

WIMSIG Report

A/Prof Yvonne Stokes, Chair
Women in Mathematics Special Interest Group (WIMSIG)
of the Australian Mathematical Society

www.austms.org.au/Women+in+Mathematics+group

Australian Council of Heads of Mathematical Sciences
(ACHMS) Meeting
21 February 2017

Women in Mathematics Special Interest Group (WIMSIG), AustMS

- ▶ Established 2012. Now **350 members** (~10% men).
- ▶ Executive Committee 2017–2018
 - ▶ Chair: Yvonne Stokes, UoA.
 - ▶ Past Chair: Lesley Ward, UniSA.
 - ▶ Secretary: Catherine Penington, QUT.
 - ▶ Treasurer: Giang Nguyen, UoA.
 - ▶ Ordinary Member: Deborah Cromer, UNSW.
 - ▶ Ordinary Member: Natalie Thamwattana, UoW.
- ▶ Webmaster: Amy Glen, Murdoch.
- ▶ Newsletter: Joanne Hall, RMIT.
- ▶ Many volunteers.
- ▶ Website:

www.austms.org.au/Women+in+Mathematics+group

The New WIMSIG Executive Committee



Natalie Thamwattana, Ordinary Member
Giang Nguyen, Treasurer
Yvonne Stokes, Chair

Lesley Ward, Past Chair
Deborah Cromer, Ordinary Member
Catherine Penington, Secretary

My Vision

- ▶ Develop greater connection with and involvement of members.
- ▶ Assist female mathematicians to develop strong research careers.
- ▶ Improve understanding of causes of gender inequity.

WIMSIG Activities

▶ AustMS WIMSIG Travel Awards:

- ▶ Cheryl E. Praeger Travel Awards: conferences or research collab'n (women), **\$1K domestic, \$3K int'nal**.
4 awards in 2014, 7 in 2015, 6 in 2016.
- ▶ Anne Penfold Street Awards: caring responsibilities while travelling (anyone **and conference organisers**), **\$750**.
1 award in 2014, 3 in 2015, 1 in 2016.

▶ WIMSIG Events:

- ▶ Women in mathematical sciences dinners at AustMS.*
150 attendees from AustMS 2016 and ASC 2016 (both in Canberra in same week).[†]
- ▶ Women in mathematical sciences lunches at ANZIAM.*
78 registrants at ANZIAM 2017.
- ▶ Jun & Nov WIMSIG gatherings around. the country

▶ See also:

www.austms.org.au/Women+in+Mathematics+group

*Sponsored by N. Joshi's Laureate Fellowship; to end with ANZIAM 2018.

[†]Also sponsored by ACEMS.

From the Travel Awardees (1)

- ▶ “I received travel funding and childcare support for an extended trip to the UK . . . I could not have made this research visit without taking my two children (3 years and 1 year) with me . . . I am very grateful for both of these awards [Street & Praeger], as they made a very productive research trip a real possibility through their financial support.”
- ▶ “It is my great pleasure to acknowledge the support from the AustMS WIMSIG Cheryl E. Praeger Travel Award. With this award, I was possible to have a very fruitful 3- week research travel to Montreal and Shanghai . . . Finally, I would like to express my deep appreciation of the support from WIMSIG, making these research experiences possible.”

From the Travel Awardees (2)

- ▶ “The funding I received from WIMSIG enabled me to invite my collaborator . . . to visit me in Sydney and to defray the costs of additional childcare during his visit, as I temporarily went from working 3 days per week to working full-time . . . It was particularly helpful that the grant was available to facilitate a collaborator visiting me rather than only supporting the reverse situation. As a sole parent of one-year-old twins it would not have been feasible for me to travel to Germany.”

Support WIMSIG Activities

How?

- ▶ Advertise travel awards.
- ▶ Encourage eligible staff to apply.
- ▶ Fund gatherings at your institution and other WIMSIG activities.



Let us advertise your jobs!

- ▶ Please make it a routine part of your recruitment process to send WIMSIG your job ads.
- ▶ We publish them in the WIMSIG newsletter and on the WIMSIG website — free for now!
www.austms.org.au/WIMSIG-Job-Ads,
- ▶ Email to WIMSIG-secretary@women.austms.org.au
- ▶ Newsletter deadline is second last day of each month.

