ASSOCIATION FOR WOMEN IN MATHEMATICS

Newsletter

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The purpose of the Association for Women in Mathematics is to create a community in which women and girls can thrive in their mathematical endeavors, and to promote equitable opportunity and gender-inclusivity across the mathematical sciences.

IN THIS ISSUE

PRESIDENT'S REPORT

As the academic year ended, we made our way to Madison, WI, for the 2025 Research Symposium. This tradition began in 2011 at the AWM 40th-anniversary celebration held at Brown University and the Institute for Computational and Experimental Research in Mathematics (ICERM). It was a great honor to host the symposium at the University of Wisconsin–Madison, home of Georgia Benkart, President of the Association for Women in Mathematics from 2009 to 2011.

In the twenty-four-year history of the biennial research symposia, this eighth one was the largest one to date. Of the 415 participants, over 40% (177) were students. More significant still, there were 262 research talks and 52 poster presentations. In addition to roundtable discussions and special sessions, we had four outstanding plenary lectures. Each plenary speaker, Tai-Danae Bradley, Kathryn Leonard, Candice Price, and Moon Duchin, connected with the audience through their wit, humor, honesty, and intellect. I especially appreciate accessible research talks, and each speaker ensured that no one was left behind. Thank you! Amid exchanging expertise, we paused to "scream for ice cream!" You could feel and hear the excitement as we ate ice cream and visited posters on Friday and Saturday afternoons. Thank you, Betsy Stovall, the local organizing committee, and the student volunteers for being excellent hosts with an eye for the invisible, such as providing ice cream and sidewalk chalk directions. We appreciate the Mathematics Department at the University of Wisconsin–Madison for its support and hospitality.

The 2025 Research Symposium was a great moment in our organization's history. In the turbulent times of organizations being under scrutiny, the AWM leadership team made a bold and risky move to host the symposium, knowing that our funding could be terminated. When we received termination just one week before the symposium, we were saddened but not surprised. We expected this and put a plan in place; we chose to be proactive rather than reactive. While we were prepared to execute the plan fully, we did not have to. The American Mathematical Society stood alongside us in our mission to create a community where women and girls can thrive in their mathematical endeavors and to promote equitable opportunity and gender-inclusivity across the mathematical sciences by providing support through their Backstop Grant. Their support is greatly appreciated and helps build stronger ties between professional societies as they work together to advance mathematics.

Another way we work together to advance mathematics is by using our collective voice. Through programs like Hill Days, our members meet with policymakers to advocate for science funding, education, and policies that shape the future of the mathematical community. The January 2026 Joint Mathematics Meetings will be held in Washington, DC, and I invite you to start planning to join the AWM for a Hill Day Visit on Thursday, January 8, 2026. If you would like updates, sign up at https://awm-math.org/policy-advocacy/hill-day-visits/. This site also contains resources on contacting your policymakers.

Now, in my fifth month as President, I have met with each portfolio of the AWM. I have fully seen the work we do as an organization. Along with a few dedicated AWM

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ASSOCIATION FOR WOMEN IN MATHEMATICS

AWM was founded in 1971 at the Joint Meetings in Atlantic City.

The *Newsletter* is published bi-monthly. Articles, letters to the editor, and announcements are welcome. Authors sign consent to publish forms. The electronic version is freely available at awm-math.org.

Opinions expressed in *AWM Newsletter* articles are those of the authors and do not necessarily reflect opinions of the editors or policies of the Association for Women in Mathematics.

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PRESIDENT'S REPORT *continued from page 1*

staff members and numerous AMS staff members who provide management support for AWM, more than 250 volunteers contribute their time and expertise across 51 committees, playing a crucial role in sustaining and expanding our programs and activities. They are continuously working to create spaces where all mathematicians can experience a sense of belonging. We did that most recently at the research symposium. The poster sessions and banquet were filled with conversation and smiles, especially since every attendee was tasked with meeting someone new each day. With its prizes, lectures, awards, grants, and other honors and recognitions, the AWM fosters a sense of belonging within the mathematical community. The honorees and recipients feel valued and seen, as do the nominators and letter writers.

I hope you feel a sense of belonging as you join AWM at the SIAM Annual Meeting and MathFest this summer. At the SIAM Annual Meeting in Montreal, Jessica Zhang of Carnegie Mellon University will give the Sonia Kovalevsky Lecture on the same day as the AWM Workshop Research Talks. The 2025 AWM Workshop "Science of Data and Mathematics" was organized by Jamie Haddock and Anna Little. The workshop includes a mentoring lunch for speakers and poster session presenters. The second day consists of the AWM workshop career panel and the AWM Poster Session. At the MAA MathFest 2025 in Sacramento, CA, we will host two panels and one workshop and have Olivia Prosper Feldman of the University of Tennessee deliver the AWM-MAA Etta Zuber Falconer Lecture. Our own Past President, Talitha Washington, is giving the NAM David Harold Blackwell Lecture. Thank you, organizers, presenters, and the AWM Meetings Portfolio Committee, for contributing to AWM's presence at SIAM and MathFest this year!

Raegan Higgins

Wishing you continued rest and restoration of summer and a harmonious academic year,

Raegan Higgins
June 5, 2025
Lubbock, TX

AWM Election Slate Announced!

We are pleased to announce the slate for this fall's AWM election. **Catherine Roberts** (College of the Holy Cross) and **Cristina Villalobos** (University of Texas Rio Grande) have been nominated to serve as President-Elect. **Angie Hodge-Zickerman** (Northern Arizona University) and **May Mei** (Denison University) have been nominated to serve as Clerk. **Bahar Acu** (Pitzer College), **Keisha Cook** (Clemson University), **Tegan Emerson** (Pacific Northwest National Laboratory), **Amanda Folsom** (Amherst College), **Omayra Ortega** (Sonoma State University), **Julia Plavnik** (Indiana University), **Wendy Smith** (University of Nebraska–Lincoln), and **Violeta Vasilevska** (Utah Valley University) have been nominated for Executive Committee Members at Large.

Nominations by petition signed by 15 members are due to our president by **September 1, 2025**. An invitation to cast an electronic ballot shall be emailed to the members on **November 1, 2025**. We give our thanks to the Nominating Committee: Kathryn Leonard (Chair), Selenne Bañuelos, Ron Buckmire, Michael Dorff, Allison Henrich, and Yvonne Lai.

A Remembrance of Emmy Noether

Rhonda Hughes, Professor Emerita, Bryn Mawr College; AWM Past President
Erica Graham, Chair, Department of Mathematics, Bryn Mawr College

On Sunday, April 13, 2025, one day before the ninetieth anniversary of Emmy Noether's passing, about seventy people gathered at Bryn Mawr College to rededicate her resting place in the cloisters of the college. The impetus for this event was Ingrid Daubechies's extraordinary gift of a bronze plaque of Noether designed by sculptor Stephanie Magdziak.

