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ROYAL  
SOCIETY  
NEW SOUTH WALES

## The Bulletin 501 February 2026

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### A message from the President

Dear <<First Name>> <<Last Name>>

Welcome to 2026. It has been a turbulent end to 2025 and start to the New Year, here in Australia and globally. I extend my condolences to all those affected by the events in Bondi late last year. We are a Society committed to reasoned debate on issues of social importance. We are facing fundamental challenges to social cohesion and to our multicultural society; reason is of utmost importance.

January has brought fires and floods to Australia, as well as challenges to the global order. Again, we as a Society must consider these challenges scientifically, with due regard to evidence. I do not doubt that the year's discussions will touch on these complex issues.

Our programs for 2026 are rapidly filling out. The RSNSW Annual Dinner and Presentation of Awards will be held at the Strangers' Room of Parliament House in Sydney on 27 February. Our after-dinner speaker is the Chief Scientist of Australia, Professor Tony Haymet, FTSE. [Do book for this event soon](#): it is a highlight of our year.

The Sydney events program is well-nigh complete, beginning with a discussion between Dr Abul Rizvi, a noted commentator on immigration and Scientia Professor Richard Holden, economist and former President of the Academy of Social Sciences, on the topic 'How many Australians should there be?' They will debate the principles underlying decisions about immigration. That will take place on 11 February 11 at the State Library. I do urge you to [book and join us](#). The University of Sydney has kindly agreed to host the Bicentennial Postgraduate Student and Early-



Career Research Awards Presentations on 9 March. Robyn Williams, presenter of the ABC Science Show, has again most generously agreed to be the Master of Ceremonies at the event. It is always exciting to hear the passion and commitment of young researchers. Booking information for this event will be available shortly.

The Annual General Meeting will be held on 8 April. More details on the lecture to follow it, focusing on Drones, will be on the website. The Southern Highlands Branch has already posted some of its offerings.

We are delighted that the term of Her Excellency Margaret Beazley AC KC as Governor of the State of NSW has been extended for a further two years. We congratulate her and look forward to working with her on Ideas@theHouse and the Forum in 2026. You will see that the first in the Ideas@theHouse has been announced – Lieutenant General Susan Coyle AM DSC CSC will talk on ‘Navigating Strategic Uncertainty: Space, Cyber and National Support in a Fractured World’ at Government House on 12 March. Members will have received an email to register for a formal invitation. Should you have mislaid this, please see the event post later in this Bulletin for the registration link.

We are only able to maintain our suite of offerings and services because of and for the membership. I do thank the more than three-quarters of you who have renewed your subscriptions thus far, and encourage those who have still to do so to renew as soon as possible. We have sent reminders, but if you cannot locate one, do reply to this email requesting assistance.

I look forward to seeing you in the coming weeks. As you know, our organisation depends on voluntary support from our fellows and members. Let me know if you are interested in supporting our activities.

Christina Slade FRSN

[President](#)

[Royal Society of New South Wales](#)

## For your diary

The Society's annual events program is published in the online [Events Calendar](#), which is updated regularly.

- [1338th Ordinary General Meeting and Open Lecture](#) (Wednesday, 11 February 2026, 6.00–7.30 pm AEDT, Michael Crouch Room, Mitchell Building, State Library of NSW) *How many Australians should there be?*, Dr Abul Rizvi PSM FRSN, Former Deputy Secretary, Department of Immigration, and Scientia Professor Richard Holden FRSN FASSA, Professor of Economics, UNSW Sydney Business School
- [Annual Meeting of the Four Societies 2026](#) (Wednesday, 18 February 2026, 5.30 for 6.00–8.00 pm AEDT, Sydney Masonic Centre) *Fusion energy: Billions in private cash is flooding into fusion power. Will it pay off?* Professor Matthew Hole, ANU Mathematical Sciences Institute and School of Computing, Australian National University
- [Southern Highlands Branch Meeting 2026-1](#) (Thursday, 19 February 2026, 6.30–7.30 pm AEDT, RSL Mittagong, Carrington Room) *The age of RNA and how it is transforming biology and medicine*, Professor Pall Thordarson FRSN, Director, UNSW RNA Institute and School of Chemistry, UNSW Sydney

- [RSNSW 2026 Annual Dinner and Presentation of Awards](#) (Friday, 27 February 2026, 5.30–10.00 pm AEDT, Strangers' Room, Parliament House, Macquarie Street, Sydney)
- [Frontiers of Science Forum 2026](#) (Friday, 6 March 2026, 6.00–9.30 pm AEDT, Concord Golf Club, 190 Majors Bay Road, Concord) A joint presentation of the Teachers Guilding of NSW, the NSW branches of the Australian Institute of Physics and the Royal Australian Chemical Institute, and the Royal Society of NSW, featuring Professor Dane McCamey (UNSW Sydney), Dr Eliza Middleton (University of Sydney), Professor Noushin Nasari (Macquarie University), and Professor James Brown (University of Technology Sydney)
- [RSNSW 2025 Postgraduate Student and Early Career Researcher Award Presentations](#) (Monday, 9 March 2026, 6.00–8.30 pm AEDT, University of Sydney, Michael Spence Building (F23), Level 1 Auditorium)
- [Ideas@theHouse: March 2026](#) (Thursday, 12 March 2026, 6.30–8.00 pm AEDT, Government House Sydney (face-to-face by invitation for members and live streaming for all) *Navigating Strategic Uncertainty: Space, Cyber and National Support in a Fractured World*, Lieutenant General Susan Coyle AM DSC CSC, Chief of Joint Capabilities, Australian Defence Force
- [Southern Highlands Branch Meeting 2026-1](#) (Thursday, 19 March 2026, 6.30–7.30 pm AEDT, RSL Mittagong, Carrington Room) *PFAS in New South Wales: Is it under control?* Associate Professor Ian Wright, Discipline of Environmental Science, School of Science, Western Sydney University

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## News

### Xiaoke Yi FRSN elected as an Optica Fellow

Society Fellow, **Professor Xiaoke Yi FRSN**, the Director of the Photonics Research Group in the School of Electrical and Computer Engineering at the University of Sydney, was elected as a Fellow of *Optica* in November 2025.

Optica, previously the Optical Society of America, is the world's leading professional society in the fields of optics and photonics. Optica Fellows are members who have served with distinction in advancing optics and photonics and are elected based on outstanding contributions in research, business, education, engineering, and service to the community and society.



Professor Yi is one of 121 Optica members, and one of three Australians, in the Optica Fellow Class of 2026. Her fellowship acknowledges 'outstanding and sustained contributions in microwave photonic signal processing and sensing.'

The Society extends its warm congratulations to Professor Yi on this recognition of her research impact.

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## Announcement of the 2025 Royal Society of NSW Awards

The Royal Society of New South Wales has long recognised distinguished achievements in various fields of knowledge through its Awards. Some are amongst the oldest in Australia, while others are more recent. In 2023, the Society broadened and streamlined its Awards portfolio to recognise recent and evolving fields and disciplines, as well as emerging and established research stars. Since then, the Society Awards are made in two main classes reflecting the Society's history: Career Excellence Medals and Discipline Awards and Medals, with additional Awards, Scholarships, and Citations, including Internal Awards for distinguished service to the Society and community.

**RSNSW Awards  
2025**



The Awards for 2025 were announced by the President of the Society, Emeritus Professor Christina Slade FRSN, at the 1337th Ordinary General Meeting of the Society, held on Wednesday, 3 December 2025.

Listed below are the winners with links to information about the awards and the recipients.

### **RSNSW Career Excellence Awards**

#### [RSNSW James Cook Medal](#)

Professor Michelle Haber AM FAA FAHMS

#### [RSNSW Edgeworth David Medal](#)

Scientia Professor Xiaojing Hao FTSE FAA

#### [RSNSW Aboriginal or Torres Strait Islander Scholar Medal](#)

Professor Bradley Moggridge FTSE

RSNSW Ida Browne Medal

No award in 2025

### **RSNSW Discipline Awards and Lectureships**

#### [RSNSW Liversidge Award in the Chemical Sciences](#)

Professor Chuan Zhao FRSN FTSE

#### [RSNSW Warren Award in Engineering, Technology, Architecture, and Design](#)

Professor Simon Ringer FRSN FTSE

#### [RSNSW Award in the Creative and Performing Arts](#)

Scientia Professor Dennis Del Favero FAHA

#### [RSNSW Award in the Life Sciences](#)

Professor Richard Kingsford AO FRSN FRZS

### **RSNSW Scholarships, Early Career Researcher, and Student Awards**

#### [RSNSW Bicentennial Postgraduate Scholarships](#)

- Ms Eilish McMaster (University of Sydney)
- Ms Isabelle Nicholas (Macquarie University)

- Mr Amir Tourani (Western Sydney University)
- Mr Christopher Whyte (University of Sydney)

#### [RSNSW Bicentennial Early Career Research and Service Citations](#)

- Dr Adrian Y. S. Lee (Westmead Institute of Medical Research, University of Sydney)
- Dr Jiayan Liao (University of Technology Sydney)
- Dr Brandon Munn (University of Sydney)

#### [RSNSW Jak Kelly Award](#)

- Mr Yunlong Qiang (University of Sydney)

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## Society welcomes new Members and Fellows: December 2025

The Royal Society of New South Wales warmly welcomes 28 new members to the Society's ranks, effective from 3 December 2025.

