

Women in Mathematics Special Interest Group (WIMSIG)

2017 Annual Report to the Australian Mathematical Society

December 5, 2017

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This report includes activities from November 2016 to October 2017.

1 Executive Committee

- Yvonne Stokes, Chair
- Giang Nguyen, Treasurer
- Catherine Penington, Secretary
- Ngamta (Natalie) Thamwattana, Committee Member
- Deborah Cromer, Committee Member
- Lesley Ward, Immediate Past Chair

2 Events

2.1 The Inaugural WIMSIG Conference

The WIMSIG Conference 2017, **Celebration of Women in Australian Mathematical Sciences**, held on 24–26 September 2017 at UniSA, was the crowning event of the year. The intent was to show and celebrate the contribution of women to the Australian Mathematical Sciences and it did just that. One participant commented: “I had not fully realised that there was so much mathematical research being done by women in Australia.”

We welcomed 190 participants from 10 countries, of whom 85% were women and 30% were students. Participants came from 44 institutions including 33 universities. There were just over 100 research talks and posters, all presented by women. There were 12 special sessions, twenty-five session organisers, four plenary speakers (Kerrie Mengersen, Christine O’Keefe, Malabika Pramanik, Ami Radunskaya), panel discussions on the Gender Equity Landscape in the Australian Mathematical Sciences and on Broader Perspectives on Gender Equity, Across Countries and Disciplines, with seven panelists in all, an info session on the AustMS WIMSIG Cheryl E. Praeger Travel Awards and Anne Penfold Street Awards, a professional development workshop, 16 sponsors, and more.

It was a very special event with excellent scientific content and a wonderful atmosphere that took two years of planning. Warm thanks go to the many people who helped make it happen, and especially to the Conference Steering Committee: Associate Professor Lesley Ward (Conference Director), Professor Lynn Batten, Dr Giang Nguyen, Associate Professor Catherine Greenhill, Dr Grace Joshy, Professor Ngamta (Natalie) Thamwattana, and Ms Sue Tyerman.

Special thanks to the AustMS for its generous sponsorship of the Conference.

We gratefully acknowledge all our sponsors, who contributed a combined total of \$60,000 to the Conference budget. Their generosity enabled us to award Travel Grants to 33 women, as well as supporting many other aspects of the Conference including free childcare. Platinum sponsors: UniSA, University of Adelaide, University of Queensland, ACEMS, AMSI in partnership with CHOOSEMATHS and the BHP Billiton Foundation. Gold sponsors: UNSW, Flinders University, AustMS. Silver sponsors: Statistical Society of Australia, ANZAMP, ANZIAM, Commonwealth Bank of Australia, ANU, MAXIMA, MATRIX, and Kate Smith-Miles through her ARC Georgina Sweet Australian Laureate Fellowship. Eight of the Travel Grants were funded by CHOOSEMATHS.

Over 100 people have completed the on-line Conference evaluation so far, and the responses are very positive, including overwhelming support for future conferences of this kind: 98% of respondents say they would attend a future WIMSIG conference. We have yet to decide on a date for the next conference, but we certainly intend to make them a regular (though at this stage not an annual) event.

Responses to the question “Was there anything about the Conference that surprised you?” included:

“The high number of participants, and the high amount of diversity among the female participants.”

“How much I really, truly enjoyed a majority female event.”

“Conference song.”

“The overall buzz and sense that everyone was having a great time. It was fantastic!”

“How welcoming it felt among the participants. It was so friendly!”

Responses to other questions included:

“It was clear that high quality research is being done by females and that they give high quality talks – not that I didn’t know that, but the conference gave a sense that there was a very significant female contribution.”

“Meeting other females in the same field as you really helps.”

“I started a new collaboration.”

“The info given in the handbook [Conference booklet] was very useful for my local diversity committee.”

“Panel discussions were enormously encouraging. Great camaraderie and new connections.”