Attendees included four members of Noether's family: grand-nieces Monica Noether and Margaret Noether Stevens, daughters of Noether's nephews Gottfried and Herman, respectively, and Margaret's daughter Alexis Fertig and her husband Ernie Brown. Bryn Mawr President Emerita Mary Patterson McPherson was in attendance, as were Karen Uhlenbeck and Helmut Hofer from the Institute for Advanced Studies (IAS), and Bryn Mawr alumna, former board member, and former AWM Executive Committee member, Fern Hunt.

Following welcomes from President Wendy Cadge and Department Chair Erica Graham, Daubechies gave a talk about Noether's contributions to physics and mathematics, as well as the thought behind the design of the plaque. Four current Bryn Mawr students (Dalena Vien, Savannah Williams, Nuha Mohammed, and Ellie Lew) read the words of Grace Shover Quinn, Ruth Stauffer McKee, Olga Taussky-Todd, and Marguerite Lehr from the *Proceedings* of the 1982 conference at Bryn Mawr, sponsored by

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Monica Noether and Margaret Noether Stevens

Erica Graham

Membership Dues
Membership runs from Oct. 1 to Sept. 30
Individual: $70/$100 **Family:** $40
Contributing: $160/$190
New member, affiliate and reciprocal members, retired, part-time: $35
Student: $25 **Unemployed:** $20
Outreach: $10
AWM is a 501(c)(3) organization.

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AWM offers a tiered pricing structure for institutional memberships in six categories. Higher levels are:
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See awm-math.org for details.

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Print Subscriptions and Back Orders—Regular and contributing members living in the US may elect to receive a print version of the *Newsletter.* Libraries, women's studies centers, non-mathematics departments, etc., may purchase a subscription for $75/year. Back orders are $20/issue plus shipping/handling ($5 minimum).

Payment—Payment is by check (drawn on a bank with a US branch), US money order, or international postal order. Visa and MasterCard are also accepted.

Newsletter Ads—AWM will accept advertisements for the *Newsletter* for positions available, programs in any of the mathematical sciences, professional activities and opportunities of interest to the AWM membership and other appropriate subjects. The Managing Director, in consultation with the President and the Newsletter Editor when necessary, will determine whether a proposed ad is acceptable under these guidelines. *All institutions and programs advertising in the Newsletter must be Affirmative Action/Equal Opportunity designated.* Institutional members receive discounts on ads; see the AWM website for details. For non-members, the rate is $130 for a basic four-line ad. Additional lines are $16 each. See the AWM website for *Newsletter* display ad rates.

Newsletter Deadlines
Editorial: 17th of January, March, May, July, September, November
Ads: Feb. 1 for March–April, April 1 for May–June, June 1 for July–August, August 1 for September–October, October 1 for November–December, December 1 for January–February

Addresses
Send all queries and all *Newsletter* material except ads and material for columns to Dandrielle Lewis, awmnewslettereditor@awm-math.org. Send all book review material to Marge Bayer, bayer@ku.edu. Send all education column material to Jackie Dewar, jdewar@lmu.edu. Send all media column material to Sarah Greenwald, appalachianawm@appstate.edu and Alice Silverberg, asilverb@uci.edu. Send all student column material to Meghan Lee at meghanlee@ucsb.edu. Send all student chapter corner queries/material to Amanda Howard, student-chapters@awm-math.org. Send everything else, including ads and address changes, to AWM, awm@awm-math.org.

AWM, honoring the centennial of Noether's birth (Srinivasan & Sally, 1983). They shared anecdotes about how Noether found a happy refuge at the college, and how she mentored four "Noether girls" who—with no previous experience in algebra—learned mathematics in a combination of English and German.

Noether's ashes are interred in the cloisters of the college, heretofore marked only by a stone in the ground with EN 1882–1935 engraved on it. The attendees moved to the college cloisters where the magnificent plaque was unveiled by Ingrid and Stephanie. Rabbi Nora Weiser-Woods delivered moving comments about the meaning of monuments and how we remember and honor the dead. She recited the Mourner's Kaddish for Emmy, and then attendees lingered for photos, some also sharing how Emmy has impacted their lives.

The day's events concluded with a presentation by German Department Chair Qinna Shen, who has meticulously chronicled Emmy's journey from Germany to Bryn Mawr (Shen, 2019).

There was general agreement that this was the dedication that Emmy Noether has so richly deserved. Her resting place is now marked with the stone, the bronze plaque, and a nearby bench for reflection and contemplation, awaiting all those who wish to sit comfortably with her memory.

Quinna Shen, A scholar from Nazi Germany: Emmy Noether and Bryn Mawr College, *Mathematical Intelligencer*, **41**(2019), 52–65.

Bhama Srinivasan and Judith D. Sally (Eds), *Emmy Noether in Bryn Mawr: Proceedings of a Symposium Sponsored by the Association for Women in Mathematics in Honor of Emmy Noether's 100th Birthday*, Springer, New York, NY, 1983.

All photos courtesy of Paola Nogueras.

Ingrid Daubechies

Rhonda Hughes, Ellie Lew, Nuha Mohammed, Savannah Williams, and Dalena Vien

ASSOCIATION FOR WOMEN IN MATHEMATICS

AWM ONLINE

The *AWM Newsletter* is freely available online.

Online Ads Info: Classified and job link ads may be placed at the AWM website.

Website: https://awm-math.org
Updates: webmaster@awm-math.org

Media Coordinator
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AWM DEADLINES

AWM Travel Grants: October 1, 2025

AWM Research Symposium
Poster Presentations: June 15, 2025

RCCW Proposals: July 1, 2025

AWM Workshop at JMM: August 15, 2025

AWM-AMS Noether Lecture: Sept. 15, 2025

AWM–MAA Falconer Lecture:
September 15, 2025

AWM–SIAM Kovalevsky Lecture:
September 15, 2025

AWM Alice T. Schafer Prize: Sept. 15, 2025

AWM Dissertation Prize: September 15, 2025

Ruth I. Michler Memorial Prize: Oct. 1, 2025

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The cloisters at Bryn Mawr College

Rabbi Nora Weiser-Woods

The Noether Family with Mary Patterson McPherson

An appreciative audience

Ingrid Daubechies and Stephanie Magdziak unveil the plaque

Stephanie Magdziak, Ingrid Daubechies, Monica Noether, Margaret Noether Stevens, and Alexis Fertig

Qinna Shen

STUDENT COLUMN

Student Column Editors: Meghan Lee, UC Santa Barbara, meghanlee@ucsb.edu, and Nandhini Ravishankar, NC State University, nravish2@ncsu.edu

Not Really a "Math Person"

Ruth Taylor, M.S. in Statistics, Utah State University, ruth.eloisa.456@gmail.com

"I wouldn't really describe myself as a 'math person.'" This was a statement from one of my friends and classmates on the way to present her work at a national conference in mathematics and statistics. In fact, we—and several other members of our Department of Mathematics and Statistics—were all on our way to present our work. Despite the irony of the circumstance, I found myself agreeing with her statement. For context, this classmate and I graduated the next morning with our master's in statistics. So why would two graduate students in such a math-oriented field not identify as "math people"? Upon reflection, I've realized this statement speaks to a larger issue in the culture of mathematics—what it means to be a "math person."