The Next 12 Months & Beyond

- ▶ WIMSIG Conference: Celebration of Women in Australian Mathematical Sciences, **24–26 September 2017**, UniSA.
Save the dates!

Australia's first-ever conference devoted to research done by women in the mathematical sciences.

- ▶ A mentoring scheme for WIMSIG members.
- ▶ Contribute to an AustMS good practice scheme.

WIMSIG Conference Goals (1)

1. Bring together women working in the mathematical sciences in Australia.
2. Showcase the research of female mathematicians and statisticians through
 - ▶ keynote addresses,
 - ▶ parallel special sessions, and
 - ▶ a poster sessionranging across the mathematical sciences.
(Anyone may participate but all presentations by women.)
3. Foster new research collaborations; enhance existing.
4. Provide professional development and mentoring for female researchers at various career stages, especially but not limited to early-career researchers.

WIMSIG Conference Goals (2)

5. Discuss the gender equity landscape in the mathematical sciences and other STEM fields, in Australia and other countries.
6. Present examples of good practice that institutions can adopt to advance gender equity.
7. Create opportunities for senior academics and research leaders to hear research talks by and interact with a large number of female researchers, who may later form part of recruitment pools for future academic roles.

Support for the WIMSIG Conference

- ▶ Funding has been promised by UniSA, UoA, ANZAMP, ACEMS, Comm. Bank.
- ▶ Further funding is being sought from AustMS, ANZIAM, SSA, AMSI.
- ▶ We hope many of you will attend.
- ▶ Please support attendance by your staff, no matter what gender.

AWM Research Symposium 2015

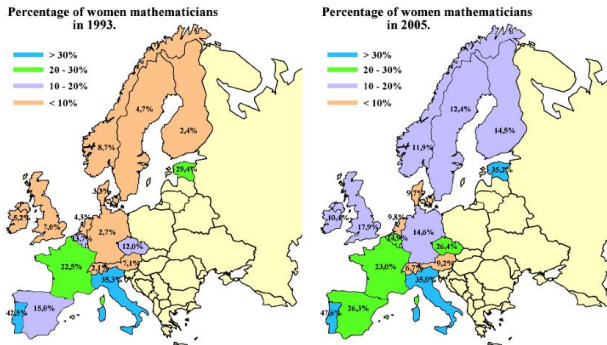
“Change does not happen automatically. It requires us to pay attention to a host of behaviors and expectations . . .”

—Valian, *Why so slow?*



AWM Research Symposium, Univ. of Maryland, 2015
Let's aim for something similar in Australia!

Data: % of math'ns who are women, by country



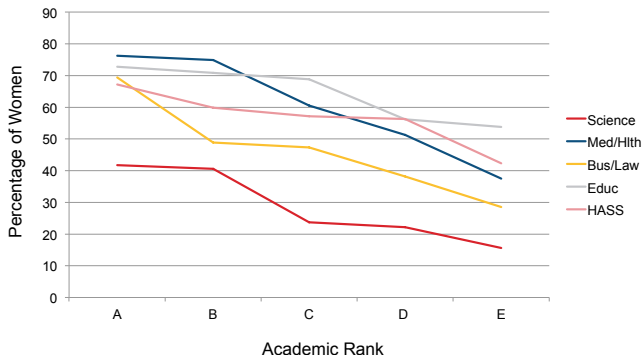
Statistics gathered by
European Women in Mathematics
and the Women in Mathematics Committee
of the European Mathematical Society

Notice the evolution in time, as well as the difference between southern and northern Europe.

