ROYAL SOCIETY NEW SOUTH WALES

The Bulletin 502
March 2026

In this newsletter:

A message from the President

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

As I write my contribution to this issue of the Bulletin, we look forward to the RSNSW Annual Dinner and Presentation of Awards in the Strangers' Room of Parliament House on the evening of Friday, 27 February. I am sure that it will be a great success. It is a huge task to organise the event. Ross Griffith, who led the team with his wife Pamela over the past two years, has continued to offer his expertise to the organising committee. We are very grateful for his time. Zile Yu and his team at Quantum Law, and in particular Fauzia Purba, have managed the many tasks involved. We thank them all. Council members Davina Jackson and Sarah Jones have each contributed. Our Vice-President, Lindsay Botten, has kept us all on track with bookings, with his eagle eye discovering that a number of you paid twice (you will have been reimbursed). We are delighted to be welcoming Australia's Chief Scientist, Professor Tony Haymet FTSE, as our after-dinner speaker and former Vice-President, Peter Shergold, as the MC for the event.

We began the Sydney program for the year with a booked-out presentation by Dr Abul Rizvi at the State Library on the question 'How many Australians should there be?' Unfortunately, the discussant, Professor Richard Holden, was unwell, but Abul's in-depth analysis of data, together with his pleasure in debate, ensured a very lively discussion. He did not, in the end, give us his preferred target population, but he placed the issues and the need for policy firmly on the table. If

you missed the presentation, the recording is available on YouTube and has proven very popular, receiving approximately 2,000 views at the time of writing.

In March, we have two major events. The RSNSW 2025 Postgraduate and Early Career Researcher Awards will be held on the evening of 9 March at the University of Sydney. Robyn Williams, the presenter of the ABC Science Show, has again agreed to be in conversation with the students. Please consider registering for this event to support our postgraduate student and early-career researcher award winners.

On 12 March, Her Excellency the Honourable Margaret Beazley AC KC, Governor of NSW, hosts the fifteenth Ideas@theHouse at Government House. Lieutenant General Susan Coyle AM DSC CSC will talk on 'Navigating Strategic Uncertainty: Space, Cyber and National Support in a Fractured World.' If you missed out on a face-to-face place, the event is being live-streamed, with the recording being made available on YouTube a few days later.

You will see that nominations for the upcoming Council election are now open and will close on 6 March. I would be happy to speak with you if you wish to nominate. Council elections will open on 16 March and close on 6 April. We are seeking to fill council and subcommittee roles associated with the organisation of the Sydney events program, oversight of our financial strategy, and also communications.

The new Council will be announced at the AGM on 8 April. Following the AGM, Dr Catherine Ball, futurist, and Simon Masters from the United Kingdom Research and Innovation, will contrast UK and Australian support for drones in a session titled 'A drone by any other name.' I look forward to seeing you there.

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.

- 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 Guild 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 5 Funcrtion Room) — features short talks by Dr Yunlong Qiang (Sydney), Ms Eilish McMaster (Sydney), Ms Isabelle Nicolas (Macquarie), Mr Amir Tourani (Western Sydney), Mr Christopher Whyte (Sydney), Dr Adrian Lee (Westmead Institute for Medical Research), Dr Jiayan Liao (UTS), Dr Brandon Munn (Sydney)

- 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
- Hunter Branch Meeting 2026-1 (Thursday, 19 March 2026, 6.00–7.00 pm AEDT, NEX, Newcastle Exhibition and Convention Centre, 309 King Street, Newcastle West) *The Faint Universe with the Legacy Survey of Space and Time*, Professor Sarah Brough FRSN, Head, School of Physics, UNSW Sydney
- Southern Highlands Branch Meeting 2026-2 (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
- Lunchtime series: Provocations and Inspirations — March 2026 (Tuesday, 24 March 2026, 12.30 – 2.00 pm AEDT, Union University and Schools Club, 25 Bent Street, Sydney (corner of Bent and Philip Streets)) *Hydrogen: Cost and Technology Challenges, Alex Dronoff*, Chair, Hunter Hydrogen Taskforce
- Western NSW Branch Meeting 2026-1 (Wednesday, 25 March, 12.30 – 1.30 pm AEDT, Livestreaming) *The illusion of friendship: Why generative AI demands unprecedented ethical vigilance*, Professor Zahid Islam FRSN, Professor in Computer Science, and Associate Dean (Research), Faculty of Business, Justice, and Behavioural Sciences, Charles Sturt University
- 1339th Ordinary General Meeting and Open Lecture (Wednesday, 9 April 2026, 6.00–7.30 pm AEST, Michael Crouch Room, State Library of NSW) *A drone by any other name*, Dr Catherine Ball, Scientific Futurist, and Simon Masters, Deputy Director, Future Flight, InnovateUK
- RSNSW Visits Program 2026-1 (Thursday, 9 April 2026, 6.00—8.00 pm AEST, Sydney Observatory)
- Southern Highlands Branch Meeting 2026-3 (Thursday, 16 April 2026, 6.30–7.30 pm AEST, RSL Mittagong, Carrington Room) *A tale of two sites: Excavating at Pella in Jordan and Zagora in Greece*, Dr Paul Donnelly, Deputy Director and Director Exhibitions and Collections, Chau Chak Wing Museum, University of Sydney

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News

Australia Day Honours 2026 — updated

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

The list below has been updated with additional Society members (identified with an asterisk), about whose honours we were recently advised.