The Myth of the Math Person

From as early as I can remember, math was my favorite subject in school. With my other grade school classes, I mostly remember staring at the clock, counting down the minutes until they were over. My math classes were different. The time flew by every day, and I sometimes even found them fun. Whenever asked what my favorite subject was, I would answer clearly, "math"—it was consistently what I found exhilarating and challenging. There's a good chance that at this time in my life I would have even identified as a "math person." Contrary to this truth I knew about myself, by the time I graduated high school and moved onto college, I didn't consider studying math further than a required class here and there. Knowing little to nothing about careers in mathematics, I didn't see much use in focusing my higher education on the subject, no matter how much I enjoyed it. Besides, I was technically a higher performer in literature and writing subjects. Most importantly, my real goal was pursuing a career in medicine, and I didn't see the relevance in a math degree.

So, entering college, I focused on the pre-med path, choosing a major related to medicine. But as I neared the end of my sophomore year and prepared to transfer to my next university, I realized I missed my math courses. I decided I would switch my degree to study math in some useful form. In my first few courses in mathematics, I was anywhere from the only woman in the class to one of a handful. Grasping at straws to find classmates with whose personalities and interests I could relate, I felt out of place. Even in courses where I remained a top performer, I felt like I was missing something. I started to develop the notorious imposter syndrome. This was only compounded by several memorable instances of classmates in these courses attempting to compliment my bubbly, feminine personality with lines like "you're a lot smarter than I expected you would be" or "you seem like someone who should be in the arts."

To add to this insecurity, I found I wasn't as passionate about math theory as other people seemed to be; I became

NSF-AWM Mentoring Travel Grants for Women *(New deadline added!)*

Mathematics Mentoring Grants. The objective of the NSF-AWM Mathematics Mentoring Travel Grants is to help junior women to develop long-term working and mentoring relationships with senior mathematicians. This relationship should help the junior mathematicians to establish their research programs and eventually receive tenure. Each grant funds travel, accommodations, and other required expenses for an untenured woman mathematician to travel to an institute or a department to do research with a specified individual for one month. The applicant's and mentor's research must be in a field which is supported by the Division of Mathematical Sciences of the National Science Foundation.

Selection Procedure. All awards will be determined on a competitive basis by a selection panel consisting of distinguished mathematicians appointed by the AWM. A maximum of $5000 per award will be funded.

Eligibility and Applications. Please see the website (https://awm-math.org/awards/awm-grants/travel-grants/) for details on eligibility and do not hesitate to contact us at awm@awm-math.org or 401-455-4042 for guidance. Applications from members of underrepresented minorities are especially welcome.

Deadline. There are now two award periods per year. Applications are **February 15 and August 15**.

increasingly more interested in its utility. Luckily, I found a home in my statistics courses with this mindset, where there was more room for interest in practical applications and other skill sets. But it was probably around this time that I stopped identifying as a "math person." I was simply someone who saw math as a useful tool. Even as I moved onto graduate school, I separated myself further and further from the math identity—bestowing it only on those classmates laser-focused on theory, with seemingly endless confidence and a reverence for the study that I lacked. The image of a "math person" solidified in my mind, and no matter how many classes I took, I did not match the description.

Unfortunately, I fell into the common trap of disqualifying myself from "belonging" in mathematics the moment I felt out of place and unsure of myself. I've observed this phenomenon throughout my time as a student in math and statistics. Even in degrees that require a high level of demonstrated skill, there's a handful of students who still feel we aren't "real math people." Whether that's a result of an educational background that wasn't math-oriented or simply not fitting into the persona, it seems to go beyond the typical definition of imposter syndrome. Rather, it's an issue of identity. And as prevalent as the issue is within math-related degrees, it's rampant across the general population. Without fail, every time someone outside of my field asks me what I study and I say "statistics," the response falls somewhere along the lines of "Wow! I could *never* do that. I'm not a math person" or "Good for you! I failed my math classes in school—my brain just doesn't work that way." Though mostly likely meant as lightheartedly compliments, the responses reflect not just an individual insecurity, but a social narrative about math identity.

The first element in that social narrative is the belief that mathematical ability is innate or only for the few top performers. While many of us who are familiar with the growth mindset advocate for its daily application, it's easy to fall back into old patterns. This is made even more challenging when those beliefs are deeply rooted from childhood. Despite the efforts of the last decades, children's belief in their mathematical competence continues to trend downward as they go through school, stabilizing by the time they reach early adolescence. Students already start self-selecting themselves out of the "math person" identity in childhood (Wan et. al, 2021; Radišić et. al, 2024). Much of this stems from the onset of comparisons. When high-achieving elementary students are placed among equally strong peers, the resulting dip in self-esteem often leads them to disengage from math and redirect their identity toward their higher-performance subjects. This marks the beginning of a years-long process in which students talk themselves out of pursuing further education or careers in mathematics (Wan et. al, 2021).

Beyond confidence in one's inherent ability, another significant barrier to identifying with mathematics lies in the feeling of not fitting the part. While many factors contribute to this, one of the most persistent and personally resonant for me has been gender. In my experience, the impact of gender in mathematics becomes more apparent with each additional step into higher education. The ratio of male to female students in my classes notably increased in college and in graduate school. This trend is reflected in current research, which shows that while mathematical ability is positively associated with postsecondary enrollment in math-related programs for all students, the increase is much steeper for male students than for female students (Breda et al., 2023). Research also shows that boys tend to develop more positive math identities than girls from an early age, and this gender gap only widens with time—intensifying from elementary to high school and becoming most pronounced by college (Radišić et al.,

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NSF-AWM Travel Grants for Women

Mathematics Travel Grants. The objective of the NSF-AWM Travel Grants is to enable women mathematicians to attend conferences in their fields, which provides them a valuable opportunity to advance their research activities and their visibility in the research community. Having more women attend such meetings also increases the size of the pool from which speakers at subsequent meetings may be drawn and thus addresses the persistent problem of the absence of women speakers at some research conferences. The Mathematics Travel Grants provide full or partial support for travel and subsistence for a meeting or conference in the applicant's field of specialization.

Selection Procedure. All awards will be determined on a competitive basis by a selection panel consisting of distinguished mathematicians appointed by the AWM. A maximum of $2300 for domestic travel and of $3500 for foreign travel will be funded. For foreign travel, US air carriers must be used (exceptions only per federal grants regulations; prior AWM approval required).

Eligibility and Applications. Please see the website (https://awm-math.org/awards/awm-grants/travel-grants/) for details on eligibility and do not hesitate to contact awm@awm-math.org or 401-455-4042 for guidance. Applications from members of underrepresented minorities are especially welcome.

Deadlines. There are three award periods per year. Applications are due **February 15**, **May 15**, and **October 1**.

