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JOAN AND JOSEPH BIRMAN CREATE FELLOWSHIP TO SUPPORT MID-CAREER WOMEN



Photo courtesy of Joan & Joseph Birman

The new Joan and Joseph Birman Fellowship for Women Scholars seeks to address the paucity of women at the highest levels of research in mathematics by giving exceptionally talented women extra research support during their mid-career years. The Fellowship was established in 2017 with a generous gift from Joan and Joseph Birman. Sadly, Joseph Birman passed away in 2016.

Joan's conversation with *The Line* offers insight into her and Joe's motivation for creating this fellowship at the AMS.

You earned your PhD at 41 and have had a highly respected career. Are there hidden benefits to pursuing a doctoral degree later in life?

While the timing I elected suited me, I would not recommend it in general. There were many special factors in my case, including my own strong motivation and a husband who was totally supportive of my efforts. This is a very individual matter, and there is no single "right" way.

Are there other fellowships like this in the mathematics world?

Not in mathematics. The American Physical Society's Bluett Fellowship invites comparisons, but its targeted group is quite different from ours. I did not do a real search of other sciences and would be interested to hear about other such fellowships.

You and Joe have long been philanthropic. You established the Ruth Lyttle Satter Prize at the AMS in 1989 and have been a long-time donor. Joe was honored several times for his support of dissident scientists. Has there been any philosophical through-line in your family's approach to helping others?

Joe always sprang to help people who asked for his assistance, and (to the best of my knowledge) this was purely spontaneous

and had nothing to do with family traditions. In my family my maternal grandparents, Reuben and Agie Siegel, arrived in the US in the 1880s as penniless immigrants. Reuben eventually succeeded in business and became one of the founders of the Hebrew Free Loan Association, whose goal was to make interest-free loans to new immigrants. So yes, the tradition was there, and it made an impression on me.

The Fields Medal's restriction to mathematicians under 40 years of age is at odds with the prime biological window for women to bear children. Would you advocate to change the requirements, such as "fifteen full-time years post-PhD", which could allow for that window?

While the "under 40" age restriction is indeed ill-suited to the normal life cycle of women, I do not recommend that it be changed. Very young mathematicians often generate highly original ideas, and I feel proud of belonging to a profession where the young are recognized and encouraged by awarding them our most prestigious prize. I would hate to see that particular change in the service of social engineering.

While there are certainly individual exceptions, the math community is largely welcoming to talent, irrespective of age, culture, or country of origin. I hope that the Fellowship will make it a little easier for women to participate fully.

Is there anything else you wish to express?

I would like to explain my decision to restrict the prize to women holding positions in American institutions. My reason was simple: while I know that women all over the world have related problems in mathematics, I felt that I understood US institutions best.

I feel that my choice to give money to the AMS rather than to some other worthy organization was the right decision. When I proposed the Satter Prize, Bill Browder (then AMS president) and others asked me thoughtful questions that led to small but important changes in its structure. The proposal for the Fellowship was similar in that excellent questions were asked by people I respect and it was shaped with the help of thoughtful colleagues. I know many good organizations, but no other where I could feel the same trust that my money will be used well for its intended purpose of helping more women mathematicians to develop their creative voices.

Applications are being accepted for the 2018–19 award until December 1, 2017. For full information, visit

www.ams.org/programs/ams-fellowships/Birman-fellow



FISKE SOCIETY MEMBERS CONTINUE TO INFLUENCE MATHEMATICS



Photo copyright: MFO

Roy L. Adler (1931–2016) In 1965 Roy Lee Adler helped introduce the seminal concept of topological entropy. He later jointly conjectured the well-known Road Coloring Theorem, developed an award-winning algorithm to improve data storage, and made several other important mathematical contributions.

Dr. Adler also served the AMS for many years. He worked on numerous committees and was chair of the Board of Trustees from 1996 to 1997. An AMS Fellow and member for over fifty years, Roy Adler continued supporting the AMS through his estate plan. We thank him for looking ahead for mathematics in so many ways.



Photo courtesy James and Bettie Hannan

James F. Hannan (1922–2010) and Bettie C. Hannan (1921–2016) James Francis Hannan served in WWII as an army meteorologist and spent his downtime winning poker games. Both activities informed his eventual work with consistency, repeated games, compound decision theory, and more as professor of statistics and probability at Michigan State University.

Hannan met Bettie Creighton at the University of North Carolina, where Bettie, pursuing her master's in art history, was secretary to statistics professor Harold Hotelling. They married in 1951, and Bettie, accomplished in French and Russian, often translated Jim's scholarly papers.

Professor Hannan was known for giving his time and guidance to students. Both he and Bettie were also generous to mathematics and included the AMS in their will. We are pleased to be stewards of their generosity.



Photo courtesy SUNY Geneseo

Paul T. Schaefer (1930–2012) and Barbara A. Schaefer (1932–2015) At the University of Rochester Paul Schaefer studied mathematics, and Barbara Kirsch the double bass at Rochester's Eastman School of Music. They shared their love of music and mathematics over their sixty-one year marriage.

