UNCONFIRMED

Australian Council of Heads of Mathematical Sciences (ACHMS)

Meeting 1/2025

MINUTES

The Meeting of the Australian Council of Heads of Mathematical Sciences (ACHMS) was held at 2:00 pm AEDT on Thursday, 22nd May 2025 by video conference.

PRESENT

ACHMS Executive Committee

Prof. Warwick Tucker (Chair), Prof. Inge Koch (Deputy Chair) and Prof. James Brown (Executive Committee Member).

University Representatives

Prof. Kuldeep Kumar, Prof. Andrew Bassom, A/Prof. Volker Gebhardt, Prof. Joe Grotowski, A/Prof. Sergiy Shelyag, Prof. Dingxuan Zhou, Prof. Howard Bondell, Dr Gabe Sorrentino, Dr Trevor Langlands, Prof. Jeffrey Hogan, Dr Michael Kemp, Prof. Graeme Hocking, A/Prof. Timothy Schaerf, Prof. Tony Roberts, Dr Nargiz Sultanova, A/Prof. Richard Garner, Prof. Federico Frascoli, Prof. Michael Giudici, Prof. Andrew Francis, A/Prof. Narelle Brack, Dr Iman Ardekani, Dr David Ompong, Prof. Song-Ping Zhu.

Friends of the Council

Dr Deborah Jackson, Dr Tony Willis, Prof. Jan De Gier, Prof. Katie Makar, Prof. Stephan Tillmann, A/Prof. Honglei Xu, Prof. Aidan Sims, Dr Kerri Morgan.

AMSI Staff

Prof. Tim Marchant, Ms Elena Panfilova, Mr Michael Shaw, Ms Sophie Kennedy, Ms Sarah Ramantanis, Mr Filip Rutkowski.

Guest Speakers

N/A

Proxies

N/A

BUSINESS

1. Welcome

The Chair opened the meeting by greeting the Heads of Schools and Friends of the Council and acknowledged the traditional owners of the many lands on which the attendees were located, paying respects to the Elders past, present and emerging of all Indigenous nations.

1.1. Apologies and Proxies

Apologies were received from Professor Gavin Reid, Dr Judy-ann Osborn, Professor Finnur Larsson.

1.2. Agenda Changes

No changes to the agenda were recorded.

1.3. Minutes of the Past Meeting

The minutes of the previous meeting, held on Thursday, 31 October 2024, were confirmed as a correct record by the members.

2. Appointments to the ACHMS Executive Committee

The Chair announced the nomination and re-appointment of Professor James Brown from UTS as Executive Committee member for 1 year. No other nominations were received, so an election was not required.

3. Report from the Chair

The Chair reminded attendees of the Council's core purposes:

- Facilitating the sharing of best practices in mathematical science, education, research, and community interaction.
- Keeping Heads of Schools aware of relevant initiatives.

The Chair encouraged members to email suggested agenda items ahead of meetings.

Global Level Updates

- Recruitment Initiatives: The Chair noted that national research agencies across European countries are making funds available to attract talents, predominantly from the United States. The Australian Academy of Science has a similar initiative targeting Americans. Monash University is also actively participating in its own recruitment campaign.

Accolades for Mathematicians

- Dr Masaki Kashiwara from Kyoto was awarded the Abel Prize for his contributions in algebraic analysis and representation theory.
- The new Pope, Leo XIV, holds a Bachelor of Science in Mathematics.

- Romania's newly elected President holds a PhD in Mathematics from Sorbonne Paris North University and was a gold medal winner in Olympiads.

National Level Updates (Australia)

- Government and Policy: Labor Government elected, providing some clarity for the coming years. Uncertainty about university student caps was resolved when the proposed bill was opposed. Student numbers have increased this year, but this might be short-lived.

- Australian Research Council (ARC) is revamping its national competitive grants program.

- Australian Academy of Science elected two new Fellows in Mathematics: Professor Aidan Sims (current president of AustMS), and Professor Jessica Purcell (former president of AustMS).

State Level Update (Victoria)

- Monash University and the Victorian Curriculum and Assessment Authority (VCAA) Collaboration: Helping create and check VCE exams for quality, consistency, and clarity. The collaboration might extend into curriculum review next year. Professor Howard Bondell mentioned that the University of Melbourne is also engaged with VCAA. The Chair encouraged other universities to get involved and offered to share insights on how to establish similar collaborations.

- AMSI Summer School 2026 will be hosted at Monash University in January and February 2026.

Questions and Comments:

- Professor Michael Giudici inquired about the Chair's involvement with the VCAA. The Chair explained the formalisation of the collaboration process, including contract arrangements and fair distribution of work and compensation.

- Professor Tim Marchant confirmed that AMSI is looking forward to the partnership with Monash University on the Summer School 2026. He also mentioned John Urschel, a former NFL player for the Baltimore Ravens, who is now a math professor at MIT.