2024). This growing disparity may shape not only who continues in mathematics, but also *how* they relate to the field in the first place.In conversations with my peers, I've observed that while my male classmates were often drawn to math for the theory or its potential applications, my female classmates consistently highlighted practical utility. And although many branches of mathematics emphasize applied work, the prevailing culture of what is considered "mathematics" still seems to prioritize theory above all else. This may explain why those of us who entered the field from an applied perspective never imagined we could identify as "math people."

The importance of highlighting motivation extends beyond identifying another gender difference in mathematics. Even if we could eliminate the effect of gender in pursuing the field, some students would still turn away from it, perceiving much of it as irrelevant to their future. As a grade school student in math, it's not always clear how the concepts you're learning will connect to a future career. Hence, the infamous "when am I ever going to use this?" complaint. Not everyone who has the potential to use mathematics in their field will find it enjoyable or fulfilling for its own, disconnected sake. For many of us, there comes a point when there has to be a reason behind learning the painstaking theory. When we study mathematics at a college level, we often get opportunities to explore the reasons through courses and projects that allow us to observe or apply the skills to real problems. The question of "why am I doing this?" is critical for students at any stage of education. In fact, motivations like intrinsic value and perceived utility have been shown to be strongly associated with the development of positive math identities during this critical period of early education (Radišić et al., 2024). Providing students with opportunities to see how mathematics connects to real life and explore its applications can help them recognize their own potential in the field. My own experience reflects this need; even as someone who enjoyed math, I had little insight into how it could be applied or where it might lead me.

Challenging the Myth

I was fortunate to discover both enjoyment and confidence in mathematics early on and to retain them longer than many students. I credit this in large part to the example of my mother, a devoted secondary math educator for over 30 years. Even with this strong foundation, I felt the impact of these broader systemic issues—from initially dissuading myself from pursuing study in mathematics, to feeling out of place and underrepresented, and questioning my conviction without a passion for theory. Yet despite these challenges—and perhaps because of them—I've found studying mathematics and statistics to be a worthwhile experience, even without identifying as a "math person."

I've had the privilege of learning from some impactful professors who understood the power of a welcoming classroom and made a conscious effort to create space for students who might not naturally be drawn to mathematics. They taught in ways that emphasized relevance and feasibility, showing students how statistics and math could support a wide range of interests. As a TA, I had the opportunity to carry that same mindset into my own teaching. I've worked with countless students over the years who initially expressed anxiety or disinterest in the subject. But after just one positive classroom experience—one course that felt engaging, human, and connected to their goals—they began to shift. I've watched students develop new confidence and curiosity in a subject they once dismissed as out of reach. These moments have demonstrated that even seemingly fixed beliefs in mathematical ability can evolve.

Finding my place in mathematics and statistics was possible because of the crucial role models in my department. The inspiration of female professors and the strong connection with fellow women in my major provided meaningful weight against the gender imbalance. And I found an exceptional ally in my mentor, whose perspective on math and statistics as tools for accessibility and public service highlighted what drew me to the field.

My experiences have helped me see not just the barriers, but also the progress and possibility. I've learned that identity in math is not a fixed or binary label—it's something that can be shaped through support, exposure, and meaningful connection. That's why the environments we create for students matter.

For educators: Build classrooms where students are allowed to grow into their identities, not confined by them. Show the relevance and purpose of math early—so students don't turn away before they've had the chance to imagine what's possible.

For students, especially women and gender minorities: Don't count yourself out just because it's challenging now or because you feel out of place. Belonging often comes later, after persistence, connection, and cultural evolution.

For the field: Embrace and uplift a broader spectrum of math identities—ones that are applied, unconventional, and accessible.

References

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Relaunching AWM Hill Days!

AWM Government Advocacy Committee, *hillvisit@awm-math.org*

The Association for Women in Mathematics (AWM) has a gem of a program in Hill Days, a one-day, facilitated day of meetings, bringing AWM constituents to the offices of their respective senators and representatives. Participants advocate for support of the AWM's legislative priorities that impact women and girls in mathematical sciences including expanding science, technology, engineering, and mathematics (STEM) educational opportunities; supporting research funding; helping Americans achieve a healthier work/life balance; and creating a welcoming environment. The program had been dormant during the pandemic, but AWM has now relaunched the Hill Days. On Wednesday, April 9, AWM kicked it off with 26 volunteers completing 51 meetings in just one day, on both the House and Senate side, and with offices across the political spectrum!

Anyone can participate in an AWM Hill Day, and this visit included a diverse group of undergraduate and graduate students, postdocs, faculty, and professionals in industry and government. In addition to other new and returning participants, Stevenson University organized a group to participate, and wrote up what the experience was like to tempt each of you to participate in AWM's upcoming Hill Day immediately following the JMM 2026 in Washington, DC.

> Five students and three faculty members from Stevenson University attended the AWM Hill Day. Faculty and students alike were amazed at how accessible Congress is. Once the meetings were set up, it was simply a matter of going through building security, finding the right office, and introducing yourself. As Engineering, Mathematics, and Physics Chair Dr. Mark Branson stated, "We think of government as something so distant from our lives—Hill Day reminds us how close it is and how easy it is to make your voice heard."
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> The group was also surprised to see how busy the Hill was. The visits took place while Congress was in session, so staffers and members of Congress alike were bustling about the building and having back-to-back meetings all day. The group was told in advance that they would be able to have a brief meet-and-greet with Maryland Representative, Johnny Olszewski, and were delighted that he stepped out of a committee hearing to not only take a photo but to talk to the students asking about their current education and future plans. Rep. Olszewski represents District 2, where Stevenson University is located.
>
> Overall, students and faculty found that sharing their stories was the most important part of Hill Day. As senior Mathematics and Biomedical Engineering double-major Rebecca Go explained, "It is important work to share your story and declare your existence to the people who represent us. They are as abstract to us as we are to them. Showing up to their offices, stating our message, sharing our stories are quintessential to future change." Junior Biomedical Engineering major Alex Reimert added, "This experience highlights the importance of informed voices in shaping policy decisions, especially in STEM fields where research is driving societal progress." Even when the viewpoints being presented by the group might not have aligned with those with whom they were meeting, students learned that it is important to make your voice heard and that listening to the opposition is an important part of democracy.

When asked what advice they would give anyone who wanted to participate in Hill Day but was unsure, Dr. Branson said, "Just do it—you're never on your own, and it's not nearly as scary as it sounds. Plus, you get to meet a lot of really awesome mathematicians from around the AWM, which is also pretty great." Go added, "While it seems intimidating, these staff members aim to relay your message and stories to your representative. Not only is that their job, but most are receptive and kind." Reimert agreed, "This was a fantastic opportunity to connect with representative staffers and engage with amazing individuals in the STEM community."

Find out more about AWM's advocacy work at https://awm-math.org/policy-advocacy/hill-day-visits/. Sign up for our mailing list and plan to stay an extra day to join the AMS-AWM-SIAM Hill Day on Thursday, January 8, 2026!

AWM members pose in front of the Capitol building between meetings on the Senate side and the House side.