### **Fellows**

Professor Ali Abbas  
Professor Dale Dominey Howes  
Professor Bronwyn Fox  
Professor Bamini Gopinath  
Ms Jennifer Laffan  
Professor Margaret Morris  
Professor Sophie Primig  
Dr Kristen Sharp  
Ms Susanne Steigler-Peters  
Professor Wenjie Zhang



Biographical information about the new Fellows will be available on the [Fellows pages](#) of the website early in 2026.

### **Members**

Professor Marian Baird  
Dr Nguyen Chanh  
Ms Erin Gao  
Dr Isabella Ludbrook  
Mr Jerzy Maciejak  
Ms Rebecca McCartney  
Dr Sophie Moscovis  
Professor Zoe Terpening

The Society hopes that all new Members and Fellows will greatly benefit from their membership and looks forward to their active participation in the Society's activities and work.

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## Society Fellow, Mary O’Kane, appointed as the next UQ Chancellor

On 3 December 2025, the University of Queensland (UQ) announced that **Emeritus Professor Mary O’Kane AC FRSN FTSE** had been appointed as its next Chancellor, commencing her five-year term on 11 July 2026. She is pictured (centre) at the announcement with the UQ Vice-Chancellor, Professor Deborah Terry AC (left) and the outgoing Chancellor, Mr Peter Varghese AO (right).



Professor O’Kane built a distinguished career across higher education, science, engineering, and policy, for which she was honoured as a Companion of the Order of Australia in 2016.

After completing her PhD in physics at the Australian National University, she began her leadership journey as Dean of Information Sciences and Engineering at the University of Canberra (1989–1993). She then became Deputy Vice-Chancellor (Research) at the University of Adelaide (1994–1996), before serving as Vice-Chancellor and President of the University of Adelaide from 1996 to 2001.

She then transitioned into public service, being appointed as the inaugural NSW Chief Scientist and Engineer (2008–2018), where she advised on energy, environment, and innovation, and later chaired the NSW Independent Planning Commission (2018–2024). She co-led major inquiries into bushfires (2020) and floods (2022), shaping state resilience strategies.

Nationally, she chaired the landmark Universities Accord Review (2022–2024), which developed major reforms that will reshape the higher education sector. In energy leadership, she has chaired the board of Aurora Energy in Tasmania and currently chairs the Australian Energy Market Operator (AEMO), contributing to national energy security. In 2025, she became Interim Chief Commissioner of the Australian Tertiary Education Commission, from which she will stand down to become the Chancellor of the University of Queensland.

The Council of the Society warmly congratulates Professor O’Kane on this capstone of an illustrious career.

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## Society Fellows and Award Winners lead four 2026 ARC Centres of Excellence

On 9 December 2025, the Australian Research Council (ARC) announced the outcomes of its latest round of eight new Centres of Excellence to receive a total of \$279 million in funding from 2026.

The Royal Society of NSW was delighted to learn that four of the new Centres are led by Society Fellows or winners of Society Awards in recent years and include a large number of Society Fellows amongst their research teams.



Details of four Centres and their Directors follow.

### **ARC Centre of Excellence for Future Oceans**

**Director: Scientia Professor Matthew England FAA (UNSW Sydney)**

2019 winner of the RSNSW James Cook Medal

Summary: This Centre will comprehensively determine how our oceans are changing, now and in the future, and develop solutions to promote ocean sustainability and a thriving blue economy. Our oceans are already changing at an unprecedented rate, with costly impacts on marine ecosystems and coastal communities worldwide. By integrating fundamental science advances, innovative analyses of new observational data, new ultra-high resolution ocean models, and training a new generation of world-class scientists, the Centre will uncover vital information about our changing oceans. This will enable proactive management of our ocean environments and resources, enhancing the health, resilience, and security of Australia's oceans for generations to come.



### **ARC Centre of Excellence in Mathematics for Quantum Era Security and Trust**

**Director: Payne Scott Professor Nalini Joshi AO FRSN FAA (University of Sydney)**

2024 winner of the RSNSW Pollock Award and Lectureship

Summary: This Centre strives to build critical expertise to protect against the expected breakdown of cybersecurity protocols on quantum computers and build trust in artificial intelligence. Deep, untapped reservoirs of mathematical problems and structures will be mined to establish complexity foundations for security and create accelerated methods for AI. MathQuEST will assemble leading researchers from diverse disciplines to deliver a mathematically trained, technologically agile workforce, ensuring Australia's preparedness for grand challenges arising from future quantum computers with dual-use impact across agriculture, defence, health and industry.



### **ARC Centre of Excellence for Quantum Computer Performance and Integration**

**Director: Scientia Professor Andrea Morello FRSN (UNSW Sydney)**

2017 winner of the RSNSW Pollock Award and Lectureship

Summary: This Centre aims to solve the scientific challenges that hinder the development of useful quantum computers. The Centre will synergistically develop high-performance quantum hardware, operate it in a resource-efficient way, and integrate diverse physical platforms across solid-state, optical and atom-based devices. Collaboration between world-leading researchers, emerging talent and global industries will unlock the full potential of quantum computer technologies, with an expected economic value of over \$1 trillion across chemical, life sciences, finance and mobility industries. The Centre will be the key research vehicle to enable workforce growth and Australian leadership in this field.



### **ARC Centre of Excellence for Advanced Peptide and Protein Engineering**

**Director: Professor Richard Payne FRSN (University of Sydney)**

2020 winner of the RSNSW Liversidge Award and Lectureship

Summary: Leveraging emerging technologies and a global competitive advantage, this ARC CoE aims to transform the engineering and translation of peptides and proteins – molecules essential for all life on Earth – for human and planetary benefit. CAPE will uncover unique molecules, including those from Australia’s flora and fauna, using advanced computational methods; design ‘new-to-nature’ structures with unprecedented applications; and step-change production technologies to an automated and eco-friendly new paradigm. CAPE will unite diverse research leaders for a legacy of impactful translation in agriculture, conservation and biotech, while engaging the Australian public in the peptide and protein revolution via extensive outreach and creative pedagogy.



The Council of the Royal Society of NSW congratulates Professors Matthew England, Nalini Joshi, Andrew Morello, and Richard Payne, together with their research teams, on this marvellous result and wishes their new Centres every success in their discoveries and innovation in the coming seven years.

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## **Vale Dr Keith Suter AM FRSN**

The Society was deeply saddened to learn of the death of Fellow, **Dr Keith Douglas Suter AM FRSN**, on 10 December 2025 after a long illness.

Dr Suter was a distinguished foreign affairs commentator, human rights advocate, and futurist whose career spanned more than five decades.

Born in London to modest circumstances, he left school at 15 to work at the Ministry of Defence, where mentors inspired his lifelong commitment to peace and justice. He later studied political science at the University of Sussex, becoming the first in his family to attend university. His activism began early, pressing British leaders on apartheid and UN obligations, while honing his oratory at Speakers’ Corner in Hyde Park.



Arriving in Sydney in 1973 on a scholarship, Suter completed three doctorates and published 12 books, including the bestseller *Global Notebook: 50 things you want to know about world issues ... but were afraid to ask*. He worked for 32 years at Wesley Mission, championing causes from Indigenous justice to nuclear disarmament. He founded the Trinity Peace Research Institute and became a leading figure in scenario planning and futurism. His voluntary service was extensive, spanning decades with the Club of Rome, the Anti-Slavery Society, the International Commission of Jurists, the Red Cross, and the UN Association of Australia. He also participated in the Foreign Minister’s National Consultative Committee on International Security for nearly 25 years.

Known for his wit and clarity, Suter was a familiar media presence, appearing on the *Sunrise* program of the Seven Network, delivering lectures, and writing widely. He was appointed a Member of the Order of Australia in 2019 and received numerous peace and service awards. Until weeks before his death, he remained active in commentary and preaching. He is survived by his partner, Jane Phelan, and brother Clive. His legacy endures as a communicator, educator, and peacemaker.

The Society extends its sincere condolences to his partner, Jane, his family, and friends at this sad time.

An obituary, written by The Hon. Michael Kirby AC CMG FRSN and his partner Jane Phelan, and titled '[An understandable voice amid the world chatter](#)', was published in the Sydney Morning Herald on 19 December 2025.