[from a Travel Grant recipient] “The funds were of extreme importance. As a PhD student I rely quite heavily on my ability to grow/learn/perform research being determined by the support of other academics and those that believe in me and support my work. For that reason I am incredibly grateful for the support and opportunities I discovered and received as a result of this grant. It really had an important impact on me and my work, now and future.”

“Seeing and listening to so many capable young female mathematicians in one venue. Being inspired by more senior female mathematicians/statisticians.”

“The high quality scientific content, and the positive, happy atmosphere.”

“I am not alone.”

“I am midway through a PhD and it [the Conference] made me more confident.”

“Seeing so many women confidently doing mathematics and being in community.”

“It was a life changing experience for me.”

“My heartiest congratulations to all the organisers. Everything so well thought out. The science and friendliness were fantastic. Thank you!”

For more information including photos, talk abstracts, and messages endorsing the Conference from Kylie Walker, CEO of Science & Technology Australia, Andrew Holmes, President of the Australian Academy of Science, and Alan Finkel, Chief Scientist of Australia, see the Conference website <http://www.austms.org.au/WIMSIG-conference-2017> and the Conference hashtag #WIMSIG2017.

2.2 Women in Maths Gatherings

WIMSIG organised four Women in Maths Gatherings around the country in the last year. Funding was provided by the host organisations.

- November 2016 Gatherings were hosted by QUT.
- October/November 2017 Gatherings were or will be hosted by U Sydney, RMIT, Uni SA.

These Gatherings are open to people of any gender. They provide a venue for discussion of gender equity and are a great way to build informal networks.

The Gatherings are well supported by the host organisations. In each case the host organisation provides a venue and catering. Some events have been attended by Heads of Schools and other influential decision-makers.

2.3 Embedded events

Pleasingly, it has become an established component of the national AustMS and ANZIAM conferences to hold a Women in Mathematics dinner or lunch, respectively. Members of the WIMSIG Executive Committee take lead roles in the organisation and running of these events. The following events have been held in the last year.

- December 2016: Women in Mathematics Dinner at 60th AustMS Annual Meeting, ANU (Funded by Nalini Joshi's ARC Georgina Sweet Laureate Fellowship)
- February 2017: Women in Mathematics Lunch at ANZIAM (Funded by Nalini Joshi's ARC Georgina Sweet Laureate Fellowship)

Planning is under way for the following Women in Maths events, to be held in the next few months.

- December 2017: Women in Mathematics Dinner at 61st AustMS Annual Meeting, Macquarie University (Funded by Nalini Joshi's ARC Georgina Sweet Laureate Fellowship).
- February 2018: Women in Mathematics Lunch at ANZIAM Annual Conference, Hobart (Funded by Nalini Joshi's ARC Georgina Sweet Laureate Fellowship).

2.4 Endorsed events

Please see the web site (<http://www.austms.org.au/WIMSIG+Events>) for events organised by others that were endorsed and advertised by WIMSIG. The web site also contains WIMSIG's advice sheet for organisers of such events.

3 Advocacy

3.1 Presentations

- **Annual Council of Heads of Schools of Mathematical Sciences:** The Chair of WIMSIG (Stokes) gave an invited *WIMSIG Re-*

port at the ACHMS meeting, 21 February 2017. Her slides are posted at <http://www.austms.org.au/WIMSIG+Events>. Highlights include:

- Data on rates of participation by women in the tertiary sector in Australia, by discipline and by level (Bachelors/Honours/PhD/Casual/A/B/C/D/E). Data from the 2015 AMSI Survey (all 27 universities) indicate the percentages of women among those completing degrees and those employed in the mathematical sciences remain lower than those for the aggregated natural sciences, which are themselves lower than for all other discipline groupings.
 - Feedback from women that have benefitted from Cheryl E. Praeger and Ann Penfold Street Travel Awards.
 - Request to Heads of School to send jobs ads to WIMSIG, through the email address WIMSIG-secretary@women.austms.org.au. We publicise them through the WIMSIG newsletter and website.
 - Published information on gender issues in mathematics publication demonstrating that women are extremely under-represented in top-ranked journals.
 - Discussion with the Heads of Schools about the outcomes of the women-only positions advertised at The University of Melbourne and others, in addition to the appointment of excellent women. The view was largely that it was too early to tell.
- WIMSIG Chair (Stokes) gave an opening presentation for and chaired the **AMSI Forum on Women in Research and Higher Degrees in the Mathematical Sciences** on 23 June 2017. The Forum was initiated and organised by Maaike Wienk (AMSI) to discuss and explore possible ways to counter the apparent drop in the number of female Honours and domestic PhD students in the Mathematical Sciences across Australia.