BOOK REVIEW

Book Review Editor: Margaret Bayer, University of Kansas, Lawrence, KS 66045-7523, bayer@ku.edu

Supporting Family Caregivers in STEMM: A Call to Action

National Academies of Sciences, Engineering and Medicine
Elena Fuentes-Afflick and Katherine Wullert, editors
ISBN 978-0309713580
2024
http://nap.nationalacademies.org/27416

Reviewer: Marge Bayer, University of Kansas, bayer@ku.edu

This report from the National Academies draws on the work of the Committee on Policies and Practices for Supporting Family Caregivers Working in Science, Engineering and Medicine of the National Academies. (The extra M in STEM is for medicine.) The committee held two symposia and commissioned three papers on the economic impact of caregiving, current promising practices to support caregivers in academic STEM, and challenges faced by caregivers in STEMM and barriers to successful policy implementation. The report and the three papers are all available as pdfs for free on the National Academies website listed above. Unfortunately, one notes quickly that some of the programs described in the report have been discontinued.

"The goal of this report and its recommendations is to facilitate and accelerate greater participation of caregivers in STEMM education and work and thereby advance scientific innovation and support a stronger and more inclusive academic STEMM workforce." [p. 2] While we may think first of childbirth and childcare as main issues of "caregiving" for faculty, the issue of caring for elderly or disabled relatives is addressed throughout the report. The contributors also consider carefully how these issues affect minority faculty (racial minorities, immigrants and LGBTQ+ people) differently. In addition, they discuss accommodations for students who are parents or caregivers.

The report begins with an overview of unpaid family caregiving, and how the need for this, especially for elder care, is increasing. This was exacerbated by the Covid pandemic. Lack of support for caregivers has negative consequences not only for the individuals, but for the profession, as it leads to low productivity and even to people leaving academia and/or science.

Laws and policies for supporting family caregivers fall into several categories. The report spells out federal laws, including the Family Medical Leave Act, which requires employers to allow employees to return to jobs after 12 weeks unpaid leave, and Title IX, which includes protection against discrimination for pregnant people. State laws supplement the federal laws, but only a few specifics are mentioned. Federal agencies and private foundations that provide grant support for research have their own policies. Then there are institutional policies, which, of course, vary widely. Some of those may be enforced by the accreditation agencies, but this (and policies of federal grants agencies) may be hampered by the current federal executive policies.

It should be noted that the US is the only high-income country in OECD (the Organisation for Economic Co-operation and Development) that does not require employers to provide paid parental leave. This combines with a low rate of employer-provided childcare, to make the US a particularly challenging environment for parenting.

Beyond the legal and policy issues around caregiving, cultural expectations, particularly those in STEMM fields, add to the challenges. The report identifies the "ideal worker norm," characterized by "commitment to the job through long hours, unbroken career trajectories, and constant availability and visibility" (quote from Kachchaf, et al.; see page 44). This can result in bias against women based on a perception that they are not living up to the norm, or even that they might in the future not live up to the norm. It also may inhibit men from contributing more to caregiving responsibilities.

In particular, the report looks at tenure-clock policies. Many universities allow a faculty member to delay the tenure decision because of the birth or adoption of a child. Typically, this policy applies to both mothers and fathers. However, some faculty are reluctant to take advantage of these policies, for fear that they will be perceived as less committed to their careers. (This is termed "flexibility stigma.") Much depends on the attitudes of department chairs. There is also a fear that tenure committees will expect more productivity because of the "extra time" the faculty member was "given." In some cases, colleagues suspect that faculty members (particularly male) have used the parental leave and extra time to tenure to increase their research portfolio. The report's recommendations include an emphasis that tenure committees know they cannot count the time with stopped clocks in evaluating research productivity. While not part of their recommendations, they mention a suggestion that research products started during caregiving leaves not be counted in tenure portfolios. I believe this goes too far and shows a lack of understanding of the research process and particularly of collaborative work. "Oh, I had this idea, but I better not think about it anymore or mention it to my collaborators, because I am on parental leave."

Specific cultural expectations (and stereotypes) apply to women of color and immigrant women. This applies particularly to care of elderly or disabled relatives (or friends or neighbors). Several studies show that Black and Latina women perform higher levels of adult care than White caregivers, and that they are more likely to provide informal care to nonfamily members. One reason for this is a lack of trust in caregiving institutions. Asian families often have high expectations that adult children will provide personal care for parents and other relatives, and that grandparents will care for grandchildren. The report notes that there is a lack of research on caregiving demands among Native American populations. LGBQT+ people face particular challenges, when policies do not apply to their families or when colleagues do not recognize their

caregiving responsibilities. (Again, there is little research on this group of STEMM professionals as caregivers.)

All these issues affect both women and men, but research (no surprise) shows that the impact is greater for women. Men are taking more responsibility for childcare than in decades past, but apparently this is not true of elder care. In fact, even when it comes to care for a husband's parents, the wife often takes a larger role.

The extra burden on women affects their persistence in the profession. A 2019 study found that among full-time professionals in STEM, 43% of new mothers and 23% of new fathers left full-time employment after the birth of their first child. Presumably, in many cases the choice is financial, when the husband's income is higher than the wife's. "The largest leak of women out of the STEM pipeline is when they start families." [p. 50]

One issue facing mothers and not fathers is the availability of spaces for lactation. In 2022, the Fair Labors Standards Act was amended with the PUMP for Nursing Mothers Act, which requires employers to provide their employees with lactation breaks and a private lactation space that is not a bathroom.

Specific problems for parents include childcare when schools or daycare centers are closed for school vacations or weather emergencies. In particular, parents of disabled children are challenged with finding temporary care, even if they have reliable continuing care. It is recommended that universities provide help for such emergency care, at least by maintaining referral lists.

Title IX protections apply to students as well as employees. Discrimination against pregnant students is illegal. Universities are required to allow students to take leave for medical and childbirth events, with extensions of time limits for degrees. Lactation accommodations for students as well as faculty are required.

The report gives examples of innovative approaches to career flexibility and makes recommendations beyond following the law. All universities should provide paid leave for childbirth, childcare and elder caregiving. Make sure that health insurance covers time out for childbirth and caregiving. This is probably standard for employees, but it could be an issue for students. Ideally, health insurance could be extended to adult family members who are being cared for.

Adjust timelines for early-career grants to accommodate family timelines. Offer grants for scientists who have had a break from research due to family responsibilities. NSF may have done this in the past through the ADVANCE program. An NSF program in the Division of Chemistry and the Division of Chemical, Bioengineering, Environmental and Transport Systems was begun in 2017. It was called RARE: Re-entry to Active Research Program, and is now shown on the NSF webpage as "archived."

Tenure-clock pauses should be opt-out rather than opt-in, to decrease the stigma associated with them. Allow for the possibility of faculty (including tenured and tenure-track) to work part-time during periods of caregiving demands.

Give credit in faculty evaluation for substitute work that faculty do for their caregiving colleagues. (Do women do more of this work than men?)

And on a day-to-day level, take responsibilities for children into account when making schedules, and do not expect faculty members to respond to email outside of the regular work week.