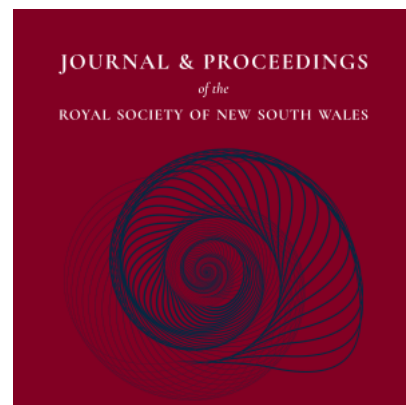
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## December 2025 issue of the Journal & Proceedings is now available

The [December 2025 issue](#) of the *Journal and Proceedings of the Royal Society of NSW* was published online on 19 December 2025 and is packed with interesting reading for the holiday season.

Many people are unaware that the ubiquitous Wi-Fi we all use to connect phones and computers was invented in Sydney by a group of CSIRO scientists. The December issue of the *Journal* contains an article describing its invention 30 years ago and the subsequent battles to obtain acknowledgement and royalties from the US computer companies. Wi-Fi eventually earned us \$500 million.



The issue also has:

- a paper on the mistakes the Federal government made in obtaining COVID vaccines during the pandemic;
- a paper by the past president on her field, biotechnology; a paper on the laws governing Antarctica;
- a piece on Mozart's second piano sonata;
- a description of a 2019 science tour to Europe; an article on society and information; and
- 13 abstracts from outstanding PhD theses.

The Journal is now online, the complete version of which is [downloadable from this link](#), and the print version will be mailed out soon.

Robert Marks

Editor, Journal and Proceedings of the Royal Society of NSW

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## University of Newcastle awards Society Fellow, Robert Whittaker, an Honorary Doctorate

The Society was pleased to learn of the award of an Honorary Doctorate by the University of Newcastle to Society Fellow and Council Member, **Adjunct Professor Robert Whittaker AM FRSN**, on 12 December 2025.

Robert Whittaker is a highly respected building industry professional, consultant, and educator whose expertise is widely recognised across Australia and internationally. He is a Companion of Engineers Australia and a Fellow of multiple peak bodies, including the Australian Institute of Building, where he served as National President. A strong advocate for industry reform, he has influenced national standards, public protection, and professional accountability. He has contributed extensively to university and TAFE education and holds several professorial appointments, including Adjunct Professor of Practice at the University of Newcastle. A Member of the Order of Australia, he also co-founded the International Building Quality Centre, serving as its Deputy Chair.



The citation for his Doctor of the University (Honoris Causa) refers to his association with the University of Newcastle over many years, in which, as an Adjunct Professor and member of the Industry Advisory Board, he has been instrumental in developing the Building Surveying major within the Bachelor of Construction Management, ensuring alignment with industry needs and the embedding of professional ethics and accountability.

The Council of the Royal Society of New South Wales warmly congratulates Robert Whittaker on this latest recognition of his career in the building industry in NSW and Australia, and his commitment to the education of young professionals in the industry.

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## Vale Professor Emma Johnston AO FRSN FTSE FAA

The Society was deeply saddened to learn of the death of former Fellow and award winner, **Professor Emma Johnston**, the 21st Vice-Chancellor of the University of Melbourne and its first female Vice-Chancellor. Her passing was announced by the University of Melbourne on Monday, 29 December 2025. She had been Vice-Chancellor since February 2025.

Professor Johnston was a sixth-generation Melburnian and an alumna of the University of Melbourne, graduating with a Bachelor of Science (1998) and a Doctor of Philosophy (2002) degrees, and being awarded an Honorary Doctorate of Science by the University in 2023.



She established her academic career at UNSW Sydney, where she rose to the position of Pro Vice-Chancellor (Research) and Dean of Science, before taking the role of Deputy Vice-Chancellor (Research) at the University of Sydney in 2022, a position she held until late 2024

before moving to Melbourne. During her research career, she published 185 peer-reviewed journal articles and supervised more than 35 higher degree students.

Professor Johnston was an outstanding marine ecologist, a leading authority in marine science and conservation, a sustainability and diversity champion, and a chief author of the Australian State of Environment Report 2021. During 2018–2019, she served as the President of Science and Technology Australia, during which time she was recognised for her strong advocacy of research and industry engagement in that role.

She was a high-profile science communicator, a regular media commentator, and the co-presenter of the Foxtel/BBC television series, *Coast Australia*, in 2015. She won the Eureka Prize for Promoting Understanding of Australian Science Research in 2015, and, before that, in 2012, she was named as the NSW Scientist of the Year for Excellence in the Biological Sciences.

Professor Johnston became a Fellow of the Royal Society of NSW in 2016 and was awarded its Clarke Medal for 2018. In August 2023, she delivered the lecture '[Ideas for Marine Stewardship and Sustainability in a Time of Acceleration](#)' in the Ideas@theHouse series, jointly hosted by Her Excellency the Honourable Margaret Beazley AC KC, Governor of NSW and the Royal Society of NSW.

In the 2018 Queen's Birthday Honours, Professor Johnston was made an Officer of the Order of Australia for 'distinguished service to higher education, particularly to marine ecology and ecotoxicology, as an academic, researcher, and administrator, and to scientific institutes'. She was elected a Fellow of the Australian Academy of Technological Sciences and Engineering in 2019 and a Fellow of the Australian Academy of Science in 2022. In recent years, she has served as a Director of the CSIRO and the Great Barrier Reef Marine Park Authority, and as a Governor of the Ian Potter Foundation.

The University of Melbourne Chancellor, Ms Jane Hansen AO, paid tribute to Professor Johnson.

'Professor Johnston made a significant and meaningful contribution during her all too-brief time as our Vice-Chancellor,' Ms Hansen said. "Her extensive experience as a leader in education and research, her understanding of the increasingly complex university environment and her care for our entire community leaves an imprint that belies her short tenure. Significantly, Professor Johnston brought a tone of optimism and energy to our University, with her insight, experience and most of all her belief in all who are part of this community. She had an unwavering commitment to our students. Be it cost-of-living pressures, to scholarships, to teaching, to their research – she did everything she could to ensure our students were best equipped to achieve their goals. Most of all, she just liked spending time with them to hear their stories. They were her inspiration.'

'Emma used her extraordinary communication skills to promote science, belief in the value of science, and the capacity of women and girls to study science as she herself did so brilliantly, helping us to better understand and protect our marine communities and coastal waterways. In 11 short months, she helped our University focus its collective intelligence on how best to advance its crucial academic mission, in which she so strongly believed, through a new strategy called Resilience. This is a loss not only to our University, the higher education sector, the research and science sectors, but to the nation. It will be felt by all those who had the privilege to know and work with her.'

Professor Johnston, who was 52, died of complications associated with cancer. Her husband and two children survive her.

The Society extends its sincere condolences to her family, friends, and colleagues at this sad time.

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## Vale Steven Patterson FRSN

The Society was deeply saddened to learn of the death of Fellow **Steven James Patterson FRSN** on 28 December 2025, aged 59, after a six-month battle with non-Hodgkin's Lymphoma.

Steven Patterson was the CEO and head chemist at Derivan Pty Ltd, a family company. He was the husband of Justine and father of David and Isobel. David has been appointed General Manager of Derivan.



Steven's formal education was limited to a chemistry certificate completed at TAFE in the 1980s. Years of practical learning, with literally thousands of experiments and vigorous research, made him unique in his field. He trained artists to know what to expect when they experiment and push acrylic art materials to the boundaries in their practice. He solely oversaw the development of several unique ranges of artist products, which have subsequently helped shape and promote Australia's fine arts industry. These include the development of the first water-based relief printing inks for education, replacing toxic solvent-based inks.

He made screen printing safer for artists by developing a liquid stencil system to produce screens with non-toxic chemicals, and this development allowed a water wash-up and removal of the stencil image. He produced a sustainable, safe range of cleaning solutions for artists. He also developed a unique paint to include the first new blue pigment in nearly 200 years, now called Yin Min blue.

Steven worked with conservators from around the world, including the Straus Centre of the Harvard Art Museums, the Slade School of Fine Art at UCL, and the Tate Galleries of London, to rediscover and promote culturally significant colours from the Mayans, Armenia, and Australia's Arnhem Land.

With conservators, he developed a 'best practice' for artists to ensure the archival longevity of their art. Steven was generous with his time, materials, and sponsorship. He was an amateur artist and printmaker. His other passion was pipe bands. His contribution to the pipe band community, both locally and internationally, is significant and deeply valued.

The Society extends its sincere condolences to Steven Patterson's family, friends, and colleagues at this sad time.

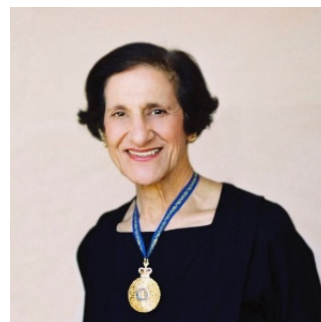
Pamela Griffith FRSN

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## Vale Professor Dame Marie Bashir AD CVO DistFRSN

The Royal Society of New South Wales was deeply saddened to learn of the passing of **Professor The Honourable Dame Marie Bashir AO CVO DistFRSN** on 20 January 2026 at the age of 95. Dame Marie Bashir was the 37th Governor of New South Wales, from March 2001 to October 2014, and the first woman to serve in this role, during which she was the Patron of the Royal Society of New South Wales.



