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MATHEMATICAL
SCIENCES INSTITUTE

Broadening Participation at MSRI/SLMath

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Gender Balance at MSRI / SLMATH

1. Awakening: the pipeline problem is ours.
2. Everyone from building manager to chair of the Board of Trustees has become invested in making a difference.
3. Governing committees are dedicated to ensuring that diversity, inclusivity, and equity are an integral part of all activities.
4. Special programs have been established to bring to the institute people who have been historically underrepresented or marginalized.
5. Targeted networking workshops were created to provide a sense of community.
6. Carefully designed outreach programs were established to welcome everyone into our mathematical community.



Gender Balance at MSRI / SLMath

By approaching the problem from as many angles as possible, MSRI has significantly increased the participation of historically underrepresented groups in its activities.

We can never rest.



Programs (Semester-long), Workshops (Week-long), & Summer Graduate Schools

Planning stages:

- Organizing committee: Diverse
- Proposals: Diverse list of potential participants with accountability
- Family support: staff
- Helping the organizers (BPAC + HR representatives)

Selection process:

- Scientific Advisory Committee (SAC)
- Broadening Participation Advisory Committee (BPAC)

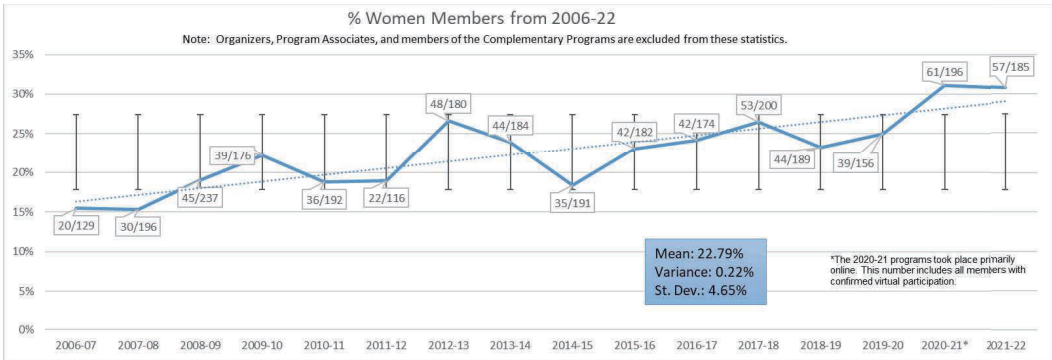


During the Program:

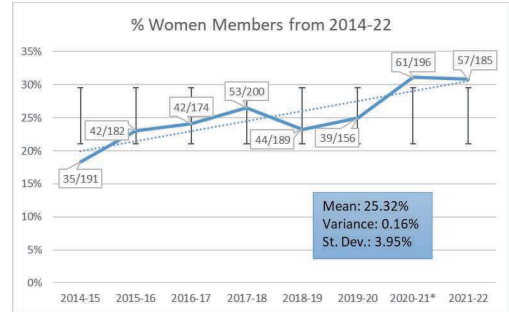
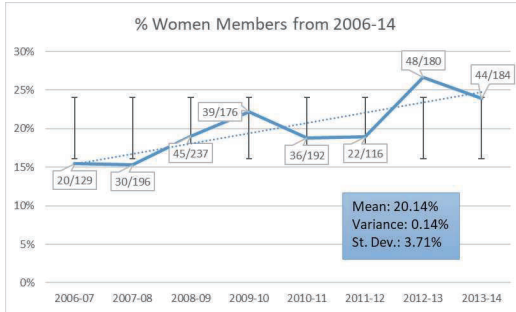
- **Family support:** *flexible funds*
- **Connections workshops:** *open to all; showcase the work of women; networking opportunities; panel; funding*
- **Introductory workshops:** *help mathematicians break into a new area of research; prioritize women, minorities, mathematicians not located at research centers, and graduate students.*
- **Seminar speakers:** diverse group
- **Collegial environment**



% Women Members from 2006-2022



% Women Members, 2006-2014 / 2014-2022



Effects of Family Funds

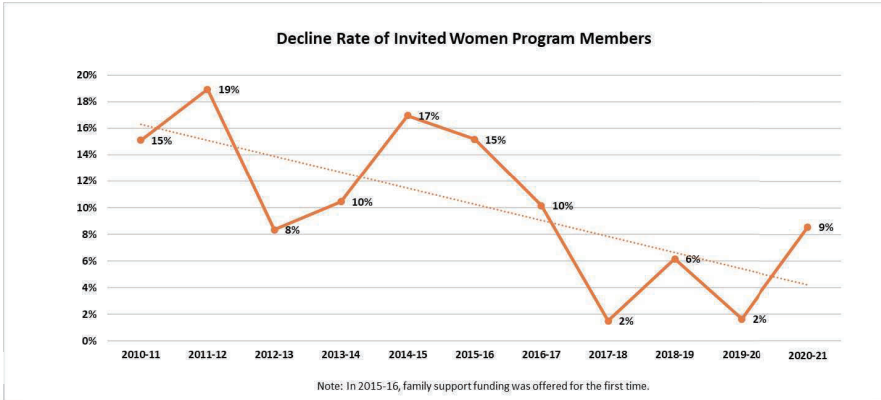
Childcare support is important not only for the parent, but also to **all participants** of the program as well, as this comment from a male postdoc about his mentor suggests:

At the Fall 2018 MSRI program on Hamiltonian Systems I was introduced to [...]. While I was familiar with her work, I had not yet met her at any recent conferences. We started collaborating on an exciting new project early in the semester and she served as an unofficial postdoctoral mentor for me, offering feedback on my talks and other career advice. After the MSRI program I started a new postdoc, close to [...]'s home institution. In addition to our continuing collaboration, she has helped introduce me to mathematicians in this area. Caring for a young child limits one's ability to travel, and had [...] not been able to attend the MSRI program, my experience in Berkeley would have been greatly diminished.