There were five invited speakers:

- *Prof Peter Bouwknegt* (Director Mathematical Sciences Institute, Australian National University) who discussed the relationship between the number of female staff to the number of female students, and the advantages of senior students mentoring more junior students.
- *A/Prof Inge Koch* (AMSI CHOOSEMATHS Executive Director, The University of Melbourne) who discussed the CHOOSEMATHS program.
- *Ms Courtney Darville* (Honours student in Pure Mathematics, The University of Sydney) who described the circumstances that she had found helpful and unhelpful as a woman in mathematics.

- *Prof Cheryl Praeger* (Professor of Mathematics, The University of Western Australia) who discussed the importance of role models and the importance of having confidence in your own abilities
- *Ms Rheanna Mainzer* (PhD Student, Statistics, La Trobe University) who described her long road to doing a PhD in statistics despite being advised to choose ‘easier’ subjects.

Following the forum, an article was written and published in the Gazette Vol. 44(4) September 2017, p.216, *ACE Forum on Women in research and higher degrees in the mathematical sciences*, Maaïke Wienk and Yvonne Stokes.

3.2 Committees and Advisory Groups

- Invitation from the Board of the Simon Marais Mathematics Competition to appoint a representative of WIMSIG to an Advisory Group for the Competition. Dr Marcy Roberts has agreed to be that representative.
- The AustMS Good Practice Scheme has welcomed WIMSIG’s contributions to the discussion and their final report.

3.3 Connections with other organisations

- *Women At The Table (WATT)*: attended by Yvonne Stokes (U Adelaide), Lesley Ward (UniSA), Gobert Lee (Flinders U). The event brought together members of 25 professional women’s networks in SA, and discussions included the AustMS WIMSIG Travel Awards and the (then upcoming) WIMSIG conference.
- *AMSI Choose Maths*. WIMSIG Chair Yvonne Stokes was the primary organiser of the SA Girls Enjoy Maths (GEM) Day. The holding of an annual GEM Day in each state is a new initiative of AMSI commenced in 2017.

3.4 Newsletter

WIMSIG has continued to issue a monthly newsletter (<http://www.austms.org.au/WIMSIG+News>) containing information of interest to members of WIMSIG. The Newsletter is edited by Joanne Hall and both delivered via a mailing list and posted on the WIMSIG website. It is published on the first or second day of each month and is divided into news, events, opportunities, media and research sections.

To join WIMSIG and receive the newsletter every month, send a request to WIMSIG-secretary@women.austms.org.au.

3.5 Website

The WIMSIG website (www.austms.org.au/Women+in+Mathematics+group) continues to be maintained by WIMSIG Webmaster Amy Glen. The website contains newsletters, event advertisements, job advertisements, a funding directory, resources on gender equity in STEM, Q&A with female mathematicians, information about the Hanna Neumann Lecturers and links to the Cheryl E. Praeger and Ann Penfold Street Awards.

4 Projects

4.1 Travel Awards

Since the 2016 Annual Report, there have been two rounds of AustMS WIMSIG Travel Awards, with closing dates 1 April 2017 for Round 6 and 1 October 2017 for Round 7. We include below the reports for these two rounds, as well as for Round 5 (closing date 1 October 2016), which was still being finalised by the time of the previous Annual Report.

In these three rounds, we received 13 applications for the Cheryl E. Praeger Awards and 2 applications for the Street Awards. The rules for the Street Awards have now changed to permit applications from event organisers for funding to support childcare at their events. We have not yet received such Street applications.