Dame Marie was also a Distinguished Fellow of the Society, recognised for her extraordinary and pre-eminent service to the administration, public life and people of New South Wales, to medicine, particularly as an advocate for improved mental health outcomes for the young, marginalised and disadvantaged, to international relations, through the promotion of collaborative health programs and as a leader in tertiary education.

She is remembered as a figure of uncommon grace, intellect, and public devotion. Her tenure as Governor of New South Wales and her lifelong commitment to mental health, Indigenous wellbeing, and education shaped a legacy that resonated far beyond the institutions she guided.

As Patron, she brought warmth, curiosity, and a deep respect for scholarship to the Society's mission, strengthening its role as a forum for scientific and cultural advancement, and encouraging and championing the value of rigorous inquiry in public life.

Born in 1930 and trained as a psychiatrist, Dame Marie combined professional excellence with a profound humanity. She leaves behind a legacy defined by service, compassion, and an unwavering belief in the power of knowledge to improve lives.

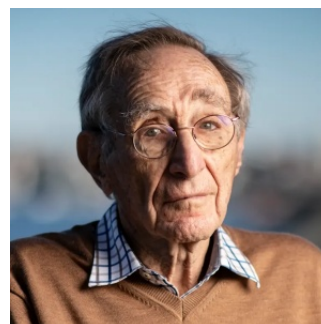
The Council of the Society conveys its deepest sympathies to Dame Marie's family.

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## Things that concentrate the mind

**Dr Peter Baume AC**, distinguished fellow of the Royal Society of NSW, former Federal Minister of Aboriginal Affairs (1980-82) and of Education (1982-84) in the Fraser Government, former Chancellor of the Australian National University, and Emeritus Professor at UNSW, attended more Royal Society of NSW events in 2025 than any other fellow or member, including the President! He also published *Things that Concentrate the Mind* (Austin Macauley Publishers) in 2025, a series of short essays dealing with important issues. It is an example for us in the Society of clear, untrammelled thinking about things that matter.



Peter begins with decisions. He talks of the process of decision-making in Cabinet, of the clarity of options and the narrowness of perspectives that prevent clear decisions. He moves quickly to an issue which dominates the early chapters – death. He talks, as a medico, of the importance of communicating with patients. He argues for the right to a peaceful death.

*We are going to die. Let us do it peacefully. Let us not ask those we love most to have to watch us suffer badly in the last days of our hospital life. Let us make decisions about ourselves, advised by experts certainly, but it is our dying and our life.*

He talks, as a former Liberal, of his concern about the future of the party, quoting Lord Hailsham 'democracies are fragile'. There are chapters on Climate Change, on Aboriginality, on the Politics of Welfare and Violence against Women. Each chapter resonates with wisdom and tolerance. Those of us who have heard his quiet but emphatic questions at our events will recognise his tone. It is one we need to emulate.

Christie Slade

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## Australia Day Honours 2026

The Society is delighted to learn of the awards to the following Fellows and Members whose names appear in the 2026 Australia Day Honours List.

### **Companion of the Order of Australia (AC).**

**Scientia Professor Michelle Simmon AC FRS DistFRSN FAA FTSE**, of the UNSW Sydney School of Physics and the founder and CEO of Silicon Quantum Computing, was honoured for eminent service to quantum physics and nanotechnology research, to atomic-scale engineering, to technology innovation and commercialisation, and to STEM education.



**Australia Day  
2026 Honours**

### **Member of the Order of Australia (AM).**

**Professor Prem Ramburuth FRSN**, Emeritus Professor in the UNSW Sydney Business School, was honoured for significant service to tertiary education, particularly through international partnerships.

The Council of the Society conveys its warm congratulations to all those honoured in the Australia Day 2026 Honours.

Should the Society have missed the names of other Members and Fellows who have been included in the 2026 Australian Honours, please let us know by writing to [RSNSW Communications](#).

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## Events

### **1338th OGM and Open Lecture — 11 Feb. 2026**

#### **How many Australians should there be?**

**Dr Abul Rizvi PSM FRSN (1)**  
**and**  
**Scientia Professor Richard Holden FRSN FASSA (2)**

(1) Former Deputy Secretary, Department of Immigration  
(2) Professor of Economics, UNSW Sydney Business School

**Date:** Wednesday, 11 February 2026, 6.00–7.30 pm AEST

**Venue:** OGM: Michael Crouch Room, Level 1, Mitchell Building,  
State Library of NSW, Shakespeare Place, Sydney

**Pre-meeting drinks:** A cash bar will operate from 5.30 pm

**Post-meeting supper:** An optional supper will be available at Balcon by Tapavino, 17 Bligh Street, Sydney, following the OGM

**Enquiries:** by [email to RSNSW Events](#)

**Registration:** OGM: [Please register](#) before 2.00 pm AEDT, 10 February 2026

Supper: [Please register](#) before 5.00 pm AEDT, 6 February 2026

**Entry:** OGM: Members, \$20; Non-members, \$30; Students, \$0

Supper: \$110 per person (non-refundable) for a set menu including some vegetarian dishes and house drinks

**All are welcome**

**How many  
Australians  
should  
there be?**



**REGISTER NOW**

**for the OGM and Open Lecture  
before 2.00 pm on Tuesday, 10 Feb.**

**REGISTER NOW**

**for the optional supper  
before 5.00 pm on Friday, 6 February**

### **Business of the Meeting**

The Agenda for the Ordinary General Meeting will be available on the [Meetings page](#) of the website before the event..

**Summary:** Australia lacks a formal population policy, relying instead on immigration policies without clear ministerial accountability for net migration outcomes. Political reluctance to discuss population targets has led to a policy vacuum, with recent surges in migration after COVID-19 sparking public debate and anti-immigration protests. The 2025 Federal Election saw immigration become a contested issue, with major parties offering vague or reactive commitments to migration levels but failing to explain the rationale or consequences of their targets.

Treasury forecasts Australia's population will grow from 27.6 million in 2024-25 to 31.6 million by 2035-36, driven by both natural increase and net migration. However, these projections are not backed by concrete government policy or ministerial responsibility, and there is little clarity on how targets will be met or what policy changes are needed. The absence of a comprehensive population plan has allowed extreme proposals, such as zero net migration or a pause in immigration, to gain traction, echoing trends in other countries facing similar debates.

A robust population plan would need to address demographic trends, economic impacts, labour force needs, infrastructure, housing, service delivery, family migration, social cohesion, humanitarian obligations, and environmental sustainability. Immigration is shown to benefit the economy and budget, especially when migrants are young, and is crucial for sectors such as health and aged care. However, infrastructure and housing have lagged behind population

growth, contributing to the current crises. Social cohesion and public confidence are threatened by the lack of long-term planning and rising contestation over migration. Globally, many nations are experiencing population decline and ageing, making Australia's approach to population and immigration policy increasingly significant.

**Abul Rizvi** is an economics, accounting and public policy graduate from the ANU and holds a PhD in immigration and population policy from the University of Melbourne. From 1998, at the Department of Immigration, Rizvi managed major growth in overseas students, skilled temporary migration, visitors and working holiday makers, including the development of pathways to permanent migration. Between 1996 and 2006, Rizvi was Chair of the Commonwealth/State Working Party on State-Specific and Regional Migration, which gave state/territory governments a much greater role in immigration to their jurisdictions.



He was responsible for commissioning research on the demographic, economic and budgetary impact of immigration, which was extensively used in the development of the 2002 and 2007 Intergenerational Reports. He was Deputy Secretary responsible for all aspects of immigration, humanitarian, citizenship and settlement policy from 2005.

Rizvi was awarded the Public Service Medal and the Centenary Medal for services to the development and implementation of Australian immigration policy. Rizvi is a frequent media commentator on population, immigration and their impact on Australia's economic and budget directions. He was invited to participate in the 2022 Jobs and Skill Summit and recently published a book in the 'In the National Interest' series titled 'Population Shock'. Rizvi recently presented on immigration policy in a televised address to the National Press Club.

**Richard Holden** is an Australian economist and Professor of Economics at UNSW Sydney. Previously, he was a faculty member at the University of Chicago and the Massachusetts Institute of Technology. Born in Sydney, he received his undergraduate degree from the University of Sydney, where he was awarded the university medal in economics. He received an AM and a PhD from Harvard University.



In addition to his professorial role at UNSW Sydney, he has served as President of the Academy of the Social Sciences in Australia.

He is currently the editor of the Journal of Law and Economics and is a former Australian Research Council Future Fellow. He is a Fellow of the Econometric Society, the Academy of Social Sciences in Australia, and the Royal Society of NSW. His research, which is mainly in organisational, political, and law economics, has garnered significant attention in the local and international media, including The New York Times, The Economist, the Australian Financial Review, amongst others, and on local radio and television.