— 2018 male participant, Hamiltonian Systems



Decline Rate of Invited Women Program Members



Quotes from Women in Connections Workshops

I appreciated the diversity of the group of participants: mostly female and from many different backgrounds. Scheduling the Connections for Women workshop right before the Introductory Workshop is very effective, since then during the Introductory Workshop women have already formed some connections with other participants, and are already familiar with the Institute. Personally, the Connections for Women workshop has led to a potential new collaboration for me with one of the speakers.

—2017 participant

This is my first workshop that has a gender perspective to it, and I loved it. Not only was it great not being the only woman in the room, but also the panel discussion motivated some great discussions and gave some really good points.

—2019 participant



After the Program

Surveys: *Crucial at detecting issues* → *Collegiality*



Introductory workshop of the Microlocal Analysis program, 2019



Reaching Out and Bringing In: Other activities to broaden participation

SRiM: Space, funding, opportunity for in-person collaboration for small groups of mathematicians, especially women and gender-expansive individuals whose ongoing research may have been disproportionately affected by various obstacles including family obligations, professional isolation, or access to funding. (2 weeks in summer, held at MSRI.)

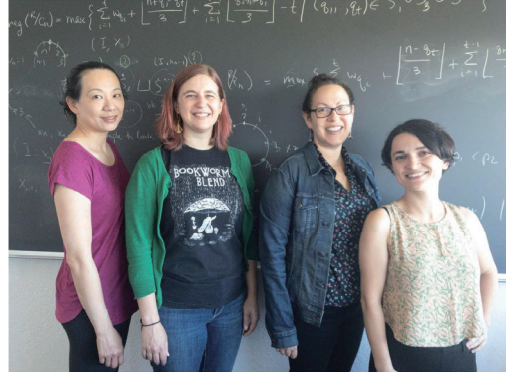
- **2017:** 4 groups – 13 participants
- **2018:** 22 groups – 81 women [6 groups invited – 21 women]
- **2019:** 45 groups – 153 women [13 groups invited – 46 women]
- **2020/21:** 80 groups – 296 women [18 groups invited – 83 women]
- **2022:** 17 groups – 60 applicants [10 groups invited – ~37 women]



Summer Research in Mathematics (SRiM)

Our [time] at MSRI enabled us to develop a small project into something substantial. We are working slowly for exactly the same reasons that [the time at MSRI] helped us: we are overflowing with commitments at home (eight children across three authors!), and the isolation permitted the focus needed to advance.

- 2018 SRiM participant



SRiM Research Group



Reaching Out and Bringing In: Other activities to broaden participation

- **Summer Graduate Schools:** 2 + 1 + 1 policy
- **MSRI-UP:** For US citizens



MSRI-UP 2022 with MSRI/SLMath staff

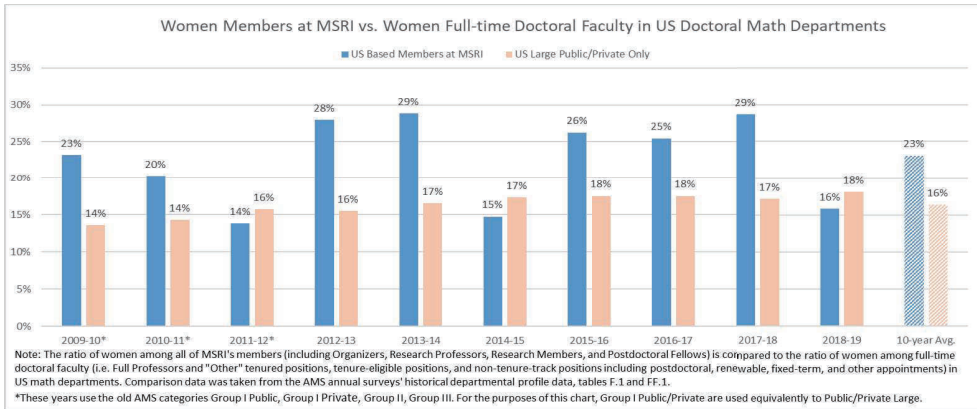


Is it successful? Can we measure outcomes?

- Data comparison with the AMS
- Surveys: comparing professional satisfaction
- Personal comments



Women Members at MSRI vs US Math Departments



The Continuing Challenge

Building and maintaining an inclusive community is an ongoing challenge. It requires us not only to implement activities that support this goal but also to work to mitigate the effects of long standing inequities. Acknowledging and responding to the forces that have blocked these goals is our responsibility. Our efforts must be broad and intentional across all our activities.

Experience shows that without continued vigilance and effort, the system reverts to old patterns. Pursuing, refining, and improving our activities, looking for new ways to move forward, sharing our experiences, and supporting each other leaves us hopeful that MSRI/SLMath will help the broader mathematical community meet the challenge of creating and sustaining inclusive communities.



% Female Summer Graduate School Students

