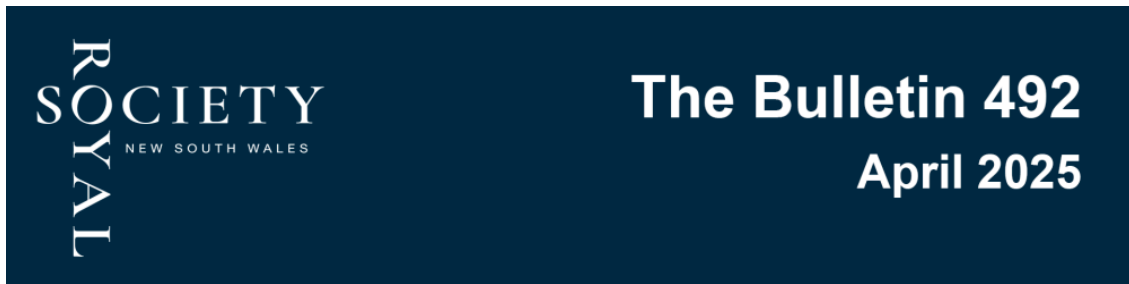


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A message from the President

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

This is my 42nd and final column written as RSNSW President for the Bulletin, having penned my first for Bulletin 451, issued in May 2021. Australia's COVID-19 vaccine rollout had begun in February 2021. Multiple lockdowns after the arrival of the Delta variant in July were yet to be triggered.

And yet, somewhat boldly, I wrote in Bulletin 451:



As President I propose to amplify the energy and firepower of our entire membership so that together we can better contribute, as an independent and authoritative voice, to the advancement of knowledge and informed debate on critical challenges and transitions.

I want to capture and retain our innovations that were successful during the pandemic, especially the extension of our outreach beyond Sydney and NSW through on-line events. That said, I also want our events to return to being held live as soon as practicable. Face-to-face meetings will be more important than ever for building stronger bonds between us, generating and debating new ideas, and facilitating a more natural flow of conversation.

With live meetings in mind, small and large, I intend to work hard to secure dedicated premises in Sydney to give the Society the permanence, stability, and presence we need to take our renaissance to the next level. I also intend to bring people from all sorts of backgrounds and from different regions into the Society so that it reflects the communities we serve. We have begun discussions about establishing a branch in Western NSW,

having seen the success of the Southern Highlands and Hunter Branches.

Fast forward four years and I am proud to say we have achieved these goals. With its focus on fostering intellectual rigour for national good, the Society has hosted a prodigious number of individual presentations and panels, four RSNSW and Learned Academies Forums, ten Ideas@theHouse, and many events in partnership with other Societies. We launched the Western New South Wales and New England North West Branches, launched our social media sites, and appointed a Communications Officer and three Distinguished Fellows. We restructured the RSNSW Annual Awards including the introduction of two new Career Excellence Medals, four new Discipline Awards and the Early Career Research and Service Citations. We have formulated and begun to implement our 2024–2029 Master Plan, published eight issues of the Journal and Proceedings, launched the first book about the origins of the Society, written by historian Anne Coote, and now, in April 2025, we will have published 42 Bulletins and hosted four Annual Dinners. Our 2022 Dinner (we could not hold one in 2021), in the Great Hall at the University of Sydney, formed part of the Society's Bicentennial celebrations that also included the Garden Party at Government House, reception at Admiralty House, and our exhibition, NEXUS, at the State Library of New South Wales. This list is not exhaustive.

Nearly all RSNSW events and meetings during 2021 were held online. We continue to harvest the fruits of transitioning to online technologies as evidenced by our recently launched new website and the growing reach of our YouTube Channel. We held many of our in-person events in Sydney in the State Library of New South Wales (SLNSW), Government House, or in spaces provided by universities, other organisations, or offices of our Council members. Each of our Branches has been afforded access to no- or low-cost venues by local institutions. The need to own and maintain physical spaces to conduct governance meetings and the administrative work of the Society is no longer necessary given the transformational impact of modern meeting and communications technologies.

In lieu of securing premises to preserve and make the RSNSW Collection accessible, we donated the RSNSW Collection to the SLNSW. The twelve months of work to review and transfer the archives and books held at 121 Darlington Road began in December 2023. Under the Agreement signed on 7 December 2023, the SLNSW agreed to accept the donation, identify it as the 'RSNSW Collection', catalogue and make it available to scholars and readers. The SLNSW will make its premises available to the Society for meetings and events at rates charged to internal departments. The State Library has devoted an enormous resource to quarantining and conserving the materials from Darlington Road, including handwritten Council Minute books. I thank all RSNSW volunteers and SLNSW staff who worked to secure the future of our collection of historical books, journals, and monographs, along with other papers including research material from members, documentation about the running of the Society, and physical assets including paintings.

We ensured financial stability for the Society through strong fiscal management and the \$108,000 sponsorship per annum via the Office of the NSW Chief Scientist and Engineer under the banner of the New South Wales Research Attraction and Acceleration Program (RRAP). Initially funded from FY2022 – FY2024, the term was later extended to FY2027. This provides a vital pillar for the Society's financial health. I commend and thank Hugh Durrant-Whyte, NSW Chief Scientist and Engineer, and the NSW State Government for their support.