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# Fusion power: Billions in private cash is flooding into fusion power. Will it pay off?

**Professor Matthew Hole**

ANU Mathematical Sciences Institute and School of Computing  
Australian National University



**Date:** Wednesday, 18 February 2026, 5.30 for 6.00–8.00 pm AEDT

**Venue:** Sydney Masonic Centre, 66 Goulburn Street, Sydney NSW 2000

**Entry:** No charge

**Enquiries:** via email to the Australian Nuclear Association through the registration contact form

**Registration:** on the [ANA Trybooking registration site](#)

**All are welcome**

**REGISTER NOW**

**Summary:** Over the past five years, private-sector funding for fusion energy has exploded. The total invested has exceeded US\$10 billion (A\$15 billion), from a combination of venture capital, deep-tech investors, energy corporations and sovereign governments.

There are several drivers: increasing urgency for carbon-free power, advances in technology, new materials, improved control methods using artificial intelligence (AI), a growing ecosystem of private-sector companies, and a wave of capital from tech billionaires. This comes on the back of demonstrated progress in theory and experiments in fusion science.

Taming fusion for energy production is hard. Nature achieves fusion reactions in the cores of stars, at extremely high density and temperature and at astrophysical scale.

So far, fusion experiments have yet to continuously produce more energy than required by auxiliary heating to make the fusion reaction happen. The highest gain to date is 0.67, although gains above well unity have been demonstrated in brief pulses using high-powered lasers (a different technology path).

The public program most likely to demonstrate the scientific and technical basis for fusion energy is the ITER project. While the project has seen some delays, the vessel segments are being put together in record time. Research operations are now expected to begin in 2034, with deuterium–tritium fusion operation slated for 2039.

In tandem to ITER are several government projects, including the massively ambitious Chinese experiment Burning Experimental Superconducting Tokamak (BEST), the Commonwealth Fusion System's SPARC tokamak, which has attracted some US\$3 billion in investment, including Australian private money, and the recent US\$6bn merger of Helion Energy with Trump Media. These initiatives promise an accelerated timeline and very high returns — but have a high risk of failure. Even if they don't meet their lofty goals, these projects will still accelerate the development of fusion energy by integrating new technology and diversifying risk.

In the long term, we have good reasons to pursue fusion energy – and to believe the technology can work. Despite this promise, Australian public investment has flatlined. It would be foolhardy for the nation that co-discovered fusion, with enormous mineral resource potential, to both support global decarbonisation and make a profit, to not have at least some skin in the game.

**Matthew Hole** is a professor at the Australian National University's Mathematical Sciences Institute and School of Computing. Professor Hole holds degrees in physics, mathematics, and electrical engineering, and completed a PhD on plasma centrifuge physics at the University of Sydney.



From 2001–2002, Dr Hole worked for the UK Atomic Energy Authority on fusion power on the innovative spherical tokamak concept. From 2003–2004, Dr Hole worked on space plasma physics for the School of Physics at the University of Sydney. Since 2005, he has worked with Professor Dewar of the Plasma Theory Modelling Group at ANU, which Professor Hole now leads.

Professor Hole is the inaugural Chair of the Australian ITER Forum (<https://fusion.ainse.edu.au/>), a growing consortium of over 180 scientists and engineers drawn from universities, government research laboratories, private industry, and the general public. The Forum seeks to promote the science of fusion energy through advocacy of Australian involvement in the world's largest science project: the next step fusion energy experiment, ITER.

He is the Australian member of the International Fusion Research Council of the IAEA, and a member of the Board of Editors for Plasma Physics and Controlled Fusion.

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## Southern Highlands Branch Meeting: 2026-1 — 19 Feb. 2026

### The age of RNA and how it is transforming biology and medicine

**Professor Pall Thordarson FRSN**

Director, UNSW RNA Institute and School of Chemistry  
UNSW Sydney



**Date:** Thursday, 19 February 2026, 6.30–7.30 pm AEDT

**Venue:** RSL Mittagong, Carrington Room

**Entry:** Members, \$5; Non-members, \$10 (cashless payments only please)

**All are welcome**

**ENQUIRIES**

**by email to the Southern Highlands Branch Chair**

**Summary:** This is the age of RNA. Ribonucleic acid (RNA) likely played a central role in the origin of life, yet for most of the twentieth century it was considered merely a 'middleman' in biology; transcribed from DNA into messenger RNA (mRNA) and then translated to proteins with no other significant roles. Today, we know that less than 2% of human DNA codes for proteins, while over 98% is transcribed into various non-coding RNAs, sometimes referred to as the *dark genome*. Equally importantly, we have now developed a powerful tool to study, make and even deliver man-made RNA molecules to our bodies.

In this talk, he will discuss the two facets of the ongoing RNA revolution: in biology and in medicine. In biology, we are slowly realising that RNA roles go way beyond being 'just' a messenger; it is a primary signal and architectural building block of the cell. The revolution in medicine is equally transformative. This is in part because RNA represents a totally different category of therapeutics, namely informational drugs, which differ from structural drugs such as small molecules and protein-based therapeutics. The world witnessed the power of this technology with mRNA-based COVID-19 vaccines in 2020. However, vaccines are just the beginning; highly effective (and cheaper) RNA-based cancer therapeutics are now in late-stage clinical trials. The RNA-based CRISPR gene editing method has also been successfully employed to treat rare, lethal genetic disorders in infants.

**Professor Pall Thordarson** (Palli) obtained his BSc from the University of Iceland in 1996 and a PhD in Organic Chemistry from the University of Sydney in 2001. Following a Marie Curie Fellowship in the Netherlands, he returned to Australia in 2003 and was subsequently appointed as a Senior Lecturer at UNSW Sydney in 2007, where he was promoted to Full Professor in 2017. He is the Director of the UNSW RNA Institute and the program leader for the NSW RNA Production and Research Network. He served as the President of the Royal Australian Chemical Institute (RACI) from 2022-2024.

Palli has published over 150 refereed papers, including in prestigious journals such as Nature and Nature Nanotechnology. His research interests range from RNA, nanomedicine, and peptides to supramolecular and systems chemistry. He is focused on advancing our understanding of how molecules interact with one another and 'self-assemble', and how self-assembly can then be harnessed to create novel functional materials and systems. He has received a number of awards, including the 2012 Le Fèvre Memorial Prize from the Australian Academy of Science for outstanding basic research in Chemistry by a Scientist under the age of 40 and the Royal Australian Chemical Institute (RACI) Leighton Memorial Medal in 2026.

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**RSNSW 2026 Annual Dinner & Presentation of Awards — 27 Feb. 2026**



## Royal Society of New South Wales 2026 Annual Dinner and Presentation of Awards

**Strangers' Room, Parliament House, Sydney, NSW  
27 February 2026, 5.30–10.00 pm AEDT**

**Dress: Black Tie**

**Registration: closes at 5.00 pm on Monday, 16 February**

**Gold Sponsors**



THE UNIVERSITY OF  
SYDNEY



UNSW  
SYDNEY

**Date and time:** Friday, 27 February 2026, 5.30–10.00 pm AEDT

**Venue:** Strangers' Room, Parliament House, 6 Macquarie Street, Sydney

**Registration:** Members: \$220; Non-members: \$250; Table of 10: \$2,200. All prices are inclusive of GST. [Registration](#) will close at 5.00 pm on Monday, 16 February 2026

**Dress:** Black tie

**Enquiries:** By email to [RSNSW Annual Dinner enquiries](#)

**All are welcome**

The Society's Annual Dinner and Award Presentations will be held at Parliament House, Sydney, on Friday, 27 February 2026, in the Strangers' Room, the principal dining room in the building with expansive views across the Domain to the Harbour.

We will honour the 2025 winners of the Society's prestigious Career Excellence and Discipline Awards. They include two inaugural Awards, in the Creative and Performing Arts and the Life Sciences.

Our after-dinner speaker is Australia's Chief Scientist, Professor Tony Haymet FTSE, recognised for his pioneering research in marine science and his leadership of major scientific institutions.

### **Accessibility**

Entrance to the building is via the security gatehouse on Macquarie Street, near the State Library. Security officers will direct you to the building entrance, and a staff member will meet you and escort you into the building.

For people who use wheelchairs or have mobility disabilities, there is a ramp and lift access from the Macquarie Street entrance to Reception on level 7.

General access car parking is not available at Parliament House. Nearby commercial car parks are located at:

- Cook and Phillip Park Pool (access via Cathedral St)
- The Domain Car Park (access via St Mary's Road)
- Sydney Hospital, next door to Parliament House (access via Hospital Road).

For people with a current Mobility Parking Scheme Permit who are attending Parliament House, it may be possible to arrange accessible parking, subject to availability on the day. Please [enquire through the RSNSW Dinner email account](#), and we will endeavour to arrange disability parking for you in Parliament House.

### How to register

Do join us to celebrate this occasion by clicking the registration button below. Members and non-members are equally welcome. We would like to encourage you to register younger colleagues and colleagues from across New South Wales.

