

Being Part of the Broader Mathematical Community

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Overview

There are several mathematical organizations in the US, including:

- AMS: American Mathematical Society
- MAA: Mathematical Association of America
- SIAM: Society for Industrial and Applied Mathematics
- AWM: Association for Women in Mathematics
- NAM: National Association of Mathematicians

Questions to answer:

- What are their main purposes and regular activities?
- What are the benefits of belonging?
- How can I be a member, as a graduate student, and beyond?
- Do any of them have a presence at UGA?

American Mathematical Society

Mission: To further the interests of mathematical research, scholarship and education, serving the national and international community through publications, meetings, advocacy and other programs.

The goals of the AMS are as follows:

- Promote mathematical research, its communication and uses
- Encourage and promote the transmission of mathematical understanding and skills
- Support mathematical education at all levels
- Advance the status of the profession of mathematics, encouraging and facilitating full participation of all individuals
- Foster an awareness and appreciation of mathematics and its connections to other disciplines and everyday life

- Founded: 1888
- Membership: Nearly 30,000 individuals and 580 institutional members around the world.
- Locations: Providence, RI; Ann Arbor, MI; and Washington, DC.
- Financing: Publication sales, dues, contributions, endowments, investments, government grants, and service contracts.
- Budget: \$25 million.
- Meetings: AMS National, sectional, and international, and AMS presence at other mathematics, scientific and publishing meetings.

Benefits of Membership:

- discounts on AMS meetings, publications and services
- subscriptions to Notices and Bulletin
- career and professional development services
- networking opportunities with mathematicians from around the globe

Our department is an Institutional Member. As such, we can nominate all our graduate students for individual membership, with no dues during the period they are graduate students! Laura normally does this at the beginning of each academic year.

We also have a Graduate Student Chapter of the AMS. This was set up mainly by Natalie and Hans at the end of 2014. The organization gets a budget of \$500 from AMS. Andrew Maurer is the current president of our Chapter, and Jordan Clark is the Secretary, so please contact one of them if you're interested in participating.

- Journals (Notices of the AMS, 8 original research journals, 4 translations journals, 2 open access journals; over 1,100 articles published annually)
- Books (approximately 80 new books published annually; over 3,500 titles in print; monographs and proceedings in 27 active series and others not in series; eBook collections and subscription)
- Mathematical Reviews, founded in 1940 (2.9 million items in the MR database online as MathSciNet; approximately 125,000 items added each year; over 2,000 journals covered; links to over 1.7 million original articles; 694,000 authors indexed; over 15,100 active reviewers)
- AMS and social media: The AMS has a presence on Facebook, Twitter, Google+, LinkedIn, YouTube, Instagram and iTunes; hosts AMS Blogs; and invites individuals to use RSS feeds.

AMS meetings and conferences provide members of the mathematical community with an environment that is stimulating, rewarding, well-organized, and affordable. Members have the opportunity to network informally with colleagues.

National Meetings

Generally known as the Joint Mathematics Meetings (JMM), the national meetings of AMS are held annually for the purpose of advancing mathematical achievement, encouraging research, and providing the communication necessary to progress in the field. Registration for graduate student members is \$71 in advance, \$83 at the meeting.

Sectional Meetings

There are eight sectional meetings annually – one in the spring and one in the fall in each of the four geographic sections of the US. Registration for students is only \$5.

AMS Short Courses

One or two short courses are offered in conjunction with the JMM.

International Meetings

The AMS joins a host society from another country once a year to organize these meetings for members of the mathematical community both in the U.S. and abroad.

AMS Conferences

There are also regularly scheduled conferences, usually held during the summer, in a relaxed atmosphere such as a university campus or a resort. These include the Mathematics Research Communities (for mathematicians just beginning their careers; held at Snowbird, UT) and the AMS von Neumann Symposia.

Meetings are an important part of any young mathematical scientist's professional development. Listening to talks, meeting active researchers, networking with old friends, and making new professional connections are building blocks of the early career.

The AMS, with support from a private gift, accepts applications for partial travel support for two types of AMS meetings:

The Joint Mathematics Meetings

For doctoral students in mathematics who are in their last year of study. Awards are for \$500. Application period Aug. 12 – Sept. 28, 2016.

AMS Sectional Meetings

For current full time doctoral students. Awards are for \$250. Application period May 4 – July 25, 2016 for the Fall 2016 Sectional Meetings.

The JMM is held jointly with the Mathematical Association of America and takes place during the first or second week of January.