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.

Member of the Order of Australia (AM).

(*) **Dr Adrian (Adi) Paterson AM FRSN FTSE**, former CEO of the Australian Nuclear Science and Technology Organisation, for significant service to science in the field of nuclear technology.

Professor Prem Ramburuth AM 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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Music for a solo violin — David Hush FRSN

Dr David Hush FRSN has released a digital album, *Music for Solo Violin*, featuring California-born violinist Zina Schiff.

The album, streaming on Bandcamp, covers a broad spectrum of emotions and moods, ranging from two lullabies to an elegy. A solo sonata comprises the centrepiece of the album, while the remaining tracks are one-movement pieces. All works on the album exhibit tangible vocal traits in keeping with the violin's unique singing quality.

In other news, on 18 December 2025, Michelle Pritchard and Alejandro Sanchez premiered *If Sorrow is a Fire*, a duo for violin and cello, in Middelburg, the Netherlands. David wrote this work in response to the bushfires in NSW in 2019–20.

David was elected as a Fellow of the Royal Society of NSW in 2018. He has written works spanning solo instrumental, chamber ensemble, choral and orchestral idioms. They have been performed, recorded and broadcast in North and South America, the UK, Europe, Israel, Australia and South Korea.

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Vale Emeritus Professor Heather Goodall AM FRSN FASSA

The Society was greatly saddened to learn of the death of Fellow, **Emeritus Professor Heather Goodall AM FRSN FASSA**.

Professor Goodall (1950–2026) was a pioneering Australian historian whose work transformed understandings of Indigenous political history, environmental change, and cross-cultural relationships. She passed away peacefully on 29 January 2026 at the age of 75.

Heather Goodall's academic journey began with the University Medal in History from the University of Sydney in 1975, followed by a groundbreaking PhD in 1982 on Aboriginal communities in New South Wales. This research shaped her lifelong commitment to collaborative, community-centred historical practice.

Over her long career at the University of Technology Sydney, Goodall became a leading figure in Australian historiography. Her research was widely recognised through multiple ARC Discovery and Linkage grants and influential publications. On her retirement from UTS in 2016, she was honoured with the title of Emeritus Professor.

Her major publications—*Invasion to Embassy*, *Isabel Flick*, *Rivers and Resilience*, *Beyond Borders*, and *Georges River Blues*—combined rigorous scholarship with deep partnerships, often amplifying voices historically marginalised in mainstream narratives. Her work extended beyond Australia, tracing intercolonial and transnational networks that reshaped understandings of activism and identity.

Professor Goodall received numerous honours, including the NSW Premier's Australian History Prize and the Magarey Medal for biography. She was elected a Fellow of the Academy of the Social Sciences in Australia and a Fellow of the Royal Society of NSW in 2014. In 2024, she was honoured as a Member of the Order of Australia for significant service to tertiary education and to the Indigenous community. She leaves a profound legacy as a scholar, mentor, collaborator, and advocate whose influence will endure across generations and will be greatly missed by colleagues, students, friends and all who were inspired by her scholarship, activism and kindness.

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

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Pamela Griffith: Etchings 1965–2014 — Book Launch & Exhibition

A new book titled 'Pamela Griffith: Etchings 1965–2014′ by Lou Klepac on the work of well-known artist and Society Fellow, **Pamela Griffith OAM FRSN**, will be launched on Friday, 6 March from 6.00 – 8.00 pm at the Royal Art Society Gallery, 25 Walker Street, Lavender Bay, NSW.

The book will be launched by the award-winning Australian film director, Bruce Beresford, and the artist and author will be in attendance to sign books that are purchased. The 204-page book is fully illustrated in colour and includes an introduction by Lou

Klepac, as well as passages of text and quotes by the artist.

To accompany the launch, there will be an exhibition at the Royal Art Society Gallery from Monday, 2 March – Sunday, 8 March 2025, with Pamela Griffith presenting a talk on Saturday, 7 March at 1.00 pm. Pamela will discuss some of the works on show at the exhibition, discussing her methods and processes and the inspiration for her work. Throughout the exhibition, the book will be available for sale at $80.00.