Options are available for individual and group registrations; a preference with whom you wish to be seated can be specified. There is also an option to book a table for 10. This may be done by initiating a single registration and then changing the registration type to 'Table for 10'. In all cases, the person undertaking the registration must make payment by credit card (either Visa or Mastercard) to confirm the booking either for themselves or their group.

Dietary requirements can be catered for, provided we are informed in advance when you register.

**Please register now**

All enquiries should be sent by email to [RSNSW Annual Dinner enquiries](#).

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## Frontiers of Science 2026 — 6 Mar. 2026

### Exploring major discoveries and theories in physics, mathematics, biology, and chemistry

**Professor Dane McCamey, UNSW Sydney**

**Dr Eliza Middleton, University of Sydney**

**Professor Noushin Nasiri, Macquarie University**

**Professor James Brown, University of Technology Sydney**



*A joint meeting of the Australian Institute of Physics (AIP), the Teachers' Guild of NSW (TGNSW), the Royal Australian Chemical Institute (RACI), and the Royal Society of NSW.*

**Date:** Friday, 6 March 2026, 5.00 pm for 6.00–9.30 pm AEDT

**Venue:** Concord Golf Club, 190 Majors Bay Road, Concord (free onsite parking is available)

**Entry:** \$30 (includes light refreshments from 5.00 pm)

**Enquiries:** [TGNSW Secretariat](#) Phone: 0418 318 418

**Program flyer:** [Available from the TGNSW website](#)

**Registration:** [Registration is required](#) by Thursday, 5 March 2026

**All are welcome**

[READ MORE](#)

[REGISTER NOW](#)

**by COB, Thursday, 5 March**

Ever since the Copernican revolution in the 15th century, science has been progressing at an exponential rate. Major discoveries and theories in physics, mathematics, biology and chemistry have shaped and continue to grow at an exponential rate. The Frontiers of Science forum will have a group of international experts to give brief talks on the latest and future developments in their fields of knowledge.

### **Schedule**

5.00 pm: Registration and refreshments

6.00 pm: Welcome by Dr Frederick Osman FRSN FAIP FACE

6.15 pm: Presentations (25 minutes each)

8.35 pm: Panel Discussion and Q/A with Ian Woolf (Diffusion Radio)

9.30 pm: Vote of Thanks and Close

### **Presentations**

#### **Molecular Quantum Technologies: Foundations and Applications**

Professor Dane McCamey, Pro Vice-Chancellor (Research),  
UNSW Sydney



Molecules offer a powerful and highly tunable platform for quantum technology, combining well-defined quantum states with the chemical flexibility to engineer function at the atomic scale. This talk introduces the physical foundations of molecular quantum technologies, focusing on how quantum coherence, spin states and controlled interactions arise in molecular systems. Beginning with the quantum physics of individual molecules, the talk explains how chemical design can be used to control quantum properties relevant to technology. It then explores emerging applications, including molecular qubits for quantum information processing and storage, ultra-sensitive molecular quantum sensors, and hybrid systems that link molecules to solid-state and photonic devices such as photovoltaics. The talk also addresses the challenges of translating molecular quantum systems from laboratory demonstrations to scalable technologies, highlighting the role of synthesis, advanced spectroscopy, low-temperature measurement and interdisciplinary collaboration between physics, chemistry, materials science and engineering in shaping this rapidly developing field.

#### **Science in the Spaces Between Disciplines**

Dr Eliza Middleton, Aola Richards Sydney Insect Hub,  
University of Sydney

The frontiers of science are no longer defined solely by new discoveries, but by how knowledge connects across disciplines and informs decisions in an increasingly complex world. The talk explores the shift from disciplinary science toward systems-based approaches that integrate data, theory, and observation across scales. It considers how ecological processes underpin human systems such as food production, health, cities, and economic stability, and how disruptions to these processes can lead to cascading and irreversible consequences. Together, these perspectives highlight a central feature of modern science: understanding not only how the world works, but how scientific knowledge is connected and applied in a complex and interdependent world.



### **How the Smallest Things Are Making the Biggest Difference**

Professor Noushin Nasiri, Head, NanoTech Laboratory, Macquarie University



Many of today's most important technological advances are happening at the nanoscale, where materials behave very differently from those we see in everyday life. At this scale, changing the size, shape, or structure of a material can dramatically alter how it conducts electricity, interacts with chemicals, or responds to light, pressure, and heat. This talk explains how scientists and engineers design nanomaterials and sensors to detect tiny signals and convert them into useful information. Using examples from health monitoring, environmental sensing, and sustainable technologies, we show how principles from chemistry, physics, and engineering work together to enable early detection, real-time monitoring, and smarter decision-making. The talk connects fundamental concepts taught in school science to cutting-edge research and industry applications and highlights how understanding matter at its smallest scales is driving some of the biggest technological breakthroughs of our time.

### **Population Statistics – a future beyond traditional census**

Professor James Brown, Head, Discipline of Mathematical Sciences, University of Technology Sydney



Australia continues to conduct a five-yearly population census to enumerate the entire population, providing the bedrock of official population and housing statistics in terms of social and economic characteristics for local communities. But official statistics are facing a data revolution with the expansion of alternative data sources that go beyond traditional direct collections. These include, but are not limited to, government administrative data from individuals' interactions with services such as health, benefits, and education, as well as information on wages and taxes. In this talk, we explore how these alternative data sources are already impacting the census model through enhancing fieldwork operations, providing additional data items, and enriching processes to adjust for non-response. We then consider their potential to replace a full enumeration census in the future, exploring a variety of alternative structures.

[Brief biographies](#) of the presenters are available from the website event notice.

## RSNSW 2025 Postgraduate Student & Early Career Researcher Award Presentations — 9 Mar. 2026

Royal Society of New South Wales  
2025 Postgraduate Student and  
Early Career Researcher Award Presentations

**Dr Yunlong Qiang**  
**Ms Eilish McMaster**  
**Ms Isabelle Nicolas**  
**Mr Amir Tourani**  
**Mr Christopher Whyte**  
**Dr Adrian Lee**  
**Dr Jiayan Liao**  
**Dr Brandon Munn**

chaired by

**Robyn Williams AO FRSN FAA**  
**Presenter, ABC Science Show**



**Date:** Wednesday, 9 March 2026, 6.00–8.30 pm AEDT

**Venue:** University of Sydney, Michael Spence Building (F23), Level 1 Auditorium

**Entry:** No charge

**Registration:** [Please register](#) by 2.00 pm AEDT on Tuesday, 3 March

**All are welcome**

*The evening's program comprises eight short talks presented by PhD research candidates who have been awarded the Society's Jak Kelly Award and Royal Society of NSW Bicentennial Scholarships for 2025, and early career researchers who have been awarded Royal Society of NSW Early Career Research and Service Citations for 2025.*

*This unique event will be chaired by renowned journalist and broadcaster, Robyn Williams AO FRSN FAA, presenter of the ABC Science Show, who will conduct a discussion with each of the postgraduate students and ECR speakers.*

*The evening is generously hosted by the University of Sydney in the Auditorium of the Michael Spence Building (F23) on the Camperdown Campus.*

### Program

The speakers and the titles of their talks are listed below. More detailed information, including summaries of the talks and brief biographical details, is available from the [website event notice](#).

- **Dr Yunlong Qiang**, University of Sydney (Jack Kelly Award) — *Novel Soliton Solutions: Uncovering the mysteries of higher order dispersion*
- **Ms Eilish McMaster**, University of Sydney (Scholarship Winner) — *Combining spatial, genetic, and environmental risk data to define and prioritise in situ conservation units*

- **Ms Isabelle Nicolas**, Macquarie University (Scholarship Winner) — *Balancing Legal privilege with anti-money laundering obligations*
- **Mr Amir Tourani**, Western Sydney University (Scholarship Winner) — *Sick of bad dates? Try sensing their microbiome! Heritable endosymbionts change the chemical profiles of male thrips, allowing females to choose compatible partners*
- **Mr Christopher Whyte**, University of Sydney (Scholarship Winner) — *Constructing a computational bridge between neurobiology and psychology*
- **Dr Adrian Lee**, Westmead Hospital and Westmead Institute for Medical Research (Early Career Researcher Citation) — *Unravelling the pathogenesis of Sjögren's disease from bedside to bench*
- **Dr Jiayan Liao**, University of Technology Sydney (Early Career Researcher Citation) — *Lighting up disease: How nanoscale light is changing the way we detect illness*
- **Dr Brandon Munn**, University of Sydney (Early Career Researcher Citation) — *Multiscale coordination of brain activity unifies theories of neural coding*

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## Ideas@theHouse: 12 Mar. 2026

### Ideas@theHouse

presented by

**Her Excellency the Honourable  
Margaret Beazley AC KC, Governor of NSW**



### Navigating Strategic Uncertainty: Space, Cyber and National Support in a Fractured World

#### Lieutenant General Susan Coyle AM CSC DSM

Chief of Joint Capabilities  
Australian Defence Force

**Date:** Thursday, 12 March 2026, 6.30–8.00 pm AEDT

**Venue:** Face-to-face (by invitation for Society members) and live streaming from Government House, Sydney

**Registration:** [Register for a members-only place at Government House](#) by 5.00 pm, 10 Feb. [Live streaming](#) on the evening of 12 March does not require registration.