What to Expect from the 2017 JMM in Atlanta (Jan 4-7):

- a comprehensive and rich scientific program, offering something for mathematicians at all levels;
- numerous invited addresses and special lectures;
- over 80 AMS special sessions;
- prize and award ceremonies, honoring the achievements of outstanding mathematicians;
- the AMS Short Course and the MAA Minicourses, offering opportunities for continued education;
- the AMS Employment Center for job opportunities;
- the Annual Mathematical Art Exhibition, a multi-media exhibition;
- exhibits featuring scientific publishers, professional organizations, mathematics-enrichment products and services, and computer hardware and software.

The Mathematical Sciences Employment Center is held each January at the JMM. It serves as a meeting place and information center for all employers and job seekers attending the Joint Meetings.

The Employment Center is an in-person interviewing program for positions in the mathematical sciences (mostly requiring a PhD). It provides tables for employers for interviewing purposes. Interviews are conducted over a period of $3\frac{1}{2}$ days. Applicants obtain interviews with employers by invitation only. Since applicants greatly outnumber the employers usually, they should expect to be busy only part of the time. Many employers at the Employment Center are looking for well-rounded candidates for college and university teaching positions, although there are usually a few nonacademic employers participating. Research-only postdoc positions are typically not found at the Employment Center.

The Employment Center registration and information exchange is completely electronic. While applicants can express interest in a position, and indicate available times on the schedule, only employers can set up an interview.

- Submit materials early, providing as much information about your abilities as possible.
- Indicate in all correspondence with employers in the Fall that you will be available at the JMM.
- Some universities interview candidates at the JMM in locations away from the Employment Center program.

Registration information and instructions can be found on the Employment Center webpage after Sept 1 each year.

The AMS holds eight sectional meetings annually. Generally, there is one meeting in the spring and one in the fall in each section of the US:

- Western – comprising the states and provinces west of Nebraska
- Central – west of Pennsylvania and east of Colorado
- Eastern – Pennsylvania and the states and provinces to its east and north
- Southeastern – all the remaining states, plus Puerto Rico and the USVI

Meetings typically run for two days, with 3–4 invited addresses and as many special sessions as time and space allow. These meetings also include social events, opportunities for discounted shopping at the on-site AMS Bookstore, and occasionally special lectures.

Each section is overseen by an Associate Secretary, who finds host universities for the meetings in his or her section, and coordinates the scientific program. I am the Associate Secretary for the SE section.

Each Associate Secretary also coordinates the AMS scientific program at the JMM once every four years. I happen to be in charge of the 2017 JMM in Atlanta.

Special sessions occupy the majority of the time at sectional meetings.

- 20+ special sessions
- running concurrently for a total of about 12 hours
- talks usually 20 minutes + 10 minute breaks
- up to 24 talks in a special session

Many of you were probably at the AMS Sectional Meeting in Athens in March. If not, you'll get to experience the flavor of an AMS sectional meeting at the Mock AMS Conference that's part of every graduate summer program at UGA; this year it's July 27-29.

Organizing a special session is an easy way to run a mini-conference in your research area without doing much work. The AMS Meetings and Conferences Department, the local organizer, and the Associate Secretary handle most of the logistics. The main things you have to do are invite speakers, make a schedule, and show up!

Special session proposals are submitted to and approved by the Associate Secretary, with a deadline about 7 months before each meeting. You should think about (co-)organizing a special session soon after you graduate; it makes a good addition to your resumé!

And you don't have to be employed in the same geographic Section as the meeting – so feel free to submit a proposal to me. I generally accept all reasonable proposals on a rolling basis as they come in, until all available rooms are filled, so submit early!

There's much more on the AMS website, including a useful section on Programs for New Faculty — check it out!

Mathematical Association of America

Mission: to advance the mathematical sciences, especially at the collegiate level.

- Established in 1915
- 14,000+ members
- the largest professional society that focuses on mathematics accessible at the collegiate level
- members include teachers, students, pure and applied mathematicians, computer scientists, statisticians
- members come from academia, government, business, and industry

Your \$35 annual student membership provides you access to:

- Electronic version of The American Mathematical Monthly
- Electronic version of The College Mathematics Journal
- Electronic version of Mathematics Magazine
- Electronic version of Math Horizons
- Electronic version of MAA FOCUS, MAA's newsmagazine
- Your MAA e-Library — a growing list of top MAA Press books
- Access to numerous MAA Columns and Online Resources
- MAA Math Alert, the MAA's monthly e-newsletter
- Discounts on MAA books, videos, and merchandise
- Discounts for MAA's annual meetings — MAA MathFest and JMM
- Eligibility to join any of MAA's fourteen Special Interest Groups (SIGMAAs)

MAA MathFest

The annual summer meeting of the MAA is the largest summertime gathering of mathematicians.