4. Discussion: Impact of the New Policies with Respect to Student Caps and Budget Cuts

Professor Brown gave a brief presentation based on pre-meeting questionnaire. He explained the reason for adding this topic to the agenda, citing recent media coverage of UTS facing significant staff cuts as the VC is pursuing a $100 million saving on expenditure, a key factor being the uncertainty around international student numbers.

Professor Brown presented survey results on institutional impacts based on 18 responses from ACHMS members:

- Subject and Course Cuts: Approximately 1/3 of respondents reported planned or ongoing cuts in undergraduate programs, about 1/6 reported cuts in postgraduate programs, but the majority reported no current pressure on subjects and courses.

- Staffing Cuts: most institutions are not currently facing staffing cuts in mathematical sciences.

- Teaching Loads and Positions: Just over 1/3 reported increased teaching loads. About 1/3 reported an increase in teaching-intensive positions. Approximately half reported no plans to increase teaching workloads.

- Noted overlap between institutions reporting increased teaching workloads and those facing budget restrictions.

Professor Brown raised the following points for discussion, inviting attendees to share strategies for addressing these challenges:

- How can we increase student demand for mathematical sciences programs and service teaching, especially as some institutions base decisions on enrolment numbers?

- What strategies can help keep mathematics programs attractive to students, and how can we better communicate the value of mathematics degrees?

- Are institutions not reporting current cuts potentially those that were already significantly impacted post-COVID? What insights can we gather from the survey results about sector-wide trends?

The Chair mentioned the brief relief provided when the bill to introduce student caps did not pass last year. However, many universities had already set conservative budgets in anticipation of the caps and were therefore unprepared for the unexpectedly high student numbers. Following these remarks, the Chair opened the discussion, during which the following points were raised:

- **Professor Francis** suggested the student caps bill was not entirely off the table, suggesting focusing on how it would be implemented. He suggested breaking down data to understand varying effects on institutions, noting that UNSW had benefited from certain visa processing rules.

- **Professor Marchant** inquired about universities exploring overseas teaching programs, particularly in China. He noted University of Adelaide transnational program with a university in Shandong and asked if other universities were developing similar initiatives in mathematics.

- **Professor Brown** acknowledged the need for more detailed data on institutions' positions in relation to cuts, noting differing circumstances and depending on previous cuts and university executives' strategies. Professor Brown also described UTS's joint college in China and their new China Learning Centre program in Hainan and UTS engineering program in Vietnam.

- **Associate Professor Gebhardt** reported on Western Sydney University's transnational program in Indonesia, primarily focusing on data science and computing. He noted recent appointments in their mathematics group but expressed concern about a projected deficit and potential cuts to subjects with high failure rates. He further noted that WSU students are primarily local but could be affected if the biggest universities expand their local recruitment amidst international student caps.

- **Professor Koch** outlined RMIT's overseas teaching in Vietnam at various locations and mentioned the transfer of cybersecurity programs to a different school, expressing concern about potential future staff cuts due to program changes.

- **Associate Professor Garner** provided an update on Macquarie University, reporting on changes to teaching programs, including removal of attendance requirements and assessment

limitations. He mentioned a reduction in third-year maths units and noted no current job cuts but anticipation of future cuts. He also mentioned a new partnership with a Chinese university for a statistics degree.

- **Professor Roberts** emphasised the role of Vice Chancellors in maintaining Schools of Mathematics. He provided details on QUT's academic workload model and its impact on mathematics teaching, highlighting the challenges in accurately representing the time required for assessment settings in mathematics.

- **Professor Zhu** shared news from the University of Wollongong, reporting significant staff cuts (1/3 of maths and stats staff). He described the impact on teaching curriculum and morale and mentioned ongoing efforts to refill some positions and negotiate international programs. Professor Zhu expressed hope for future recruitment to alleviate the high teaching load.

In conclusion, Professor Brown emphasised the importance of viewing mathematics programs holistically rather than subject-by-subject. The Chair concluded stressing the need to communicate the broader value of mathematics departments to university management and the importance of advocating for mathematics programs within universities.

5. Review of the ARC National Competitive Grants Program

Professor Marchant gave an overview of the ARC's review of national competitive grant programs. ARC released a review paper with changes expected to be announced in the second half of 2025 and implemented from 2026 onwards. He noted that AMSI and other mathematical societies submitted separate but aligned responses to the review.

According to the ARC review paper, the major themes driving the proposed changes include strengthening support for early-stage research and moving beyond the traditional divide between basic and applied research. The ARC proposed eliminating the distinction between discovery and linkage schemes and aimed to reduce administrative burden by reducing the number of schemes from 15 to 6 and promoting potential breakthrough research.