**Entry:** No charge

**All are welcome to the live stream**



**REGISTER NOW**

for a face-to-face place  
by 5.00 pm, Tuesday, 10 February

**LIVE STREAM**

Join the live stream at  
6.30 pm on Thursday, 12 March

**Summary:** The global strategic environment is entering a period of accelerating instability marked by intensifying competition between major powers, growing assertiveness from authoritarian states, and an increasingly volatile security landscape that transcends traditional boundaries. Strategic alignment between China, Russia, Iran and North Korea is reshaping geopolitical balances and challenging the rules-based international order on which Australia's security and prosperity have long depended. These developments are occurring alongside rapid technological disruption and an expanding grey zone in which state and non-state actors compete below the threshold of armed conflict—using influence operations, cyber intrusions, economic coercion, disinformation and space-based capabilities to exploit strategic ambiguity.

Lieutenant General Susan Coyle, Head of Space Command, Commander of the Defence Cyber and Information Domain, and leader of Defence's National Support Division, sits at the nexus of Australia's response to this shifting environment. Her portfolio covers the domains where these tensions are most acutely manifest: the contested theatre of space, now central to communications, navigation, intelligence and economic continuity; the cyber and information battlespace, where daily intrusions probe national vulnerabilities; and the essential systems of national support, mobilisation and resilience required to sustain Defence operations in an era of compressed warning time.

Her address will explore how Australia must navigate this new reality: the emergence of strategic blocs, the rise of persistent grey-zone activity, the fragility of critical infrastructure and supply chains, and the growing inseparability of physical and virtual domains. She will highlight the need for integrated national preparedness, deeper partnerships between government, industry and the research community, and innovative approaches to capability, deterrence and resilience. This Ideas@theHouse offers Fellows and Members of the Royal Society of NSW and invited guests a unique opportunity to engage with these issues in discussion with one of Australia's most forward-looking senior Defence leaders.

**Lieutenant General Susan Coyle** is one of the Australian Defence Force's most senior and influential leaders, with a career spanning more than three decades across command, operations, intelligence, cyber and advanced capability development. She currently serves as Commander, Joint Capabilities, where she leads Space Command and Defence's integrated Information and Cyber Domain, as well as National Support Division, which is responsible for preparedness, logistics governance, mobilisation planning, estate management, humanitarian assistance and national resilience partnerships. This portfolio places her at the centre of Australia's response to the accelerating complexity of modern strategic competition.

Commissioned into the Australian Army in 1992, General Coyle has held command appointments at every level, including Commander, Joint Task Force 633 in the Middle East, Commander of the 6th Combat Support Brigade, Director General Cyber Warfare and Army Land Forces Command. She has served on operations in Timor-Leste, Afghanistan and the wider Middle East, where she earned distinguished recognition for leadership in high-pressure joint and coalition environments. Her decorations include appointment as a Member of the Order of Australia (AM), the Distinguished Service Cross (DSC), and the Conspicuous Service Cross (CSC).

General Coyle is a nationally respected strategic thinker on the intersections of technology, national resilience and defence preparedness. Her work increasingly focuses on integrating scientific innovation, digital transformation and sovereign Australian capability to strengthen national security. She is widely regarded for her clarity of communication, collaborative leadership style and ability to navigate complex, multi-domain environments in a time of unprecedented strategic uncertainty.

## Southern Highlands Branch Meeting: 2026-2 — 19 Mar. 2026

### PFAS in New South Wales: Is it under control?

**Associate Professor Ian Wright**

Discipline of Environmental Science  
School of Science  
Western Sydney University



**Date:** Thursday, 19 March 2026, 6.30–7.30 pm AEDT

**Venue:** RSL Mittagong, Carrington Room

**Entry:** Members, \$5; Non-members, \$10 (cashless payments only please)

**All are welcome**

ENQUIRIES

by email to the Southern Highlands Branch Chair

**Summary:** In 2024, NSW became aware that some of its residents were drinking water containing harmful chemicals — per- and polyfluoroalkyl substances (PFAS). This was triggered by news that the United States health authorities announced new laws reducing the safe levels of PFAS in drinking water supplies. A *Sydney Morning Herald* newspaper article in June 2024, *There's no safe level: Carcinogens found in tap water across Australia*, reported that PFAS 'forever chemicals' had been detected in drinking water supplies around Australia. The NSW Chief Health Officer declared on 11 June that Sydney's drinking water was safe.

It came as a major shock when it was announced in August 2024 that the Blue Mountains water supply contained elevated levels of PFAS. In September 2024, Ian Wright assisted Fairfax journalists in tracking down the source of this contamination. Sampling water from a flowing creek in a 'protected' Blue Mountains drinking water catchment, they discovered PFAS at a concentration that exceeded the Australian Drinking Water Guidelines by more than 50 times. It later emerged that the contamination was probably from fire-fighting foam used to control the fire from a burning petrol tanker, which crashed in 1992 on the Great Western Highway near Medlow Bath.

PFAS is not just an issue for Blue Mountains drinking water. An additional concern is the impact of elevated PFAS on water supplies in rural and regional communities. Even grazing livestock are known to be susceptible to PFAS contamination of their meat if their drinking water exceeds trace concentrations. PhD student research supervised by Ian Wright has revealed that platypuses have substantial PFAS bioaccumulation.

Should people be concerned about their exposure to PFAS? What action should they take? Should they have their blood tested? Can we trust that contamination by PFAS is under control? Ian Wright's presentation will canvass these questions surrounding an issue that is of importance to us all.

**Ian Wright** is a water scientist and an Associate Professor at the Western Sydney University School of Science. He teaches classes in water science and management, environmental planning, and environmental regulation across several degree programs. Before joining WSU, he worked as a scientist in the urban water industry, mainly at Sydney Water. His water science interests include freshwater ecology, water chemistry, and water pollution (science and management). His research interests include urban water issues, contamination from concrete materials, and the impact of mining on streams and rivers. He has provided independent expert testimony for environmental science matters for the NSW Land and Environment Court and also for mining development proposals being considered through the planning system.

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## Branch and Program Reports

### Report from the Activities with Impact Program

The Society provides an active program of events in Sydney and through its Hunter, New England North West, Southern Highlands, and Western NSW branches. With events planned and held recently by the branches reported separately in this Bulletin, this section focuses on the Master Plan's *Activities with Impact* program and events held in Sydney.



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### Presentation Report: 1337th OGM and Open Lecture— 3 December 2025

#### A Future Made in Australia

#### Dr Donald Hector AM FRSN

Principal

Grassick SSG Pty Ltd

The audience of approximately 50 people who attended the Society's 1337th Ordinary General Meeting at the State Library of NSW on 3 December 2025 enjoyed a highly-informative and technically accessible presentation from Dr Donald Hector, Principal of Grassick SSG Pty Ltd and a former President of the Royal Society of NSW, on the intent and challenges in the Government's decade plan for '[A Future Made in Australia](#)'.

In his presentation, Dr Hector outlined the government policy to invest \$23 billion over ten years to position the country as a renewable energy superpower, focusing on green minerals, metals, innovation, and workforce development. He described the strategy, split into two streams: the net-zero transformation (emphasising renewable hydrogen and green metals) and economic security (reducing reliance on imported critical minerals and boosting clean manufacturing). Transitioning from coal to



renewable energy sources will involve gas as an interim step, with hydrogen playing a central role, though its production is energy-intensive and costly.

His talk emphasised the importance of comparing technology costs using the levelised cost of energy, highlighting solar PV's declining costs versus nuclear's high capital requirements. Renewable energy's intermittency necessitates advanced storage solutions, such as batteries and hydro, to stabilise the grid. Critical minerals are vital for enabling technologies but raise environmental and supply chain concerns, especially given China's market dominance. Hydrogen production methods, their challenges, and the complexities of handling hydrogen were explored, as were the production of green steel and aluminium, noting the technical and economic hurdles.

In summing up his talk, Dr Hector called for the re-industrialisation of Australia, increased research funding, and integrated industrial and national security policies to increase Australia's economic complexity and ensure resilience.

A [video recording of the presentation and Q&A session](#) is now available on the Society's YouTube channel, while a [collection of images](#) from the occasion is also available for viewing and downloading.

Lindsay Botten  
Vice-President, RSNSW

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## Hunter Branch Report

### Presentation Report— 4 December 2025

#### Renewable Energy 101: What is being delivered in NSW's first renewable energy zone?

**Adjunct Professor Warwick Giblin FRSN FEIANZ**

Principal  
ESE Justice

The fifth and final event for 2025, organised by the Hunter Branch of the Royal Society of NSW, was held on Thursday, 4 December, before an audience of approximately 25 people. The speaker was Adjunct Professor Warwick Giblin, who spoke on the topic of 'Renewable Energy 101: What is being delivered in NSW's first renewable energy zone?'.