MathFest draws mathematicians from all over the world who come together to celebrate mathematics. It features great exposition of mathematics as well as numerous sessions devoted to all aspects of collegiate mathematics, undergraduate teaching, and curriculum.

MathFest 2016:

Columbus, OH

Aug. 3–6, 2016

Joint Mathematics Meetings

- the largest annual mathematics meeting in the world
- held early each January in partnership with the AMS
- engage with fellow mathematicians
- learn about innovative research in your interest areas
- numerous invited addresses
- minicourses
- short courses
- panel sessions
- workshops
- paper sessions
- posters
- exhibits & more

Students presenting at either of the national meetings are eligible to apply for student travel grants.

Sections of the MAA

The MAA has 29 sections. Each section holds at least one professional meeting per year, usually in the spring.

Section meetings include:

- Invited lectures
- Contributed papers
- Panel discussions
- Student paper sessions
- Student poster or paper competitions
- Other activities designed to promote and improve collegiate level mathematics

The Southeastern Section of the MAA (MAA SE) advances the mathematical sciences within the states of AL, GA, NC, SC, and TN.

The MAA-SE annual meeting includes:

- presentations of mathematical research by faculty, graduate students, and undergraduate students
- presentations involving the scholarship of teaching and learning undergraduate mathematics
- professional development activities for new college faculty
- activities for undergraduate students (posters, Math Jeopardy, scavenger hunt, etc.)

2017 Conference:

MAA Southeastern Section 96th Annual Meeting
March 10–11, 2017
Mercer University
Macon, GA

Journals

- The American Mathematical Monthly publishes articles, notes, and other features about mathematics and the profession.
- Mathematics Magazine presents articles on undergraduate mathematical topics in a lively expository style that appeals to students and faculty throughout the undergraduate years.
- The College Mathematics Journal emphasizes the first two years of the college mathematics curriculum.

Books

- nine different book series
- approximately 15 books per year
- focus on quality exposition
- biography & history
- problems & recreational math
- textbooks, classroom resource materials & notes on pedagogy
- advanced monographs

Society for Industrial and Applied Mathematics

- International community of over 14,000 individual members
- Almost 500 institutional members worldwide:
 - academic, manufacturing, R & D, service and consulting, government, military
- Fosters the development of applied mathematical and computational methodologies essential in solving real-world problems
- Incorporated 1952 to convey useful mathematical knowledge to other professionals who could implement mathematical theory for practical, industrial, or scientific use
- Headquartered in Philadelphia, staffed by more than 60 full- and part-time employees

SIAM's Goals:

- To advance the application of mathematics and computational science to engineering, industry, science, and society;
- To promote research that will lead to effective new mathematical and computational methods and techniques for science, engineering, industry, and society;
- To provide media for the exchange of information and ideas among mathematicians, engineers, and scientists.

- 16 peer-reviewed journals, including:
 - SIAM Review, a quarterly journal of expository survey and education-oriented papers
 - SIAM/ASA Journal on Uncertainty Quantification
 - SIAM Journal on Financial Mathematics
 - SIAM Journal on Imaging Sciences
 - Multiscale Modeling and Simulation
 - SIAM Journal on Applied Dynamical Systems
 - SIAM Undergraduate Research Online
- SIAM News, published 10 times a year
- Approximately 25 books each year

Annual Meeting

SIAM's Annual Meeting provides a broad view of the state of the art in applied mathematics, computational science, and their applications through invited presentations, prize lectures, minisymposia, contributed papers and posters. First held in 1954, it takes place every summer unless combined with another SIAM meeting or conference.

Conferences

SIAM holds several conferences each year, focused on timely topics in applied mathematics and computational science. Some of these are sponsored by SIAM Activity Groups.

Recent topics: analysis of PDEs; applied linear algebra; computational science & engineering; control and its applications; data mining; discrete algorithms; dynamical systems; financial mathematics; geometric design; geo-, life, imaging, and materials sciences; nonlinear waves; numerical combustion; and optimization.

SIAM offers travel support for students through SIAM Student Travel Awards. The SIAM Student Travel Fund is maintained through royalties donated by SIAM book authors, donations from SIAM members, and donations from industry. Any full-time student in good standing is eligible to receive an award plus free registration for the meeting.

Limited travel support for postdocs and early career participants in SIAM conferences is also available through a grant from the NSF. Applicants must be affiliated with a US institution and be within five years of their PhD at the time of the conference.