Pamela Griffith (b.1943) comes from a family of artists and has built a distinguished career as a painter, printmaker, teacher and author. Trained at East Sydney Technical College, she taught herself etching and developed her own press with her husband Ross. In 1976, she founded the Griffith Studio and Graphic Workshop, a major centre for Australia's printmaking revival. Deeply inspired by the natural world, she travelled widely to study Australian landscapes and wildlife. Over five decades, she produced more than 400 editions and held over 150 solo exhibitions. A respected portraitist and educator, she is a Fellow of the Royal Society of NSW and received an Order of Australia Medal (OAM) in 2022.

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Society Fellow, Sean Brawley, on 'What are universities for — and who gets to decide?'

Professor Sean Brawley FRSN is one of several of our Fellows who regularly contribute to the debate on the future of Australia's higher education system.

In his latest contribution, published in the newsletter *Future Campus*, Sean Brawley is exploring the theme 'What are universities for — and who gets to decide?' in a four-part series that provides forensic context for the establishment of the proposed Australian Tertiary Education Commission (ATEC) and expanded Federal Government regulation. In essence, Brawley contends that governance cannot be disentangled from purpose, and purpose cannot be understood without history.

The four-part series, all of which have now been published, includes:

- What do we mean by University Governance? — that explores confusion about governance is a confusion about purpose
- Self-Rule, Scholarship and the State: Foundations of Australian University Governance
- Before the Revolution — Sector Governance and the Limits of Arm's-Length Control
- The Dawkins Revolution — From Coordination to Control

which are certainly an erudite and informative read that provides a potted history of Australian university governance.

Sean Brawley is a Professor of History and a leader in higher education. Previously, he was the Deputy Vice-Chancellor (Strategy and Assurance) from 2022–2024 at the University of

Wollongong and, before that, the Pro Vice-Chancellor (Programs and Pathways) at Macquarie University from 2017–2022.

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Pint of Science 2026: Call for Speaker Expressions of Interest

Pint of Science is an international festival where scientists share their latest research with the public in casual, friendly settings—usually pubs. The idea is simple: remove the barriers between researchers and the community, and make science enjoyable, social, and easy to understand.

This year, the Pint of Science Australia festival will run from 18–20 May 2026 in 15 cities and will showcase around 170 researchers from all disciplines in six themes:

- Atoms to Galaxies: physics, chemistry, maths and astronomy
- The Mind: neuroscience, psychology and psychiatry
- Our Body: medicine, human biology and health
- Society: law, history, politics, policy and languages
- Planet Earth: geosciences, botany and zoology
- Technology: biotechnology, robotics, computers and AI

The festival offers researchers the opportunity to engage with their local community and share their recent work in a relaxed and casual environment. Expressions of Interest to participate have been called, and researchers from all disciplines and levels of experience are invited to apply by completing the online EOI.

With the festival increasing in popularity every year, speaker spots are becoming more competitive, particularly in the major cities. The volunteer City Coordinators select the speaker line-up to create a diverse and interesting program for the audience.

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Events

Frontiers of Science 2026 — 6 March 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 16th 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.

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RSNSW 2025 Postgraduate Student & Early Career Researcher Award Presentations — 9 March 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 5 Function Room
Entry: No charge
Registration: Please register by 5.00 pm AEDT on Tuesday, 3 March
All are welcome

REGISTER NOW

Please register before
5.00 pm AEDT on Tuesday, 3 March

ENQUIRIES

By email to RSNSW Events

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*

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.

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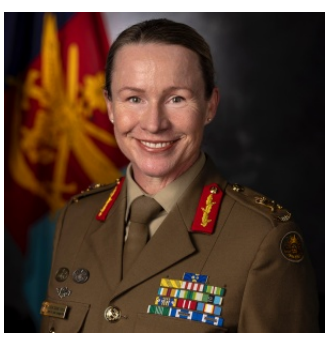
Ideas@theHouse: 12 March 2026

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: Live streaming on the evening of 12 March does not require registration.
Entry: No charge
All are welcome to the live stream

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.

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RSNSW Hunter Branch Meeting 2026-1 — 19 March 2026

The Faint Universe with the Legacy Survey of Space and Time

Professor Sarah Brough FRSN
Head, School of Physics
UNSW Sydney

Date: Thursday, 19 March 2026, 5.30 pm AEDT for 6.00–7.00 pm
Venue: NEX, Newcastle Exhibition and Convention Centre, 309 King Street, Newcastle West
Entry: Members, $15; Non-members, $25; Students: $5
Registration: Registration is required by 2.00 pm on Wednesday, 18 March 2026
Enquiries: Via email to the RSNSW Hunter Branch Chair
All are welcome

REGISTER NOW

for this event
by 2.00 pm on 18 March

ENQUIRIES

by email to
Hunter Branch Chair

Summary: Our understanding of the evolution of our own and other galaxies will be transformed by the Legacy Survey of Space and Time (LSST), which begins later this year. This 10-year program, carried out by Chile's Vera C Rubin Observatory, will use a 3,200-megapixel camera to make sensitive observations of the whole southern sky, studying faint stellar features around galaxies (shells, tidal tails, halos and stellar streams) and making the first statistically significant measurements of the diffuse stellar light at the centre of galaxy clusters. Interpreting and learning from this data will be a worldwide endeavour. I will present the LSST survey and describe the anticipated role of Australian astronomers.