In the presentation, Warwick Giblin presented a comprehensive analysis of Australia's transition to renewable energy, emphasising the urgency created by climate change, the ageing of coal-fired power stations, and the economic and environmental advantages of renewables. He underscored the scientific consensus on climate change, referencing the United Nations Intergovernmental Panel on Climate Change and data showing rising carbon dioxide levels and global temperatures.

ROYAL SOCIETY  
NEW SOUTH WALES  
**Hunter  
Branch**



The presentation explored the challenges of meeting future electricity demand, noting that generation may not match demand by 2030. The shift to renewables requires significant investment in new transmission infrastructure, with costs potentially reaching \$400 billion, not yet reflected in consumer bills. Australia's high per capita emissions and global responsibilities were highlighted, alongside the moral imperative to act as a wealthy nation and major fossil fuel exporter.

Rapid uptake of rooftop solar was praised, but limitations of decentralised energy and the ongoing need for centralised generation and transmission lines were acknowledged. Economic issues such as the absence of a carbon price and fossil fuel subsidies are discussed, with calls for incentives and disincentives to better manage carbon.

The presentation also addressed planning and community impacts, the role of batteries in stabilising the grid, and the importance of balancing environmental, social, and economic justice in Australia's energy future and concluded by recognising the complexity of the transition and the need for inclusive solutions.

A [video recording](#) of the presentation and the audience Q&A is available on the Society's YouTube channel.

Summary prepared by Lindsay Botten, RSNSW Vice-President, from the recording transcript.

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## The Society and Social Media

The Society's presence on our social media channels—[Facebook](#), [LinkedIn](#), [X/Twitter](#) and [YouTube](#)—is engaging an increasing following, and we continue to build our repository of events on YouTube.

Our YouTube channel now has almost 1,580 subscribers, while the 229 full-length videos and 'shorts' that are online have received nearly 189,000 views.

The social media icons at the end of this newsletter will take the reader to our pages on these platforms, from where you can follow, subscribe, and be notified of new content.

*As a Society member, please consider subscribing to our social media channels to support the Society's outreach and encourage your friends, colleagues and members of your networks to do so.*

## YouTube recordings of recent events

All online presentations and all face-to-face presentations held in Sydney and by the Hunter, New England North West, and Western NSW Branches are recorded and made available on the Society's YouTube channel. These can be accessed directly from our [YouTube channel](#) or the [Presentations](#) page of the RSNSW website.

For convenience, the video links below provide access to current recordings and recent popular recordings. We hope that these will be of interest to members.

RENEWABLE ENERGY 101:  
WHAT IS BEING DELIVERED  
IN NSW'S FIRST RENEWABLE  
ENERGY ZONE?

ADJUNCT PROFESSOR WARWICK G

ROYAL  
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YouTube recording of the presentation from the Hunter Branch Meeting 2025-5 of the Royal Society of NSW (5 December 2025) on the topic, *Renewable Energy 101: What is being delivered in NSW's first renewable energy zone?*, delivered by Adjunct Professor Warwick Giblin, Principal of ESE Justice. A summary of the talk and a brief biography of the presenter are available from the [online event notice](#).

A FUTURE MADE  
IN AUSTRALIA

DR DONALD HECTOR

ROYAL  
SOCIETY  
NEW SOUTH WALES



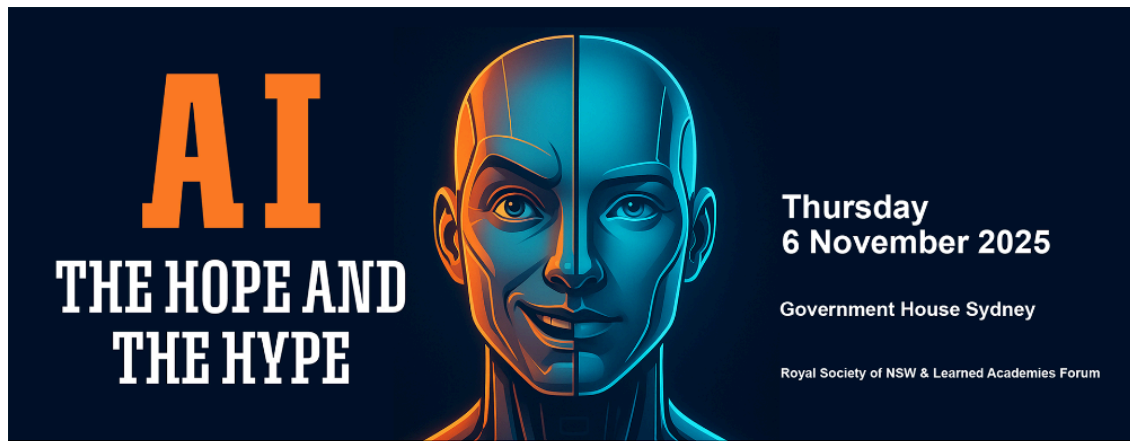
YouTube recording of the presentation from the 1337th Ordinary General Meeting (4 December 2025) on *A Future Made in Australia*, delivered by Dr Donald Hector AM FRSN, Principal, Grassick Pty Ltd. A summary of the lecture and a brief biography of the presenter are available from the [online event notice](#).



YouTube recording of the presentation from the Western NSW Branch Meeting 2025- 4 (5 November 2025) on *Optimising yield, growth, and use of the '5th quarter' for Australian agricultural food access and market security*, delivered by Professor Jane Quinn FRSN, Professor in Veterinary Physiology at the Gulbali Institute of Charles Sturt University. A summary of the lecture and a brief biography of the presenter are available in the [online event notice](#).



YouTube recording of the presentation from the 1336th Ordinary General Meeting (3 September 2025) on *Arts-based Community Interventions for Youth Mental Health*, delivered by Professor Katherine Boydell FASSA, Professor of Mental Health and Director, Arts-based Knowledge Translation Lab at the Black Dog Institute. A summary of the lecture and a brief biography of the presenter are available from the [online event notice](#).



@royalsocnsw

#AIHopeAndHype

YouTube playlist of recordings of the RSNSW and Learned Academies 2025 Forum on 'AI: The Hope and The Hype'. A [brochure](#) describing the day's program and listing biographies of the panellists and presenters is available from the preceding link.



YouTube recording of the presentation from the Hunter Branch Meeting 2025-4 of the Royal Society of NSW (30 October 2025) of the *Male Infertility Public Forum*, comprising talks and a panel session from researchers at the University of Newcastle and medical practitioners from Newcastle. A summary of the presentation and brief biographies of the presenters and panellists are available from the [online event notice](#).

**BUILDING RESILIENT FUTURES:  
UNDERSTANDING RURAL  
YOUTH THROUGH THE  
LENS OF PLACE, RISK,  
AND PREVENTION**

**DR KYLE MULROONEY**

**ROYAL**  
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**SOCIETY**



YouTube recording of the presentation from the presentation from the New England North West Branch (29 October 2025) on '*Building resilient futures: Understanding rural youth through the lens of place, risk, and prevention*', comprising a lecture delivered by Dr Kyle Mulrooney, Co-Director, Centre for Rural Criminology University of New England, followed by a panel discussion with Sam Coupland, Mayor of the Armidale Regional Council, and local youth workers, Samantha Guilbert, and Sam Davis, that was moderated by Professor Vicki Bitsika. A summary of the lecture and a brief biography of the presenter are available from the [online event notice](#).

**AFTER THE CRISIS:  
A NEW AUSTRALIAN DREAM**

**PROFESSOR ANTHONY BURKE**

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**SOCIETY**



YouTube recording of the presentation from the fifth meeting of the Society's Provocations and Inspirations lunchtime series held at the Union, University, and Schools Club in Sydney (21 October 2025) at which Professor Anthony Burke FRAIA, Professor of Architecture at the University of Technology and host of Grand Designs Australia and Restoration Australia, and co-host of Grand Designs Transformations on ABC TV. He spoke on the topic of '*After the Crisis: a new Australian Dream*', addressing Australia's housing crisis. A summary of the presentation and a brief biography of the presenter are available from the [online event notice](#).



YouTube recording of the presentation from the 1335th Ordinary General Meeting (1 October 2025) on *Have universities become too political?*, conducted as a panel discussion between The Hon. Bill Shorten, Vice-Chancellor of the University of Canberra, and Professor Merlin Crossley AM FRSN, Deputy Vice-Chancellor (Academic Quality) at UNSW. Sydney. A summary of the lecture and a brief biography of the presenter are available from the [online event notice](#).



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Edited by: [Lindsay Botten](#) FRSN, Vice-President, Royal Society of New South Wales

Disclaimer: Positions expressed in this publication by the authors of articles and event presenters do not necessarily reflect those of the Society.

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