Types of Individual Membership

- Regular Member: For professionals interested in the field of mathematics.
- Early Career Member: 50% discount off the price of regular membership for the first three years after graduation and 25% discount off the price of regular membership for the fourth and fifth years after graduation.
- Student Member: For full-time students enrolled in any college or university who are studying mathematics, engineering, computer science, physical science, or who use mathematics or computational methods in any field of study. Free or discounted memberships.
- and several more!

Students can join SIAM for free:

- If you attend an institution that is an Academic Member of SIAM
- If you are a member of a Student Chapter of SIAM
- If you are nominated by a nonstudent member of SIAM

Even if you don't qualify for a free membership, as a student you pay only \$25 and receive all the benefits of membership plus more.

Why you should join:

- Opportunities to network with peers and faculty
- Meet professionals from research institutions and corporations
- Increased visibility in the applied and computational communities
- Access to cutting edge research
- Resources for identifying and developing career options in applied and computational math

What you will get:

- Free membership in two SIAM Activity Groups (SIAGs)
- Subscription to SIAM News
- Subscription to SIAM Review
 - Free student members get electronic access only
 - Deeply discounted student rates include print and electronic access
- 30% discount on all SIAM books
- 80% discount on up to 4 subscriptions to SIAM journals in print and any number of electronic journals
- 95% discount on electronic access to current content and archives for all journals
- Eligibility to hold office and serve on SIAM committees
- Paying student members are eligible to vote in SIAM elections.

All students, regardless of SIAM membership status, are eligible for greatly reduced registration rates (up to 85% discount off non-member fee) to attend SIAM conferences, and can join or start a student chapter of SIAM on their campus.

SIAM Activity Groups (SIAGs)

SIAGs provide opportunities to communicate with colleagues and stay current in a particular discipline or application area. SIAGs organize conferences, minisymposia, newsletters, electronic communications, and websites, and they award prizes.

Moody's Mega Math (M^3) Challenge

SIAM annually organizes the M^3 Challenge, an applied mathematics contest for high school students, funded by The Moody's Foundation.

Visiting Lecturer Program (VLP)

SIAM's VLP offers a valuable resource to department chairs, colloquium organizers, student chapters, and advisors: a roster of applied mathematicians in academia, industry, and government who are able to speak to students on a variety of topics. The visitors are experienced speakers who have been recommended for their commitment to education and their ability to reach students.

The Association for Women in Mathematics

AWM is a non-profit organization founded in 1971.

Purpose: To encourage women and girls to study and to have active careers in the mathematical sciences, and to promote equal opportunity and the equal treatment of women and girls in the mathematical sciences.

AWM currently has more than 3000 members (women and men) representing a broad spectrum of the mathematical community—from the United States and around the world.

Membership is not restricted to women; men are encouraged to join!

Rates:

- Standard membership: \$65
- New paying members, first-year rate: \$30.
- Part-time employed and retired: \$30
- Students and unemployed: \$20

Benefits:

- Receive AWM listserv announcements
- Access to the electronic version of the AWM Newsletter
- Discounted registration for AWM conferences
- Listing in the Combined Membership List
- Regular members can receive the print version of the AWM Newsletter six times per year

UGA Mathematics is an institutional member of AWM. As such we receive 10 complimentary student memberships in AWM.

Since Fall 2015, UGA Mathematics also has a Student Chapter of AWM. Each of the three officer positions has been shared by an undergraduate and a graduate student. All members of the student chapter receive complimentary membership in the AWM.

2015–16 Personnel:

- Co-Presidents: Natalie Hobson, Sarah Tammen
- Co-Secretaries: Lori Watson, Yuke Yang
- Co-Treasurers: Irma Stevens, Keeko Villaveces
- Faculty contact: Angela Gibney

During 2015–16 they held two social events (potlucks) and had official meetings. They are eager to have more members!

AWM Newsletter:

- Informative articles
- Book reviews
- Announcements of upcoming events of interest
- Job announcements from academic and non-academic organizations
- Published bimonthly

Workshops and Conferences

- AWM often cooperates with mathematics institutes or other associations in organizing conferences
- Workshops, panels, contributed paper sessions, and poster competitions:
 - at the JMM, MAA MathFest, SIAM Annual Meeting, and other special events

Travel Grants

- Travel grants for women researchers
 - to attend research conferences in their fields
- Mentoring travel grants for women
 - for untenured women mathematicians
 - travel to an institute or a department
 - to do research with a specified individual for one month

Noether Lectures

- Jointly sponsored by AWM and AMS
- Presented at the JMM each year
- Honors women who have made distinguished contributions to the mathematical sciences or mathematics education