The Selection Committees consisted of:

- Barbara Maenhaut (Chair), Yvonne Stokes, and Joanna Wang – R5
- Amie Albrecht (Chair), Joanna Wang, and Jessica Purcell – R6
- Jessica Purcell (Chair), Jessica Kasza, Cecilia Gonzalez Tokman – R7.

Normally, according to the rotating scheme, Yvonne Stokes would have chaired Round 6. However, shortly prior to the closing date of this round Yvonne was elected as Chair of WIMSIG. Thus, to ensure the independence between the WIMSIG Executive Committee and the WIMSIG Selection Committee, we invited Amie Albrecht, a former Chair of WIMSIG SC, to take on the role again.

For Round 7, according to the rotating scheme, Joanna Wang would have been Chair. However, Joanna excused herself due to personal reasons, and Jessica Purcell chaired instead.

Over Rounds 5–7, there were 11 Praeger Travel awardees and 2 Street Travel awardees:

AustMS WIMSIG Cheryl E. Praeger Travel Award:

R5 Bronwyn Hajek (UniSA), University of Perugia, Italy, May 2017;

- R5 Joan Licata (ANU), Workshop at the Isaac Newton Institute, Apr - Jun 2017;
- R5 Catherine Penington (Macquarie), Society of Mathematical Biology Conference, USA, Jul 2017;
- R6 Paige Davis (QUT), SIAM Conference on Dynamical Systems, UT, USA, May 2017;
- R6 Gobert Lee (Flinders), EMBC 17 conference, South Korea, Jul 2017;
- R6 Barbara Maenhaut (UQ), Canadian Discrete and Algorithmic Mathematics Conference, Canada, Jun 2017;
- R7 Bregje Pauwels (ANU), AustMS 2017, Sydney, December 12-15;
- R7 Valentina Wheeler (Wollongong), 12th AIMS Conference on Dynamical Systems, Differential Equations and Applications, Taiwan, July 2018;
- R7 Marcy Robertson (Melbourne), Infinity-Categories, Infinity-Operads, and their Applications, Mexico, 6-11 May, 2018;
- R8 Sara Heke (UQ), ACCMCC, 4-9 December 2017;
- R9 Jie Yen Fan (Monash), AustMS 2017, Sydney, December 12-15.

AustMS WIMSIG Anne Penfold Street Award:

- R5 Joan Licata (ANU), Workshop at the Isaac Newton Institute, Apr - Jun 2017;
- R6 Joanne Hall (RMIT), WIMSIG Conference, 24 - 26 Sep 2017.

4.2 Mentoring Scheme

This year (2017) the WIMSIG Executive Committee has been working on a mentoring program for its members. To ensure a program that matches the requirements of our members, we have developed a survey aimed at obtaining the ideas and input of both potential mentees and mentors. The survey is anonymous and is divided into two sections, one for potential mentees and one for potential mentors. Each section is estimated to take less than 5 minutes to complete and people can choose to complete either or both sections, depending on their interests.

We are particularly interested to find out the areas in which potential mentees want input and the areas in which mentors feel they are able to provide useful input. This will assist us to match mentees and mentors. The survey will also shed light on the demand for mentoring and the resources

available to fill it. The survey is open to all whether WIMSIG members or not and we hope that this will result in more input and a better mentoring program.

Depending on the response rate, we hope to analyse the survey results by the end of the year and certainly by early in the new year. Following on from this we will look at implementing a mentoring program later in 2018.

5 Membership

The WIMSIG membership list and mailing list are maintained by WIMSIG Secretary Catherine Penington. After the removal of inactive email addresses, WIMSIG currently has 220 people on the mailing list, of whom about 140 are members of the AustMS. Membership is approximately 85% female and 15% male.

6 Elections

The 2017 WIMSIG Election round is now underway, with the election of the new Incoming Chair. This is the first year where the Chair is elected according to the new Rules of Procedure, and we expect the new Chair to benefit from a shadowing period.