Sarah Brough is an observational astronomer, the Head of the School of Physics at UNSW Sydney, Chair of the Australian Academy of Science's National Committee for Astronomy, and she represents Australia on the intergovernmental European Southern Observatory Council.

Her research focuses on galaxy evolution, particularly how massive galaxies change over time and how their environments shape that process. She has played leading roles in major galaxy

surveys and helped secure Australia's participation in the Vera C. Rubin Observatory's Legacy Survey of Space and Time. Brough has published extensively, represented Australia on international astronomy councils, and is a strong advocate for equity and inclusion in science. She previously held an ARC Future Fellowship.

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Southern Highlands Branch Meeting: 2026-2 — 19 March 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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Lunchtime series: Provocations & Inspirations—24 March 2026

Hydrogen: Cost and Technology Challenges

Alex Dronoff
Chair, Hunter Hydrogen Taskforce

Date: Tuesday, 24 March 2026, 12.30–2.00 pm AEDT
Venue: Union University and Schools Club, 25 Bent Street, Sydney (corner of Bent and Philip Streets)
Enquiries: by email to RSNSW Events
Registration: Registration is required by 2.00 pm AEDT on Thursday, 19 March 2026. Places are limited
Cost: $75 (RSNSW and UUSC members), $85 (non-members/guests). A warm meal with wine will be served.
Dress: Smart business casual (jacket preferred). No denim
Flyer: Downloadable with this link

REGISTER NOW

Please register before
2.00 pm AEDT on Thursday, 19 March

Hydrogen: Cost and Technology Challenges

A Future Made in Australia (FMiA) is a major federal government program (announced in the 2024-25 Federal budget) that establishes a policy framework called the National Interest Framework (NIF) that imposes rigour on government decision-making on public investments, particularly those that need to attract large-scale private investment. The program will see investment of $22.7 billion over the next decade, focused on two major streams:

- Net zero transformation; and
- Economic security and resilience.

The focus of this program is to utilise Australia's abundant renewable energy resources to produce green hydrogen and use this to replace carbon in the manufacture of metals such as iron, steel and aluminium. This would substantially reduce or even eliminate emissions of carbon dioxide, one of the major contributors to global warming.

In this talk, Alex Dronoff will explore the cost and technology challenges in the production and safe handling of the very large volumes of green hydrogen required to have a major impact on the replacement of carbon in industrial processes such as green metals and fuels.

Alex Dronoff is chair of the Hunter Hydrogen Task Force and was a founding director of the Australian Hydrogen Council. He was appointed CEO of Fichtner Australia in 2021 to establish Fichtner's operations in Australia, building on the strength, global expertise and experience of the German parent. Currently, he is a member of the Supervisory/Advisory Board of Fichtner Australia/New Zealand.

As CEO, he was responsible for the growth of the renewable engineering consulting business in the areas of renewable hydrogen and its derivatives such as ammonia, methanol, e-fuels, solar PV, concentrated solar power (CSP), battery energy storage systems (BESS), thermal storage, energy from waste (EfW) and pumped hydro.

Fichtner was commissioned by the Dutch and Australian Governments, in collaboration with the German Government, to undertake work in the certification of renewable hydrogen.

Before working for Fichtner, Alex developed and grew the Clean Energy business for BOC/Linde and was one of the pioneers in advocating the need for the energy transition and developed the early pilot hydrogen projects. He is a senior executive with over 30 years' experience (including 15 years with Shell, both nationally and internationally) in the traditional oil and gas industries, before focusing on renewable energy.

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Western NSW Branch Meeting 2026-1 — 25 March 2026

The illusion of friendship: Why generative AI demands unprecedented ethical vigilance

Professor Zahid Islam FRSN
Professor in Computer Science and
Associate Dean (Research)
Faculty of Business, Justice, and Behavioural Sciences
Charles Sturt University

Date: Wednesday, 25 March 2026, 12.30–1.30 pm AEDT
Venue: Live streaming
Registration: Please register through Humanitix
Entry: No charge
All are welcome

REGISTER NOW

Please register through Humanitix

This meeting is a joint presentation of Charles Sturt University and the Western NSW Branch of the Royal Society of NSW.