The proposed changes to grant schemes were then outlined. Professor Marchant explained the introduction of new schemes such as Initiate, Lead and Mentor, Breakthrough, and Collaborate. He emphasised the elimination of existing fellowship schemes like DECRA, Future Fellows, and Laureates. The new structure would introduce shorter grants and fellowships, particularly for Early Career Researchers (ECRs), with a requirement for applicants to already be in academic positions.

Professor Marchant then discussed AMSI's response to the proposed changes. While AMSI supported reducing administrative burden, they expressed concerns about the impact on ECR career pathways. AMSI suggested extending the Initiate Grant period from 2 years to 2-4 years and expressed concern about the potential loss of talent to overseas institutions. AMSI also raised concerns about the balance between ECR and senior researcher applications in the Initiate scheme.

Regarding the merging of Discovery and Linkage schemes, Professor Marchant highlighted potential disadvantages for mathematical sciences due to their low participation in linkage schemes. He emphasised the need for careful consideration of selection criteria and suggested that ARC funding should prioritise fundamental research.

Professor Marchant concluded by raising several discussion points, including the impact of dropping the DECRA scheme on ECR career pathways, the potential need for PhD graduates to seek Postdoc

positions overseas, and what strategies would ensure high grant success rates. The Chair opened the floor for discussion, with the following points being made:

- **Professor De Gier** commented that the Academy of Science and Go8 universities had highlighted the same two items across the sector, not just for mathematical sciences: the pure basic research element and the development of risk-taking initiatives. Professor De Gier noted that while the Initiate scheme talks about taking risks, it doesn't address this as it's about embedded fellowships for already existing groups.

- **Professor Marchant** acknowledged those points but emphasised that mathematics might be more at risk than some other fields, such as engineering, due to its greater reliance on discovery compared to linkage grants.

- **Professor Brown** commented on the potential fit of the Initiate scheme with institutional postdoctoral fellowships, such as the Chancellor's fellowships at UTS financed by the university. However, he expressed concern that mathematical sciences often struggle to secure these institutional fellowships due to competition with other disciplines where candidates may have more publications. Professor Brown worried that this could be very damaging for mathematics, as it would limit access to the Initiate scheme to those already employed as lecturers in the discipline.

- **Professor Marchant** agreed with the assessment, noting that while the Initiate grants look appealing for ECRs, the requirement to already be in the system presents a significant barrier.

- **Professor Grotowski** urged a positive, forward-looking approach, encouraging the mathematics community to focus on communicating the broad value of mathematics — including its practical applications and foundational role — rather than dwelling too heavily on how recent changes may negatively impact the discipline.

- **Associate Professor Garner** noted that early-career mathematicians typically don't have many publications. He highlighted the value of schemes like DECRA in providing a pathway for mathematicians to establish themselves and become more appealing prospects for permanent positions. He emphasised the importance of these early-career positions in helping mathematicians overcome the initial hurdle of long publication times in mathematics.

The Chair closed the discussion by thanking everyone for their participation and encouraged optimism, framing the situation as an opportunity to be embraced.

6. Other Business

The next Council meeting is scheduled to take place during the upcoming AustMS meeting at LaTrobe University Bundoora on Wednesday 10 December 2025. It is going to be a hybrid meeting – in person for those able to attend, but with a Zoom link for those joining online.

The next International Congress of Mathematicians will be held in Philadelphia on 23-26 July 2026.

The Chair concluded the meeting by thanking attendees for their contributions and reminded members to submit suggested discussion topics for future meetings in advance.

The meeting concluded at 3:25 pm.

Signed by the Chair: _____ and dated: _____

DISTRIBUTION

ACHMS Executive Committee

Professor Warwick Tucker, Chair
Professor Inge Koch, Deputy Chair
Professor James Brown, Executive Committee Member

Members

Dr Duncan Sutherland, Australian Defence Force Academy (UNSW Canberra)
Professor Lilia Ferrario, Australian National University
Associate Professor Adam Butt, ANU School of Finance, Actuarial Studies & Statistics
Professor Kuldeep Kumar, Bond University
Dr David Ompong, Charles Darwin University
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Associate Professor Sergiy Shelyag, Flinders University
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Professor Andrew Francis, University of New South Wales
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Dr Trevor Langlands, University of Southern Queensland
Professor Dingxuan Zhou, University of Sydney
Professor Bronwyn Hajek, University of South Australia
Professor Andrew Bassom, University of Tasmania
Professor James Brown, University of Technology Sydney
Dr Aaron Wiegand, University of the Sunshine Coast
Professor Michael Giudici, University of Western Australia
Professor Song-Ping Zhu, University of Wollongong
Dr Gabriele (Gabe) Sorrentino, Victoria University
Associate Professor Volker Gebhardt, Western Sydney University

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Professor Lynne Giles, Statistical Society of Australia SSA
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Dr Nathan Clisby, Australian and New Zealand Association of Mathematical Physics ANZAMP
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Written by F.Rutkowski on 26/06/2025.