Etta Z. Falconer Lectures

- Jointly sponsored by AWM and MAA
- Presented at MathFest each year
- Honors women who have made fundamental and sustained contributions to the mathematical sciences

Sonia Kovalevsky Lectures

- Jointly sponsored by AWM and SIAM
- Presented at the SIAM Annual Meeting each year
- Honors women who have made distinguished contributions in applied or computational mathematics

Sonia Kovalevsky High School Mathematics Days

- workshops, talks, and problem-solving competitions for high school women students and their teachers, both women and men

Teacher Partnership

- links teachers of mathematics in schools, museums, technical institutes, two-year colleges, and universities with other teachers working in an environment different from their own and with mathematicians working in business and industry

Mentor Network

- matches mentors, both men and women, with girls and women who are interested or are pursuing careers in mathematics

AWM Essay Contest: Bios of Contemporary Women in Mathematics

- cosponsored by AWM and Math for America
- designed to increase awareness of women's ongoing contributions to the mathematical sciences
- open to any student in grade 6 through college undergraduate
- entries are biographies of contemporary women mathematicians and statisticians in academic, industrial, and government careers

AWM Student Chapters

- hold regular meetings and events
- open to all undergraduate and graduate students, regardless of major or gender
- allow students to
 - be exposed to the world of professional mathematics
 - obtain information about the varied career options in mathematics
 - network with professional mathematicians
 - develop leadership skills

Alice T. Schafer Prize

- awarded annually to an undergraduate woman for excellence in mathematics

Louise Hay Award

- awarded annually to recognize the outstanding achievements of a woman in mathematics education
- won by our own Sybilla Beckmann Kazez in 2014!

Humphreys Award

- awarded annually to recognize the outstanding mentorship activities of a woman in the mathematical sciences

Ruth I. Michler Memorial Prize

- awarded annually to a midcareer woman to facilitate a semester of mathematical research at Cornell University

Three prizes awarded every other year to recognize exceptional research in a particular area by a woman early in her career:

- AWM-Birman Research Prize: topology/geometry
- AWM-Microsoft Research Prize: algebra/number theory
- AWM-Sadosky Research Prize: analysis

National Association of Mathematicians

The National Association of Mathematicians (NAM), founded in 1969, is a non-profit professional organization in the mathematical sciences with membership open to all.

NAM's mission and purpose is to promote excellence in the mathematical sciences and the promotion and mathematical development of under-represented minority mathematicians and mathematics students. It also aims to address the issue of the serious shortage of minorities in the workforce of American mathematical scientists.

NAM membership is per calendar year January 1 to December 31.

The types are:

- individual: \$50
- student: \$30
- life
- institutional

Individual members are entitled to:

- voting privileges
- a subscription to the quarterly NAM Newsletter
- other services that may be provided to NAM members

To achieve its objectives, NAM conducts, supports, and/or sponsors several activities on a regular basis, including:

- an annual national meeting
- the Cox-Talbot Address, delivered at the NAM annual meeting
- an annual Regional Faculty Conference on Research and Teaching Excellence
- the David Harold Blackwell Lecture at MAA MathFest
- an annual Undergraduate MATHFest Conference
- a banquet during the JMM
- participates in the annual Field of Dreams Conference for students from backgrounds underrepresented in the mathematical sciences

The Tenth Annual Mathematical Field of Dreams Conference will be held in St. Louis, MO, Nov 4–6, 2016. It is run by the National Alliance for Doctoral Studies in the Mathematical Sciences.

Graduate students will have many opportunities during the conference, including:

- meeting and networking with other Alliance graduate students
- meeting Alliance graduate faculty and learning about postdoc programs
- presenting your research in the Poster Presentation session
- sharing your experiences and knowledge by serving on program panels targeted at predoctoral scholars

UGA is also an institutional member of two of the several mathematics Institutes in the US and Canada, which entails certain benefits for our graduate students.

Mathematical Sciences Research Institute

MSRI is located in Berkeley, CA. They run workshops, conferences, and programs on specific topics each year, bringing together mathematicians of all levels for periods of a few days to an academic year.

MSRI also runs several 2-week workshops for graduate students each summer, and as an Academic Sponsor, we are entitled to send 2–4 graduate students to these workshops at no cost each year.

The Graduate Committee solicits nominations for the MSRI Summer Graduate Programs every Fall.

Mathematical Biosciences Institute

MBI is located in Columbus, OH, and is part of the Ohio State University. MBI runs workshops and “emphasis semesters” on topics of current interest in the Mathematical Biosciences.

As an MBI Institute Partner, faculty and students from our department can receive a 50% travel reimbursement from MBI when traveling to participate in MBI events.