Summary: Generative AI (GenAI) systems such as ChatGPT are increasingly used for drafting, summarisation, tutoring, and decision support, offering substantial gains in productivity and reduced cognitive load. However, the same natural-language fluency that makes these systems useful can also blur the boundary between tool and companion. This boundary confusion may also encourage some users to experience GenAI as empathic, benevolent, and relationally persistent.

Emerging reports and early findings suggest that some users may form emotionally significant attachments to conversational agents, in some cases with harmful consequences, including delayed help-seeking, dependency, and impaired judgment in high-stakes contexts.

In this lecture, Professor Zahid Islam develops a philosophical and ethical argument for why the resulting 'illusion of friendship' is both understandable and ethically risky. Drawing on classical accounts of friendship (including Epicurean, Confucian, and Aristotelian perspectives), the presentation explains why users may understandably interpret sustained supportive interaction as friend-like and companionship-like.

The lecture then advances a counterargument that, despite relational appearances, GenAI lacks moral agency, i.e., consciousness, intention, and accountability, and therefore does not qualify as a moral agent or a true friend. To demystify the illusion, the talk presents for an everyday audience a mechanism-level explanation of how transformer-based GenAI generates responses via tokenisation, embeddings, self-attention, and probabilistic next-token prediction, often producing emotionally resonant language without inner states or commitments.

The lecture concludes by outlining a safeguard framework for safe and responsible GenAI use, education as a foundational defence, human-in-the-loop accountability, and design-level interventions to reduce possible anthropomorphic cues generated by the GenAI systems. The central contribution is to demystify the illusion of friendship and explain the computational background so that we can shift the emotional attachment with GenAI towards necessary human responsibility and thereby understand how institutions, designers, and users can preserve GenAI's benefits while mitigating over-reliance and emotional misattribution.

Md Zahidul Islam (commonly known as Zahid Islam) is a Professor of Computer Science at Charles Sturt University. He is the Director of the Centre for AI and Cyber Futures and serves as Associate Dean (Research) in the Faculty of Business, Justice and Behavioural Sciences.

Professor Islam's research spans data mining, privacy and cybersecurity, with a strong focus on applying advanced data analytics to real-world problems across industry and society. His work contributes to the responsible development and deployment of emerging digital technologies, particularly in high-impact and high-risk contexts.

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1339th OGM and Open Lecture — 8 April 2026

A drone by any other name

Dr Catherine Ball (1)
and
Simon Masters (2)

(1) Scientific Futurist, Tech Influencer, Robotics Expert, Adjunct Professor
(2) Deputy Director, Future Flight, InnovateUK

Date: Wednesday, 8 April 2026
Time: OGM: 6.00–7.30 pm AEST;
Supper: 8.00–9.30 pm AEST
Venue: Michael Crouch Room, 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 from Balcon by Tapavino, 17 Bligh Street, Sydney, following the OGM
Registration: OGM: Please register before 2.00 pm AEST on Tuesday, 7 April
Supper: Registration information to follow
Entry: OGM: Members, $20; Non-members, $30; Students, $0
Supper: $110 per person (non-refundable) for a fixed menu meal
Enquiries: by email to RSNSW Events
All are welcome

REGISTER NOW

Please register before
2.00 pm AEST on Tuesday, 7 April

OGM Agenda: The Agenda for this meeting will be available on the Meetings Page of the website.

Summary: For a decade, Australia was the global drone rule-maker, and the UK was still warming up.

This presentation tells the story of a regulatory power shift. Australia got out fast, with CASA's 2016 reforms making commercial drone operations easier and more accessible well before many markets caught up. It was bold, practical, and business-friendly. In many ways, Australia wrote the early playbook for modern drone regulation.

But being first is not the same as staying first.

The UK arrived later, then surged ahead by pairing regulation with serious national investment. It moved into a more advanced risk-based framework, aligned drone policy with broader aviation reform, and backed it with a Future of Flight strategy designed to scale real-world operations, including beyond visual line of sight. In short, the UK did not just regulate drones; it funded the future they needed.

This presentation compares the two countries side by side, showing how Australia led on early regulatory innovation, while the UK built the stronger long game through capital, policy alignment, and industry mobilisation.

If Australia proved drones could be regulated, the UK is proving they can be scaled.

Dr Catherine Ball is an award-winning company director, bestselling author, futurist and adjunct professor working across global projects where emerging technologies meet humanitarian, education and environmental needs.

Working to protect the natural environment and empowering all members of society through mutual education and respect are core aspects of her chosen projects. As well as supporting start-ups and leaders from all generations across the globe, Catherine is particularly passionate about social mobility and equity.

Catherine is proud to be an advisor to a broad range of enterprises and philanthropic organisations, including being an XPRIZE visioneer and member of their Global Brains Trust.