The WIMSIG Executive Committee is considering requesting a change to the Rules of Procedure including a Student Representative in the Executive Committee. WIMSIG would benefit from the direct experience of a student member, however the two-year terms for members of the committee are potentially off putting to students whose future plans are still unknown. We therefore propose a Student Representative who would have a one year term. Once the Executive Committee has confirmed the proposed position, we will hold a vote of all members of WIMSIG to approve the proposed changes.

7 Funds

In 2016, WIMSIG submitted a funding proposal for 2016–2018, and was approved funding for

- \$3,200 for operational purposes, including travel money to attend events for advocacy (the session 2016–2017)
- \$20,000 for the Cheryl E. Praeger Travel Awards (FY 2017–2018)
- \$3,000 for the Anne Penfold Street Awards (FY 2017–2018).

A summary of expenditures, and WIMSIG's future funding request, have been prepared as a separate document by the WIMSIG Treasurer Giang Nguyen.

8 Funding for Women in Maths Events at AustMS and ANZIAM annual meetings

A Women in Mathematics Dinner has been held at each AustMS Annual Meeting beginning in 2013, and a Women in Mathematics Lunch has been held at each ANZIAM annual Conference since 2014. WIMSIG assists with these events, working with local organisers and providing an MC. In our Annual Report for 2016 we flagged that the funding for these events generously provided by Prof. Nalini Joshi from her Georgina Sweet Laureate Fellowship over the last five years will cease after the ANZIAM 2018 conference and that a new source of funding will be needed to continue with these events.

We are pleased to report that Professor Kate Smith-Miles has promised to fund these events for the next three years at the same level as Professor Joshi, i.e. \$5000 for each of the AustMS and ANZIAM conferences, so that, with input from the conferences themselves as has happened in the past, these events are secure through to the beginning of 2021.

We take this opportunity to record our gratitude to both Professor Joshi and Professor Smith-Miles for their strong support, and to acknowledge the initiative taken by Professor Joshi in starting these events and making them an established part of the AustMS and ANZIAM meetings.

Catherine Penington
Secretary
Women in Mathematics Special Interest Group
Australian Mathematical Society
9 November 2016

A Travel Award Reports, Rounds 5–6

On the following pages we present the reports by recipients of the AustMS WIMSIG Cheryl E. Praeger Award and the AustMS WIMSIG Anne Penfold Street Award in R5 and R6.

R5 Bronwyn Hajek (P)

I am happy to acknowledge WIMSIG's Cheryl E. Praeger Travel Award which facilitated my recent visit to Prof Clara Nucci at the University of Perugia.

Prof Nucci and I explored a problem related to nonclassical symmetry analysis – an extension of Lie's classical symmetry method, one of the most useful methods for finding exact solutions of differential equations. One technique for finding nonclassical symmetries is to derive and solve the heir equations. During my visit, we derived the heir equations for systems of evolution equations – something that had been done previously for single equations only.

This visit initiated a new collaboration. It was a very busy and productive few weeks and we are currently writing a journal article based on the research undertaken during my visit. We have discussed plans for future areas of research and possible funding opportunities for a subsequent visit.

R5 Joan Licata (ANU) (P & S)

I am very grateful for the support offered by a Cheryl E. Praeger Award and an Anne Penfold Street Award for my recent travel. I had been invited to join a special semester on Homology Theories in Low-Dimensional Topology at the Isaac Newton Institute in Cambridge, UK, and the AustMS awards helped defray the substantial costs involved in the travel. The program itself was invaluable, offering a fantastic opportunity for me to spend several months immersing myself in a research-intensive environment. The theme of the special program is closely tied to my research area, so I was able to talk to many mathematicians working in my field. While in the UK, I gave talks in Glasgow, Cambridge, and on the Isle of Skye. I was also invited to visit Cologne, where I gave a series of research talks and graduate lectures and began a new paper with a pair of researchers there. However, one of the best features of my trip was simply having the opportunity to talk about maths daily at the Institute with other topologists, and I'm excited about a new and on-going collaboration that developed from these conversations. It took us some time to turn mutual interest into a focused project, so the opportunity for an extended stay was particularly helpful. The Anne Penfold Street Award helped with the costs of relocating to Cambridge with my two children, which in turn make the longer visit possible. Thank you!