A mathematics professor at SUNY Geneseo, Paul worked in combinatorics and number theory, compiled a history of women mathematicians, and was the organist at his church. Barbara became a librarian and focused on mathematical literature, writing *Using the Mathematical Literature* in 1979 to help others achieve robust search results.

The Schaefers continued their dedication to mathematics with a provision for the AMS in their estate plan. The Society is grateful for their forward-thinking bequest.

MATHSCINET® FOR DEVELOPING COUNTRIES: REPORT FROM AIMS CAMEROON

Prof. Dr. Mama Foupouagnigni writes to us from AIMS Cameroon, a beneficiary of MathSciNet for Developing Countries.



Prof. Dr. Mama Foupouagnigni,
Centre President, AIMS Cameroon

Science and technology are powerful forces for sustainable development in the global economy. With mathematics as the backbone of science and technology, Africa must build a strong indigenous capacity to master the mathematical sciences.

The African Institute for Mathematical Sciences (AIMS) is the first pan-African Network of Centres of Excellence in mathematical sciences, with three main activities: postgraduate education, research, and public engagement. The six centres (South Africa, Senegal, Ghana, Cameroon, Tanzania, and Rwanda) enable Africa's most talented students to become innovators who propel Africa's science, education, and self-sufficiency.

As of July 2017, AIMS has graduated more than 1,500 students from 42 African countries, with 31% of them being women.

Students at AIMS Cameroon made full use of MathSciNet during academic year 2016–17, thanks to the MathSciNet for Developing Countries (MDC) program from the American Mathematical Society. MDC assisted with the production of 46 theses in various subjects, including partial differential equations, numerical analysis, differential geometry, cryptography, algebraic geometry, mathematical modeling, statistics, and financial mathematics. We are very thankful to the AMS for this valuable support and hope it will be continued and enhanced.

YOUR GIFT IN ACTION: STUDENT CHAPTER HOSTS CONFERENCE

Your gift to AMS Graduate Student Chapters helps provide grants of \$500 to each chapter for programming that enriches their graduate experience.

Graduate students at the University of California Riverside used some of their grant to help organize their inaugural interdisciplinary conference, Math Connections, in May 2017. It focused on the interplay of algebra, analysis, and number theory, and brought together students from across Southern California. Students enjoyed ten 25-minute talks given by graduate students and a plenary talk given by a UCR faculty member.





DONORS HONORED AT AMS HEADQUARTERS

The AMS Donor Wall of Honor celebrates people who have made a gift to the AMS of \$1,000 or more in a calendar year. We are pleased to add the following names from 2016. Thank you as well to the donors who wished to remain anonymous.

2016 AMS Staff

Estate of Roy L. Adler

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Estate of James F. and Bettie

C. Hannan

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In memory of Alfred Stöhr

In memory of Bill Thurston

In memory of Jim Van Horne



A MESSAGE FROM OUR PRESIDENT: THE AMS AND THE NEXT GENERATION



AMS President Ken Ribet

It is my pleasure to write to you as AMS president. Even as mathematics powers technology, technology is transforming mathematics. The AMS is implementing new tools, features, and offerings that will benefit the next generation of mathematicians.

Helping to advance young mathematicians has been central to the AMS throughout its

history—indeed, the Society was founded by graduate students. In recent years, travel grants, MathJobs, Mathematics Research Communities, and AMS Student Chapters are programs for this population that have been in high demand.

Support for early-career mathematicians was the top priority expressed by our community in the AMS's 2015 strategic planning survey. Thus, we are adding new features and tools. MathSciNet now links with arXiv and Math Overflow. Open Math Notes lets students “sit in” on distant classrooms and collaborate remotely. Our Education and Diversity Department is working to improve student recruitment, preparation, and success rate, particularly those from underrepresented groups. This is just the beginning!

The value of the AMS in this highly connected digital age is seen in our broad range of offerings. We address programmatic gaps that individual institutions can't. We elevate mathematics by transcending the divisions of universities, corporations, disciplines, and nations. This is also why my wife, Lisa Goldberg, and I have been AMS donors, giving to a variety of AMS activities, including those that help early-career mathematicians. Please join us in our support for the next wave by donating to the AMS.

YOUR GIFT IN ACTION: ACADEMIC JOB APPLICATION PANEL

By the end of academic year 2016–17 the AMS had 54 active Graduate Student Chapters. They are making great things happen with the help of your donations. For example, the AMS Graduate Student Chapter at the University of Rochester used some of their \$500 grant to organize an Academic Job Application Panel to gain insight



UNIVERSITY of
ROCHESTER

about the job application process. Participants included two faculty members who are on the UR hiring committee and two graduating PhD students who were each successfully offered research positions in well-regarded universities.

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AMS News Inside!

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FOR DEVELOPING COUNTRIES**



**THE JOAN AND JOSEPH BIRMAN
FELLOWSHIP FOR WOMEN SCHOLARS**



Photo courtesy of Joan & Joseph Birman

**PRESIDENT TALKS
NEXT GENERATION OF AMS**



Photo by Kate Awtry, Atlanta Convention Photography

ALSO: YOUR GIFT HELPING GRADUATE STUDENTS

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