Data: Australian academia (from B. Gaensler)



Data: Women in Australian Academia



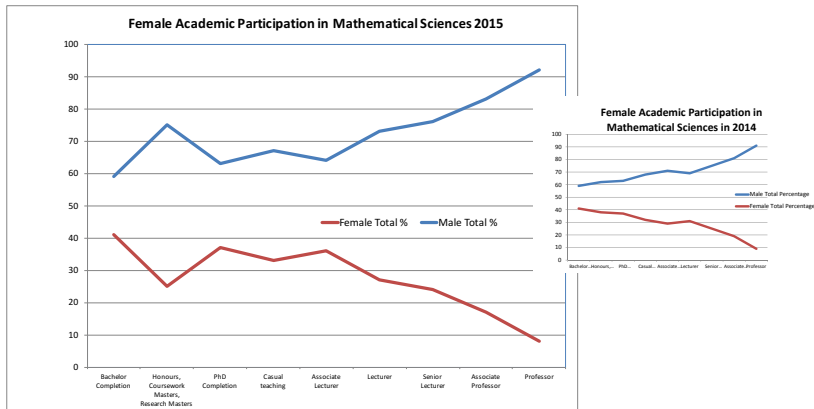
Work and Careers in Australian Universities survey (Strachan et al. 2012)

Data: Australian Mathematical Sciences (from AMSI)

Student completion data: Graduate, DEET 2014; Hons, P. Johnston 2015.

Staff profile data: AMSI Universities Survey 2014 (25 depts from 24 universities); AMSI Universities Survey 2015 (all 27 universities).

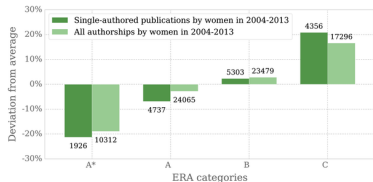
—Thanks to AMSI (S. Henderson, M. Wienk, L. Williamson)



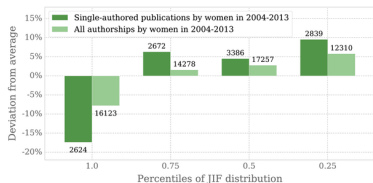
Gender & Maths Publication

Mihalhević-Brandt, Santamaria, Tullney, The effect of gender in the publication patterns in mathematics, *PLOS One*, Oct 2016.

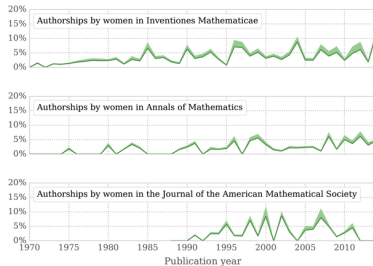
(zbMATH database used, ~150 000 mathematicians, 4 decades.)



Deviation of the share of women's publications from the average ERA ranking.



Deviation of the share of women's publications from the average impact factor.



Share of authorships by women in three reference journals since 1970.

Women extremely under-represented in top-ranked journals; a negative correlation between journal rank (ERA or JIF) and the % of women among its authors.

Why? Data excluded research field as a reason. Biased editorial boards and reviewers? Lack of strategic publication choices on the part of women? Needs investigation.



	Professors	Associate Professors	Doctors	Students
Male	98 (93%)	39 (81%)	166 (72%)	124 (67%)
Female	7 (7%)	9 (19%)	65 (22%)	60 (33%)

ANZIAM 2017 update: 4 women received awards!



Jody Fisher, A.F. Pillow fellowship.



Claire Miller, T.M. Cherry prize (shared with E. Hester).



Dr Alys Clark, Michell Medal.



Prof. Kate Smith-Miles, Tuck Medal.

What's Being Done Around Australia?

- ▶ **Science in Australia Gender Equity (SAGE)** initiative of the Australian Academy of Sciences. 40 participants. Pilot project commenced in 2015.
- ▶ U Melbourne advertised women-only maths jobs in May 2016. (The Age, ABC, The Guardian, etc.)
- ▶ Women-only positions advertised by ANU (Mathematics, Oct 2016), Swinburne U (STEM, Oct 2016), U Newcastle (Science, Nov 2016).
- ▶ Any other initiatives?
- ▶ How can WIMSIG help you?

In Conclusion

- ▶ Advertise travel awards.
- ▶ Encourage eligible staff to apply.
- ▶ Fund gatherings at your institution and other WIMSIG activities.
- ▶ Make it a routine part of your recruitment process to send WIMSIG your job ads.
- ▶ Support the WIMSIG Conference by coming yourself and facilitating attendance by your staff.
- ▶ Be proactive with initiatives to improve gender equity.