasons for mathematicians and scientists to reach out to the larger community is to bring whatever expertise we have in whatever capacity possible to bear on the problems facing our community and our country.

If the job market for mathematicians is bad, that for journalists is worse. The newspaper industry is in peril and, consequently, in flux. *The Oregonian* recently nixed its science section, and the number of dedicated science journalists at the paper and at large is dwindling. If this trend continues, the responsibility for putting science and math in the media will fall increasingly on the shoulders of mathematicians and scientists. This will require us to become less afraid of being wrong or appearing stupid—less afraid of leaving our comfort zone—and more afraid of the unchecked spread of misinformation, because there are always people willing to discard the facts or pretend to expertise if it serves their interests.

—Benjamin Pittman-Polletta

Deaths of AMS Members

EMIL R. BRANDLI, of Zurich, Switzerland, died on January 30, 2010. Born on October 24, 1916, he was a member of the Society for 39 years.

A. JOHN COLEMAN, of Ontario, Canada, died on September 30, 2010. Born on May 20, 1918, he was a member of the Society for 68 years.

HERBERT B. ENDERTON, professor at the University of California Los Angeles, died on October 20, 2010. Born

on April 15, 1936, he was a member of the Society for 49 years.

JOE W. JENKINS, from the National Science Foundation in Arlington, VA, died on October 21, 2010. Born on October 17, 1941, he was a member of the Society for 44 years.

NIGEL KALTON, of Columbia, Missouri, died on August 31, 2010. Born on June 20, 1946, he was a member of the Society for 32 years.

RICHARD MICHAEL KANE, University of Western Ontario, died on October 1, 2010. Born on June 27, 1944, he was a member of the Society for 19 years.

ROBERT J. LEVIT, of Oakland, California, died on May 13, 2010. Born on August 17, 1916, he was a member of the Society for 69 years.

WILLIAM S. MAHAVIER, professor emeritus, Emory University, died on October 8, 2010. Born on July 30, 1930, he was a member of the Society for 55 years.

RICHARD J. MAHER, professor, Loyola University, died on September 14, 2010. Born on July 13, 1943, he was a member of the Society for 39 years.

- J. E. MARSDEN, California Institute of Technology, Pasadena, California, died on September 21, 2010. Born on August 17, 1942, he was a member of the Society for 39 years.
- G. C. MILOSLAVSKY, of Staten Island, New York, died on July 1, 2010. Born on November 1, 1911, he was a member of the Society for 62 years.

REINHARD M. OLIVIER, University of Bonn, Germany, died on September 13, 2010. Born on October 3, 1933, he was a member of the Society for 40 years.

JOHN RAUSEN, of New York, New York, died on October 31, 2010. Born on February 3, 1923, he was a member of the Society for 61 years.

CONSTANCE REID, of San Francisco, California, died on October 13, 2010. Born on January 3, 1918, she was a member of the Society for 10 years.

JOEL E. SCHNEIDER, of New York, New York, died on September 12, 2004. Born on April 8, 1943, he was a member of the Society for 38 years.

MICHAEL S. SKAFF, of Michigan, died on June 18, 2010. Born on June 21, 1936, he was a member of the Society for 50 years.

S. LEIF SVENSSON, of Sweden, died on February 13, 2010. Born on December 18, 1943, he was a member of the Society for 17 years.

JOSEPH J. TRIOLO, of Pennsylvania, died on January 20, 2010. Born on December 4, 1942, he was a member of the Society for 16 years.

RONSON J. WARNE, of Birmingham, Alabama, died on September 12, 2010. Born on June 14, 1930, he was a member of the Society for 51 years.

DAVID A. WOODWARD, of Fair Oaks, California, died on July 7, 2010. Born on November 23, 1932, he was a member of the Society for 50 years.

DAVID M. YOUNG, of Texas, died on December 21, 2008. Born on October 20, 1923, he was a member of the Society for 59 years.