My own experience with childbirth and childcare in the 1990s depended on an accommodating department chair and a husband who took shared responsibility seriously. I hope that our institutions follow the National Academies' recommendations to make it easier for all our colleagues.

Black Girl MATHgic and The Nebraska Conference for Undergraduate Women in Mathematics (NCUWM) Receive 2025 AWM Presidential Recognition Awards

Two AWM Presidential Recognition Awards were presented at the 2025 AWM Research Symposium in Madison, Wisconsin. **Black Girl MATHgic** and **The Nebraska Conference for Undergraduate Women in Mathematics (NCUWM)** were honored at the banquet on May 18, 2025.

Black Girl MATHgic is an innovative monthly subscription box and educational movement dedicated to increasing math confidence and engagement among girls—especially Black girls—at early and critical stages of their mathematical journeys. Founded by Brittany Rhodes in 2019, Black Girl MATHgic brings math into homes in a joyful, affirming, and culturally responsive way, showing girls that they belong in mathematics.

The Association for Women in Mathematics honors Black Girl MATHgic with the AWM Presidential Recognition Award for its deep alignment with AWM's mission to encourage girls and women to pursue and thrive in mathematics. The program powerfully embodies Marian Wright Edelman's insight that "You can't be what you can't see," by pairing each math activity with the story of a woman mathematician, allowing girls to see themselves reflected in the field.

Brittany Rhodes, founder of Black Girl MATHgic
Photo Credit: Morgan Mickens, RED by Morgan Photography

By centering representation, creativity, and confidence-building, the Black Girl MATHgic Box supports the development of a strong mathematical identity in young learners. As its founder emphasizes, "Girls of all racial and ethnic backgrounds benefit from the math confidence the Black Girl MATHgic Box offers." In reaching girls from diverse communities and empowering them to see themselves as capable problem-solvers, the program helps shape a more-inclusive future for the mathematical sciences. Visit https://blackgirlmathgic.com/

Since 1999, **NCUWM** has been a milestone on the mathematical journey of thousands of women undergraduates. Hosted annually by the Department of Mathematics at the University of Nebraska–Lincoln, NCUWM welcomes undergraduates from across the country to share their research, build professional networks, and explore future opportunities in mathematics. To date, over 5550 undergraduates have participated.

The Association for Women in Mathematics honors NCUWM with the AWM Presidential Recognition Award for its long-standing dedication to fostering a supportive community for undergraduate women in mathematics and to strengthening the pipeline of women advancing to graduate study.

The atmosphere at NCUWM is professional, but never rigid or stuffy. Participants are encouraged to ask candid, even tough, questions of leading women mathematicians and to explore the wide range of careers and paths available in the mathematical sciences. The conference includes panels on graduate school and professional development, keynote addresses by accomplished mathematicians, and ample opportunities for peer connection and multi-tier mentoring across institutions and career stages.

You can see the impact of NCUWM in the stories its alumnae tell—stories of pursuing graduate degrees; of becoming faculty, educators, and researchers; and of finding their place in the mathematics community. For 27 years, NCUWM has been building confidence, sparking connections, and shining a light on the accomplishments of undergraduate women in math.

The AWM Presidential Recognition Award was established in 2014 to recognize those individuals who, or programs that have significantly increased and/or supported women in mathematics. The first award was presented at the 2015 AWM Symposium and is presented at the banquet at the biennial AWM Research Symposium.

The Nebraska Conference for Undergraduate Women in Mathematics (NCUWM). Photo courtesy of the University of Nebraska–Lincoln

MEDIA COLUMN

Media Column Editors: Sarah J. Greenwald, Appalachian State University, appalachianawm@appstate.edu , and Alice Silverberg, University of California, Irvine, asilverb@uci.edu

Girl Math and the Social Media Ecosystems

Katrina Morgan, Temple University, morgank@temple.edu

If you were hoping the Girl Math TikTok trend would be a showcase of women's mathematical prowess, you might be disappointed. The trend, which emerged in early August 2023, revolves around women rationalizing their spending habits with hyperbolic statements such as, "If I buy it with cash, it's free!"

The trend sparked controversy. Critics expressed concern that it contributed to the outdated notion that women are bad at math [1, 2]. On the other hand, supporters argued it was a lighthearted way for women to reclaim financial stereotypes and that it gave women permission to spend money on things they enjoy [3]. So, is *Girl Math* empowering or problematic? The reality is, there is no clear-cut answer. Social media is a complex ecosystem where trends are shaped by the cultural context in which they exist and in turn shape culture. To make matters more complicated, the ever-present, but elusive, Algorithm determines what content reaches whom. Rather than trying to label the trend as "good" or "bad," it is useful to examine its origins, evolution, and cultural context.

The trend has two origin stories [4, 5]. In one, TikTok user @samjamess declares it is time to move on from girl dinner (another popular TikTok trend in which women display their chaotic dinners consisting of whatever food was on hand) and talk about *Girl Math*. According to @samjamess the tenets of *Girl Math* are: *If it's less than $5, it's basically free; returning a $50 item then buying a $100 item means you only spent $50; and concert tickets bought months in advance are free.* The other potential origin is a New Zealand radio station which launched a "Girl Math" segment where callers ask for help justifying purchases like $400 hair extensions for a wedding ("It's only $1.40 per inch of hair—practically nothing!"). Both videos went viral, and young women began posting their own *Girl Math* tenets to TikTok.

The following are some of the primary principles that came to define *Girl Math*:

- If I buy it with cash, it's free.
- Returning something means I'm making money.
- Buying something on sale also means I'm making money.
- An expensive item that I'll use a lot is actually not expensive. (A $400 handbag used every day for 2 years is just 55 cents per use!)

continued on page 14

These hyperbolic statements exaggerate common (and ungendered) financial behaviors. The feeling that spending cash doesn't count reflects a generational shift in how we think about money. Smartphones, online banking, and easy credit card use have created a world where the number in your bank account feels more concrete than physical cash. A claim like buying a $120 shirt at 40% off means you can buy a $48 item for free simply takes the old adage "A penny saved is a penny earned" to comical extremes.

The *Girl Math* videos generated popular response videos, and the original format evolved. One common format features a woman explaining *Girl Math* to a man, usually her father, boyfriend, or husband. Some men play along with good-natured teasing, while others appear genuinely frustrated, taking the hyperbolic statements literally as though women are so illogical they may actually believe cash isn't money. Other videos acknowledge *Girl Math*'s underlying rationale, like one personal finance account which compared one of the common *Girl Math* tenets to an accounting principle called amortization. Additionally, some young women used the trend's popularity to share advanced mathematical concepts, such as one creator who used a hair tie to visualize time dilation in general relativity [6]. Yet another evolution is the *Boy Math* trend which emerged primarily on X (formerly Twitter), where users highlighted men's irrational behavior, often in the context of their treatment of women [7]. Posts like "Boy math is wanting a traditional woman who pays bills" and "Boy math is being afraid of gold diggers when you only have three pairs of socks to your name" garnered tens of thousands of likes.