Simon Masters has 20 years of experience across industry and public sector roles. With a background in aerospace and technology, he has held senior positions in the civil and military aerospace sectors, including systems engineering and R&D roles with Airbus and BAE SYSTEMS.

He took up the role of Deputy Director for the Future Flight Challenge within InnovateUK in 2020, focusing on developing drone and advanced air mobility capabilities and supporting systems in the UK. He has led efforts to integrate technology solutions with emerging use cases, particularly those addressing needs and opportunities in public services. In 2024, he took on the leadership of the Future Flight Challenge program as it transitions from R&D to commercialisation and growth. Passionate about innovation and collaboration, he has worked to build international partnerships across Europe, Japan and Australia.

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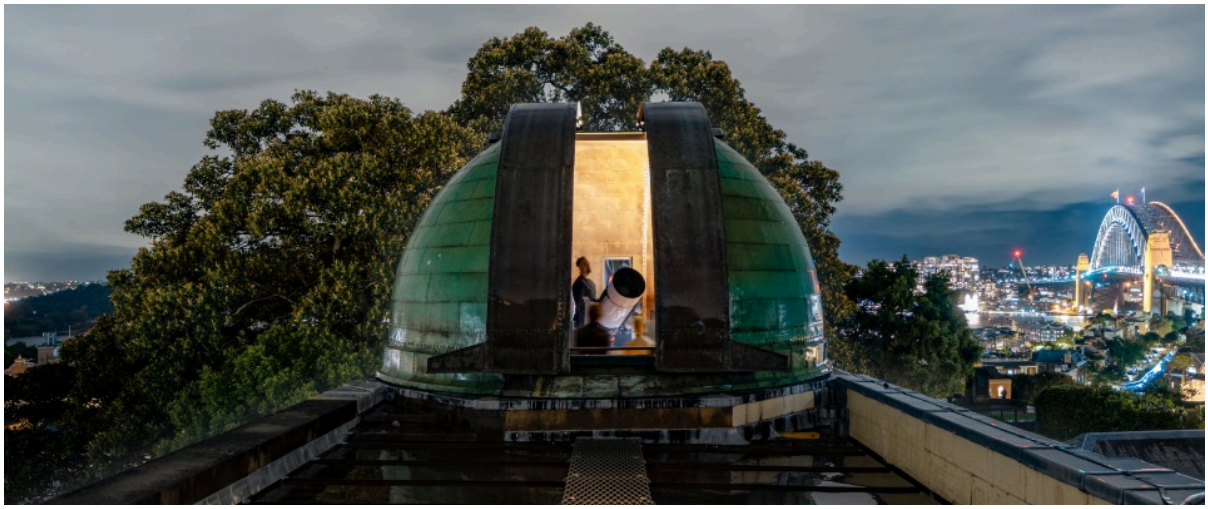
RSNSW Visits Program 2026-1 — 9 April 2026

Sydney Observatory



Date and Time: Thursday, 9 April 2026, from 6.00—8.00 pm AEST
Venue: Sydney Observatory, 1003 Upper Fort Street, Millers Point, NSW

Transport: own arrangements
Cost: RSNSW Members, $25; Non-members/Guests: $30
Registration: Please register now. Registration closes 5.00 pm AEDT on Monday, 30 March 2026
Numbers: limited to 30 places
Enquiries: By email to RSNSW Programs

REGISTER NOW

for this visit before 5.00 pm AEDT on Monday, 30 March

ENQUIRIES

by email to RSNSW Programs

The Royal Society of NSW Visits Program returns in 2026 with an evening visit to the Sydney Observatory.

The Observatory has been the epicentre of modern science in Australia since its completion in 1858. However, its role in Western astronomy began earlier in providing time to ships in Sydney Harbour. The Observatory Hill itself, being the highest natural site in Sydney Cove, is believed to have played an important role in the culture and lives of the Gadigal people that stretches back through the millennia. Today, the Sydney Observatory, within the Powerhouse group of museums, brings together communities and stories across arts, sciences, design and technologies to explore, inform and entertain.

Our visit begins with an exploration of the grounds and exhibitions at the Observatory. There will be some naked-eye star gazing, a look at the Carte du Ciel exhibit of international collaboration to photograph and catalogue the entire night sky, a walk through the Observatory building which housed the Government Astronomer with his family, and finally up some narrow staircases to the Observatory's domes for spectacular evening views across Sydney Harbour and, weather permitting, the southern skies through historic and modern telescopes.

Practical notes: Meet at the Observatory gates at 6.00 pm
This evening visit involves walking on lawns, pathways, uneven ground, stairs etc.
The Observatory can be accessed by public transport and vehicles,
see https://powerhouse.com.au/visit/sydney-observatory#plan-your-visit for visitor information and maps.