R5 Catherine Penington (P)

Thanks to the generosity of AustMS and WIMSIG, I had the funds to travel to the Society of Mathematical Biology annual conference in Salt Lake City, USA. I've never had the chance to attend an SMB conference before, and it was a wonderful opportunity to go to a conference where every talk was aimed in my field, and I was never left behind as speakers moved into details of their work.

I presented a talk on “Quantifying skin and melanoma cell interactions”, and had several useful questions from others at the conference (mostly after the talk session, as 15 minute slots allow very little question time!). I am about to start a continuing position at Macquarie University, so the timing of the conference allowed me to talk about my move and build the research links I'll need as I start a research group of my own.

Attending this year's SMB conference was also very useful from a women-in-maths point of view: next year's SMB conference will be in Sydney, and I will be involved in running a women in maths event during it. Attending this conference helped me to understand how the conference is run and what sort of events attendees find interesting. It also gave me a chance to introduce myself to influential mathematicians in the field, and hopefully I can use that to increase attendance and awareness for next year's event.

R6 Paige Davis (QUT) (P)

I was awarded the WIMSIG Cheryl E. Praeger Travel Award to attend the SIAM Conference on Applications of Dynamical Systems at the Snowbird resort, UT USA. This conference is held every two years and is one of the largest conferences for dynamical systems. I was able to attend the talks of many prolific mathematicians whose works I had read and frequently cited. These mathematicians included Bjorn Sandstede and Keith Promislow whose writings originally peaked my interest in spectral stability and specifically the absolute spectrum associated with linear operators.

I also spoke as part of a mini-symposium “Recent Advances in the Stability of Travelling Waves” on the 25th May, 2017. My talk, “Absolute Instabilities of Travelling Wave Solutions in a Keller-Segel Model” was attended by many of the mathematicians I had met throughout the week which increased my profile in the mathematical community immensely. My talk was also recorded and posted on the conference page (www.siam.org/meetings/ds17) increasing the accessibility of my work. This work has garnered interest as the Keller-Segel model is well known but by applying existing stability techniques and by locating the absolute spectrum associated with the travelling wave solutions we were able to present new results and have discovered a region of parameter space where solutions are spectrally stable.

By attending both the plenary talks and the mini-symposiums I was made aware of new advances and techniques regarding the stability of solutions to partial differential equations. Many of these techniques are directly applicable to my research. These discussions provided insight into many of the issues I had been having in my current research project and a few potential new avenues forward for my research. As well as attending talks, I also attended several social events. These events allowed me to network and I participated in a few insightful discussions with both fellow PhD candidates and professors about women in maths, the ratios of female to male professors and techniques for encouraging female undergraduates to remain in mathematics.

As a third year PhD candidate, this was an invaluable experience. I was able to network with many north-American and European mathematicians who do not regularly attend conferences in or near Australia. I discussed the possibilities of post-doctorate positions with several academics and collaborations on my current and future projects with others. I am immensely grateful to WIMSIG for this opportunity. This was an exhilarating and extremely beneficial experience.

R6 Gobert Lee (Flinders) (P)

The annual conference of the IEEE Engineering in Medicine and Biology Society (EMBC) is a leading conference attended by ≥ 2500 researchers, leaders and early-careers each year in all the major fields of biomedical engineering – including biomedical imaging and image processing which is my research area. In 2017, the 39th annual conference of the IEEE Engineering in Medicine and Biology Society was held in Jeju, South Korea from July 11 to 15. Together with my collaborator from Japan, I co/organised one of the thirty mini-symposia ran during the conference. The mini-symposium was entitled “Emerging Methods in Medical Image Analysis” which included invited talks on the advances in machine learning, computer vision and statistics in conjunction with improvements in medical imaging technology providing ever greater opportunities for breakthroughs in medical image analysis. The mini-symposium was exceptionally well-attended with many great insights from the field leaders and enthusiasm from ECRs. In addition to co/organising the mini-symposium, I also presented an oral paper on the application of statistical theory in medical image segmentation entitled “Statistical Region Merging and Segmentation in Abdominal CT” which described the 3D generalization of the Statistical Region Merging method (Nock & Nielsen, 2004) for 3D images such as CT images.