The varied evolution of the trend reveals its complicated cultural impact. Whether one interprets *Girl Math* as evidence of women's lack of logical reasoning or as tongue-in-cheek examples of reasonable financial habits depends on the individual's preconceptions. People tend to see what they expect to find.

Girl Math also fits into a larger cultural moment dubbed "the year of the girl," which was punctuated by TikTok trends like *Girl Dinner*, *Girl Math*, and subsequently *Just a Girl*, along with the enormous success of the *Barbie* movie [8, 9]. At its best, this movement declares that women are allowed to express traditionally feminine traits and still be taken seriously. This philosophy is not new (2001's *Legally Blonde* comes to mind), but it has recently become increasingly mainstream. There are more unequivocally empowering examples of the philosophy on social media than the girly TikTok trends. Emily Calandrelli (@spacegal), an MIT trained engineer and science communicator, often posts about fashion and clothing alongside her educational STEM content. A creative engineer, Christina Ernst, uses the Instagram account @shebuildsrobots to showcase her robotic fashion designs such as a ballgown with moving feathers on the skirt, or a wig that appears to be in the process of knitting itself. *Girl Math* may be open to interpretation, but these accounts are not.

The concern I feel about the *Girl Math* trend is that this all takes place in a broader social media ecosystem that often promotes regressive views of gender. Recent years have seen the rise of "tradwife" content, Andrew Tate, and social media smear campaigns against high-profile women who accuse men of abuse [9, 10]. In this context, the videos where men get visibly frustrated with supposedly illogical women espousing *Girl Math* principles feel insidious. Such content generates views—both from those laughing along with it and from those critical of it—so the Algorithm amplifies it, allowing harmful negative stereotypes to dominate the narrative.

Girl Math's popularity amongst young women demonstrates its relatability. Even as someone who is not much of a "shopaholic," I find it relatable. The camaraderie the meme creates around consumerism isn't exactly revolutionary, but I'm slow to criticize anyone who had fun participating in it. Unfortunately, even lighthearted content is vulnerable to the undercurrent of misogyny that persists online. How one interprets these videos is subjective and depends on the lens through which one views them, but the popularity of videos purposefully positioning women as irrational is concerning. While the internet may have moved on to the next meme, the dynamics underlying the *Girl Math* trend remain relevant.

[1] Zoe Burt, *Girl math is toxic and it could be holding women back from growing wealth, says a financial specialist.* Business Insider. Oct 18, 2023. https://www.businessinsider.com/why-girl-math-toxic-tiktok-trend-2023-10.

[2] Jessica Schrader, #GirlMath: *How social media trends perpetuate stereotypes*, Psychology Today, Sept 14, 2023. https://www.psychologytoday.com/us/blog/positively-media/202309/girlmath-how-social-media-trends-perpetuate-stereotypes

[3] Alaina Demopoulous, *'Can't we have a funny joke?' Why #girlmath is dividing TikTok*, The Guardian. Sep 28, 2023. https://www.theguardian.com/lifeandstyle/2023/sep/28/girl-math-tiktok-joke-women-sexism

[4] Elizabeth Gulino, *Is girl math really helping the girls?*, Refinery29. Aug 16, 2023. https://www.refinery29.com/en-us/girl-math-meaning-trend

[5] https://knowyourmeme.com/memes/boy-math-girl-math

[6] https://www.tiktok.com/t/ZP8jCqVED/

[7] Dani Di Placido, *'Boy Math' and 'Girl Math' Meme, Explained*, Forbes. Sep 29, 2023. https://www.forbes.com/sites/danidiplacido/2023/09/29/boy-math-and-girl-math-meme-explained/

[8] Emma Klein, Sarah Handel, and Juana Summers, *Why 2023 was the Year of the Girl*. NPR, All Things Considered, Jan 1, 2024. https://www.npr.org/2024/01/01/1222405952/why-2023-was-the-year-of-the-girl

[9] Shanspeare, *Girl Math & Girl Power: The Conservative Politics of 'Girl World'* YouTube. Nov 24, 2024. https://www.youtube.com/watch?v=BaKs8iJpG6c

[10] Taylor Lorenz, *Why won't the media use the word misogyny?* UserMag. Dec 23, 2024. https://www.usermag.co/p/blake-lively-justin-baldoni-smear-campaign-misogyny-amber-heard-gamergate

AWM Workshop at the 2026 Joint Mathematics Meetings

Application deadline for graduate student poster session: **August 15, 2025**

For many years, the Association for Women in Mathematics has held a series of workshops in conjunction with major mathematics meetings. The AWM Workshops serve as follow-up workshops to Research Collaboration Conferences for Women (RCCW), featuring both junior and senior speakers from one of the AWM Research Networks. An AWM Workshop will be held in conjunction with the Joint Mathematics Meetings in Washington, DC from January 4–7, 2026.

FORMAT: The JMM workshop will include **Special Sessions** showcasing recent work by two of the AWM Research Networks. A **Women in Geometry (WiG)** session will be organized by **Raquel Perales** and **Catherine Searle**, and a **Women in Mathematical Physics (WoMaP)** session will be organized by **Katrina Barron** and **Gaywalee (Gail) Yamskulna**. A juried Poster Session for graduate students, a Professional Development Panel, and a Mentoring Luncheon are all being organized by the AWM JMM organizing committee.

POSTER SESSION: The Poster Session is open to all areas of research; graduate students working in areas related to Mathematical Physics or in areas related to Geometry are especially encouraged to apply. Poster presenters will be selected through an application process.

AWM will provide partial travel support to selected graduate students for their participation in the AWM Workshop, thanks to the National Science Foundation. Furthermore, the Diversity Committee of the Mathematical Sciences Institutes sponsors all poster presenters to attend a week-long workshop at one of the participating Mathematical Sciences Institutes.

ELIGIBILITY: To be eligible for participation and funding, a graduate student must have made substantial progress towards their thesis. Mathematicians with grants or other sources of support are welcome to apply.

All applications should be submitted on mathprograms.org and include:

- a title of the proposed poster
- an abstract in the form required for AMS Special Session submissions for the Joint Mathematics Meetings
- a curriculum vitae
- one letter of recommendation from the applicant's thesis advisor.

Applications must be completed electronically by **August 15, 2025**.
See https://awm-math.org/meetings/awm-jmm/ for details.

MENTORS: We seek volunteers to act as mentors for graduate students as part of the workshop. If you are interested in volunteering, please contact the AWM office at awm@awm-math.org by **September 15, 2025**.

JUDGES: We also seek volunteers to act as judges for the Poster Session. If you are interested in volunteering, please contact the AWM office at awm@awm-math.org by **September 15, 2025**.

Mathematicians of all genders are invited to attend the talks and poster presentations. Departments are urged to help graduate students and junior faculty who are not selected for the workshop to obtain institutional support to attend the presentations.