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Southern Highlands Branch Meeting: 2026-3 — 16 April 2026

A tale of two sites: Excavating at Pella in Jordan and Zagora in Greece

Dr Paul Donnelly
Deputy Director and Director Exhibitions and Collections
Chau Chak Wing Museum
University of Sydney

Date: Thursday, 16 April 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: Dr Paul Donnelly has been participating in excavations at Pella in Jordan since late 1989 and Zagora in Greece since 2012. This talk will focus on his activities in the most recent seasons for 2026 in Pella and 2025 in Zagora.

Dr Paul Donnelly is the Deputy Director and Director of Exhibitions and Collections at the Chau Chak Wing Museum at the University of Sydney. He has worked in curatorial roles for 30 years. He excavates at Pella in Jordan, which was the focus of his PhD research (2006) and is the Co-Director of the University's Zagora Archaeological Project on Andros in Greece.

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Contributed Article

Remembering a *Very* Distinguished Fellow

A Personal Recollection

Governors of New South Wales have been patrons of the Royal Society of New South Wales from its beginnings. They have all contributed in one way or another for over 200 years. However, the 37th is the only one to be made a Distinguished Fellow of the Society — and what a worthy recipient.

Professor the Honourable Dame Marie Bashir AD CVO DistFRSN* was an exceptional person in so many ways. She was gracious, thoughtful, caring, humble and down-to-earth.

I first met her at a book launch in the early 2000s. On a rainy afternoon, I was waiting in Macquarie Street outside Parliament House to welcome her. The car pulled up, the door opened, she was sitting in the rear in stockinged feet with various pairs of shoes with different heel heights on the floor around her, and she asked me which ones she should wear. I was somewhat taken aback by this unexpected turn of events, as this was my first encounter with her. She chose the mid-heel ones.

It happened to be her birthday – 1 December – and Government House had given strict instructions not to mention her birthday and to ensure that she left on time because her husband, Sir Nicholas Shehadie, had organised a surprise birthday dinner for her with the family. However, we were unaware that she had decided at the last minute to go on to the Art Gallery of NSW for another function. I am sure her beloved Nick would not have been happy.

Speaking of book launches, she always read the book beforehand or at least enough of it to be sure she could launch it in her inimitable style. As Chancellor of the University of Sydney, she launched Roy McLeod's book on Archibald Liversidge – a substantial tome – at a time when the NSW Government was in a state of flux. She arrived on time, greeted everyone with her warm smile, and made a witty speech referencing Liversidge's association with the University (she could not have in any probability read the whole book) and mentioned nothing of the situation she faced in her other role, even when she was asked. At that moment, the book launch was what mattered to her.

As Patron, she and Sir Nicholas usually attended the Society's Annual Dinner. On one of these occasions, when John Hardie was President, over dinner, they got talking about World War II. John mentioned that his father, Graeme, had been at El Alamein and was a Rat of Tobruk. She said she would like to meet him. John never gave this another thought until several months later, when there was a telephone call from Government House, and to his surprise, arrangements were made for morning tea at the House. In passing, John had mentioned that his father was rather fond of a glass of champagne. As morning tea was being served – tea, coffee, tiny sandwiches and cakes – a silver salver arrived with two flutes of champagne. One each for her and Graeme. He was overcome.

At one of the University of Sydney Vice-Chancellor's Christmas parties, Dame Marie arrived quite late. (Although she was not the host, she seemed genuinely regretful.) Liz Cartwright, who looked after her at the University, asked us to go and have a chat with her. The first thing she did was to apologise for the rather heavy security presence. At that time, she was the Administrator of the Commonwealth and hence Head of State. She told me she had been at a function at Royal Prince Alfred Hospital and had been delayed, and that she was going on to yet another function. I commented that I did not know how she did it. She replied that she always thought of her Aunt Rosie, who told her, 'put your feet together, your head high and just get on with it'.

At a Government House reception, it was getting quite late, and Sir Nicholas and most of the guests had departed. We were saying good night to the Governor, and she remarked that Nick had commented that Sir Roden Cutler would turn in his grave because she did not follow protocol that the Governor should be the last to arrive and the first to leave. She said that she did not mind being the last to arrive, but the first to leave was a different story. She then enjoyed a glass of red wine and continued chatting.

Much has been made about her love of music. Not only Bach and Beethoven, but also Wagner. She usually saw at least one Ring Cycle somewhere in the world every year. You often ran into her at concerts in the Opera House or City Recital Hall. No fuss, just another concert goer, although with good seats. Once spotted, she always acknowledged you. At a concert in the Federation Concert Hall in Hobart, she was in the official party, and I was in the row behind. As she returned after the interval, she said, 'How very nice to see you so far from home'.