I would like to thank the support of the prestigious AustMS WIMSIG Cheryl E. Praeger Travel Award which makes my attending and participation of the EMBC’17 conference possible.

R6 Barbara Maenhaut (UQ) (P)

I attended the 6th biennial Canadian Discrete and Algorithmic Mathematics Conference (CanaDAM) from June 12-15, 2017 at Ryerson University in Toronto, Canada. The conference website is <https://canadam.math.ca/2017/>. CanaDAM is a biennial conference held in each odd year at a university in Canada, attracting approximately 200 mathematicians from around the world. The format of the conference is usually eight plenary speakers, and a selection of invited and contributed mini-symposium sessions throughout the week.

At CanaDAM2017, I presented a talk entitled “Hamilton Decompositions of Line Graphs” in the mini-symposium session in honour of Professor Alex Rosa. Professor Alex Rosa is an emeritus professor of McMaster University in Canada. He has always been very supportive of me when we met at conferences or overlapped on research visits at various institutions, and I have drawn on his expertise by email on several occasions, so I was honoured to be invited to speak in this special session.

In addition to presenting and discussing my work on line graphs, I worked with colleagues Peter Danziger (Ryerson) and Andrea Burgess (New Brunswick) on a problem involving decomposition of complete graphs into circulant graphs, and we are currently in the process of writing up our new results.

I would like to thank the AustMS and WIMSIG for supporting me on this trip. There were many excellent talks at the conference, as well as good networking opportunities, and having a few days of face-to-face time with research colleagues progressed our work far quicker than collaborating via email.

R6 Joanne Hall (RMIT) (S)

The funding I received through the Anne Penfold Street Award paid for childcare for my two children whilst I was in Adelaide at the WIMSIG Conference. I work part time (Wed-Fri) so Monday and Tuesday are not my usual workdays. RMIT paid for my travel, but this extra childcare expense put pressure on my family budget. I booked extra days at my children’s usual childcare for 25 and 26th September to enable me to attend the conference. This enabled my husband to go to work as usual whilst I was in Adelaide for the conference.

I was fortunate that both of my children’s childcare facilities had the capacity to take my children on those extra days. This is largely due to the timing of the conference being in the school holidays. Many families take holidays at this time, and so the child care operations are not working at full capacity.

The WIMSIG Conference: Celebration of Women in Australian Mathematical Sciences was a fabulous event. I coordinated a session on the

mathematics of Cryptography, Coding and Compression. Whilst this session was small, it attracted female mathematicians working in engineering who would not normally consider attending an AustMS event. My presentation was Optimal Data Distribution for Big-Data All-to-All Comparison Pattern using Finite Projective and Affine Planes.

I really enjoyed the technical program, with excellent plenary speakers, engaging contributed talks and interesting posters. I have come away with new ideas, and potential collaborators.

I also enjoyed staying in the CWA hostel with many of the conference participants. This feature of the event added to the feeling of connectedness and belonging that is one aim of the event.

I was a member of the WIMSIG committee when the Anne Penfold Street Awards were first established. Since WIMSIG's establishment in 2012, I have indirectly benefited from all of the events, advocacy and projects that WIMSIG has undertaken. It is nice that I now have the opportunity to directly benefit from WIMSIG's fabulous work.

I am thankful to the Street Awards Committee for accepting my application, to the WIMSIG committee members, both past and present, for establishing the Street Awards, and to the AustMS for providing financial support for the Anne Penfold Street Awards. I am thankful to my husband and children for making my life beautiful.