EDUCATION COLUMN

Education Column Editor: Jackie Dewar, Loyola Marymount Unversity, jdewar@lmu.edu

Survey Findings: From TIMSS on Math Achievement and from SIAM on AI in Math Education

Jackie Dewar, Professor Emerita of Mathematics, Loyola Marymount University

Findings were recently released from two international surveys: (1) "Trends in International Mathematics and Science Study" (TIMSS), which is a comparative study of student achievement across the world, and (2) a survey by the Society of Industrial and Applied Mathematics (SIAM) on student and teacher views of the impact of artificial intelligence (AI) on math education at the precollege level in the US, England, and Wales.

Disturbing Results from TIMSS

For US students, TIMSS reports data for grades four and eight. The TIMSS 2023 results released in December 2024 showed statistically significant declines in the US from prepandemic 2019 scores in mathematics for both grade levels.

Drilling down into the data revealed even more disturbing news. The greatest declines occurred among the lowest-performing students.[1] Between 2019 and 2023, scores of fourth-graders at the 10th percentile declined 37 points in mathematics, while for eighth-graders, low-performing students' scores declined 19 points in mathematics.

There was also bad news concerning the gender gap in math performance. In 2023, US boys outscored girls at both grade levels. Fourth-grade boys have outperformed fourth-grade girls in math in nearly every administration of TIMSS going back to its beginning in 1995. But, in 2023, fourth-grade boys outscored girls by the widest margin ever (526 to 508), surpassing the previously greatest margin of 11 points in 2019. In addition, the eighth-grade gender gap that had disappeared in 2015 reappeared in 2023 (495 to 481).[2]

A gender gap favoring boys also opened up for many other countries participating in TIMSS. For example, data released in April 2025 showed a huge gender gap in mathematics for England, the largest gap of any country taking part. Researchers in England called out "an urgent need to assess why a gender gap of this kind has re-emerged over time in England, especially given the large-scale initiatives in place to address this in mathematics and science."[3]

More details are available at the links provided in footnotes 1–3.

[1] https://nces.ed.gov/whatsnew/press_releases/12_4_2024.asp
[2] https://hechingerreport.org/proof-points-2023-timss/
[3] https://schoolsweek.co.uk/timss-gender-gap-widens-as-boys-significantly-outperform-girls/

SIAM Survey on AI Finds Some Overlap of Student and Teacher Views

SIAM conducted a survey of participants in its annual MathWorks Math Modeling Challenge (M3 Challenge) to get their views on AI's impact on math education. The M3 Challenge is an internet-based, intensive math modeling contest for students in the last two years of precollege mathematics. Fifteen hundred students in the US (11th- and 12th-graders) and England and Wales (6th form students) and 250 of their teachers took the survey. Educators (61%) and students (49%) overlapped in their belief that the best use of AI would be as a mentor or study partner to learn math concepts rather than a source of answers.[4]

But far more students thought that AI had potential as an antidote to math anxiety (56%) than did their teachers (only 19%). In fact, 15% of students reported that they had personally experienced a decrease in math anxiety by using AI, while 21% said that their math scores improved. Their survey replies also held some insights into why AI use might help with math anxiety. Students saw AI as being able to give instant clarification and feedback, something not available in a crowded classroom; it could provide round-the-clock help in a nonjudgmental setting; and it delivered a personalized approach.

More details are available at the link in footnote 4.

[4] https://m3challenge.siam.org/newsroom/artificial-intelligence-math-anxiety/

Column Editor's Note

Jackie Dewar, Professor Emerita of Mathematics, Loyola Marymount University

Regular readers of the Education Column may have noticed that I have just written two columns in a row. Unfortunately, Dr. Toya Frank has had to step back from writing for the Education Column. However, I am pleased to report that Dr. Shelly Jones, professor of mathematics education at Central Connecticut State University, will be her replacement beginning in 2026.

Dr. Jones teaches undergraduate mathematics content and methods courses for preservice teachers as well as graduate-level mathematics content, curriculum, and STEM courses for in-service teachers. She wrote the delightful math activity book for children: *Women Who Count: Honoring African American Women Mathematicians*, published in 2019 by the American Mathematical Society. She coauthored the two volumes, *Engaging in Culturally Relevant Math Tasks: Fostering Hope*, *for K–5* and *for 6–12*, published in 2022 by Corwin Press.

I know readers will join me in thanking Toya for sharing her perspectives since 2022 and in welcoming Shelly to the writing team for the Education Column.

AWM Workshop at the 2026 SIAM Annual Meeting

Call for Poster Session Participants

Application deadline for graduate students: **November 15, 2025**

For many years, the Association for Women in Mathematics has held a series of workshops in conjunction with major mathematics meetings. The AWM Workshops serve as follow-up workshops to Research Collaboration Conferences for Women (RCCW), featuring speakers from one of the AWM Research Networks. An AWM Workshop is scheduled to be held in conjunction with the 2026 SIAM Annual Meeting happening in Cleveland, OH, July 6–10, 2026.

The AWM Workshop at SIAM will consist of two research minisymposia focused on **Numerical Analysis and Scientific Computing** organized by Fengyan Li and Jing-Mei Qiu, a **poster session**, a **panel** and a **mentoring luncheon**. The research minisymposia will feature selected junior and senior mathematicians from the Research Network Women in the Numerical Analysis and Scientific Computing (WiNASC). This workshop follows the RCCW that took place in 2024 at ICERM.

POSTER SESSION: The poster session is open to ***all areas of research***; graduate students working in areas related to numerical analysis and scientific computing are especially encouraged to apply. Poster presenters will be selected through an application process to present at the workshop reception and poster session. Subject to funding availability, AWM will provide partial travel support to selected graduate students for their participation in the AWM Workshop. The Mathematical Sciences Institutes will also sponsor all poster presenters to attend a week-long workshop of the presenter's choice (restrictions apply) at one of the participating Mathematical Sciences Institutes (subject to availability). The workshop will include a mentoring luncheon where workshop participants will have the opportunity to meet with other women and non-binary mathematicians at all stages of their careers.

ELIGIBILITY: To be eligible for selection and funding, a graduate student must have made substantial progress towards their thesis. Mathematicians with other sources of support are also welcome to apply.

All applications should be submitted on mathprograms.org and include:

- a title of the proposed poster
- an abstract (75 words or less) of the proposed poster
- a curriculum vitae
- a letter of recommendation.

Applications must be completed on www.mathprograms.org by **November 15, 2025**.

MENTORS: We seek volunteers to act as mentors for graduate students as part of the workshop. If you are interested in volunteering, please contact the AWM office at awm@awm-math.org by **May 15, 2026**.

Mathematicians of all genders are invited to attend the talks and poster presentations. Departments are urged to help graduate students and junior faculty who are not selected for the workshop obtain institutional support to attend the presentations.

2024-2025 Individual Membership Form

JOIN ONLINE at awm-math.org!

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☐ Contributing membership (*members earning <$90,000*)(*includes designation of a free student membership*) $160
☐ Contributing membership (*3 year membership, members earning <$90,000*) $480
☐ Contributing membership (*members earning ≥$90,000*)(*includes designation of a free student membership*) $190
☐ Contributing membership (*3 year membership, members earning ≥$90,000*) $570
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