Dame Marie could also be quite insistent. One Christmas Eve, when I was at the George Institute for Global Health, I got a message that someone called Marie Bashir had rung and could I ring

her back. I thought it was a joke, but I rang the number I had been given anyway. Sure enough It was true, and she asked if she could get a copy of a particular research paper we had published. Although I did not have a clue how to get hold of it, I promised I would find it. She then asked if she could have it that day, as she wanted to read it over the Christmas holidays. After several phone calls, I got hold of the paper and walked it up to her office in the Chief Secretary's building. Expecting to leave it at reception, I was surprised when she came out of her office and thanked me personally. In the new year, I received a note to say how much she appreciated my efforts and how useful the paper had been.

There are many memories, and I could go on and on, but I won't. I hope these words go some way towards capturing her grace, her compassion, her humility and her sense of fun. She genuinely cared about people regardless of their station in life, where they came from or what their beliefs were. She was special.

Vale Dame Marie. Requiescat in pace.

Bruce Ramage MRSN
4 February 2026

*She once told Margaret Throsby in a radio interview that the title 'Dame' was not one of her favourites.

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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.

Presentation Report: 1338th OGM and Open Lecture— 11 February 2025

How many Australians should there be?
Dr Abul Rizvi

Former Deputy Secretary, Department of Immigration
and Expert Commentator

An audience of over 60 people who attended the Society's 1338th Ordinary General Meeting at the State Library of NSW on 11 February 2026 enjoyed a comprehensive, informative, and highly-accessible presentation titled 'How many Australians should there be?', on the thorny topic of

immigration in Australia, delivered by Dr Abul Rizvi PSM FRSN, former Deputy Secretary of the Department of Immigration and now expert commentator.

In this insightful session, Dr Rizvi examined the state of Australia's immigration policy, underscoring the absence of a long-term, strategic plan from any major political party. He clarified how population growth is measured, distinguishing between natural increase and net overseas migration, and highlighted the frequent confusion between permanent visas and actual population movements. Since the pandemic, net overseas migration has surged while permanent migration has remained steady, creating policy challenges that are rarely addressed in public debate. Dr Rizvi noted that immigration is often blamed for housing shortages and inflation, despite limited evidence, and went on to argue that policy should be informed by both aggregate demographic impacts and the design of specific visa categories. He explained that higher net migration slows population ageing and delays the point where deaths exceed births, keeping Australia's population younger than many developed nations.

The global context was also considered, with Australia's trading partners facing shrinking populations and increased competition for skilled migrants. The Q&A session that followed his presentation explored topics such as the humanitarian program, regional migration, the economic role of international students, and the need for transparent communication about immigration's benefits and costs. Dr Rizvi stressed the importance of a clear national vision and plan, warning that without one, Australia risks reactive and short-sighted policy decisions. He concludes that population projections follow a parabola—rising, peaking, and eventually declining—and that the timing and height of the peak depend on net migration settings.

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. The YouTube video has proven to be one of the Society's most popular, attracting over 1,700 views within the first four days of its release.

Lindsay Botten
Vice-President, RSNSW

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Southern Highlands Branch Report

Presentation Report— 19 February 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

This outstanding presentation by Pall Thordarson opened the Southern Highlands Branch lecture series for 2026. 'The age of RNA' was an excellent title for this lecture. We now know that our

society has reached the point where we can make and even deliver RNA molecules to our bodies. The world witnessed the power of this technology with mRNA-based COVID-19 vaccines in 2020.

Pall stated that our current understanding is 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'. He spoke of two facets of the ongoing RNA revolution: biology and medicine. As regards the new insights into biology, he feels that we are slowly concluding that RNA roles go way beyond that of a 'messenger'. RNA roles now include those of primary signalling as well as forming the architectural building blocks of the cell.

The revolution in *medicine* is equally transformative. Vaccines are just the beginning in Pall's view. Highly effective and cheaper RNA-based cancer drugs are now in late-stage clinical trials. Already, the RNA-based CRISPR gene-editing method has been employed to treat rare, lethal genetic disorders in infants.

Professor Thordarson has published over 150 refereed papers in journals such as *Nature* and *Nature Nanotechnology*. He has also received a number of awards, the most recent being the Royal Australian Chemical Institute (RACI) Leighton Memorial Medal in 2025. 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. What an inspiring lecture!

Anne Wood FRSN
Chair, RSNSW Southern Highlands Branch

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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 1,620 subscribers, while the 230 full-length videos and 'shorts' that are online have received almost 192,000 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.

YouTube recording of the presentation from the 1338th Ordinary General Meeting (11 February 2026) on *How many Australians should there be?*, delivered by Dr Abul Rizvi PSM FRSN, former Deputy Secretary of the Department of Immigration and now an expert commentator on such matters. 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 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 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.

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.

Edited by: Lindsay Botten FRSN, Vice-President, Royal Society of New South Wales