Our 2024-2029 Master Plan includes the [RSNSW Future Fund Policy](#), which lays out a plan to raise \$5 million in capital to underpin the Society's longer-term future. The current Future Fund balance of just over \$50,000 is two orders of magnitude less than that. Much remains to be done. It is likely that in the current economic environment, most of the contributions will come from Bequests. The Society's website provides [relevant information](#) about leaving such a gift.

The advances made during the four years of my Presidency would not have been possible without the tower of strength provided by the Council and its Committee members, and our Branch Committees. I thank all members who volunteered their time, talent and valuable ideas to the life of the Society. Meeting and learning about so many of you will be a long-treasured highlight for me from my time as President. It was wonderful to see so many members among the 250 guests at our [Annual Dinner and Award Presentations](#) held in March 2025 at Parliament House.

I acknowledge and thank our patron, Her Excellency the Honourable Margaret Beazley AC KC, for her beneficent support of the Society throughout her tenure as Governor of New South Wales, evidenced most recently at our twelfth Ideas@theHouse in February and the Annual Dinner in March.

My four-year term as President will end in accordance with the Society's Act and Rules at the conclusion of our Annual General Meeting on 2 April. I look forward to one final year on the Council as the Immediate Past President.

I salute two Office-Bearers who will be retiring from Council at the AGM. Donald Hector has made an enormous contribution to the Society, serving as Secretary for the past two years, and in many other formal governance positions during the past fourteen years, including as President from 2012–2015. Don will continue to serve on the Editorial Board of our Journal and other Committees.

Peter Shergold served as Vice-President for the past two years. Among his many contributions is the revised Rule 10 which outlines the new criteria for Fellowship amended to encourage nominations from highly accomplished leaders in the private, public, community and creative arts sectors. Peter will continue to contribute as a member of the Fellows and Members Assessment Committee.

We have an accomplished line-up of nominees for Office-Bearer and Council positions as provided in the information about electronic voting open from 10 – 31 March. The positions of President (Christina Slade), Vice-President (Lindsay Botten), Secretary (Trevor Brown), Librarian (Stephen Garton) and Webmaster (Graham Town) are uncontested. Each Branch has also met and appointed its Committee, Committee Chair, and representative on the Council. We can have confidence that the Society is in good hands and will flourish well into the future.

It has been my privilege and honour to serve the Society and its membership—a group that understands the ever-more pressing need to make meaningful contributions to our community by enhancing public discourse not just for the select few but for everyone.

Susan Pond AM FRSN FTSE FAHMS

[President](#)

[Royal Society of NSW](#)

For your diary

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

- [Frontiers of Science Forum 2025](#) (Friday, 28 March 2025, 5.00 pm for 6.00–9.30 pm AEDT, Concord Golf Club, 190 Majors Bay Road, Concord NSW) *Exploring major discoveries and theories in physics, mathematics, biology, and chemistry*. Speakers include: Associate Professor Benjamin Pope, Macquarie University; Emeritus Professor Liz Harry, University of Technology Sydney; Associate Professor Helen Georgiou, University of Wollongong; and Dr Vipul Agarwal, UNSW Sydney
- [158th Annual General Meeting and 1330th Ordinary General Meeting and Open Lecture](#) (Wednesday, 2 April 2025, 6.00 – 8.00 pm AEDT, Michael Crouch Room, Mitchell Building, State Library of NSW, Shakespeare Place, Sydney), *Engineering the Future*, Professor Hugh Durrant-Whyte FRS FREng FAA FIEEE HonFIEAust, NSW Chief Scientist and Engineer
- [Lunchtime series: Provocations and Inspirations—April 2025](#) (Tuesday, 15 April 2025, 12.30–2.00 pm AEST, Union, University and Schools Club, 25 Bent Street Sydney), *Extreme Earth: Antarctica's climate warning for the future and what we can all do about it*, Professor Christian Turney, Pro Vice-Chancellor (Research), University of Technology Sydney
- [Southern Highlands Branch Meeting 2025-3](#) (Thursday, 17 April 2025, 6.30–7.30 pm AEDT, RSL Mittagong, Carrington Room), *Using Precision Medicine to Eradicate Childhood Cancer*, Associate Professor Mark Cowley, Deputy Director, Enabling Platforms and Collaboration, Children's Cancer Institute
- [1331st Ordinary General Meeting and Open Lecture](#) (Wednesday, 7 May 2025, 6.00–7.30 pm AEST, Zoom webinar) *Rethinking Mobility in a Changing Climate*, Scientia Professor Jane McAdam AO FASSA FAAL, School of Law and Justice, UNSW Sydney
- [Southern Highlands Branch Meeting 2025-4](#) (Thursday, 15 May 2025, 6.30–7.30 pm AEDT, RSL Mittagong, Carrington Room), *Rare or Everywhere – Life in a Hostile Universe*, Professor Geraint Lewis FRSN FLSW, Sydney Institute of Astronomy, School of Physics, University of Sydney
- [Hunter Branch Meeting 2025-2](#) (Thursday, 15 May 2025, 6.00–7.00 pm AEST, NEX, Newcastle Exhibition and Convention Centre, 309 Kind Street, Newcastle West), *From Test Tubes to Megawatts: How Research Sparked a Battery Business*, Professor Thomas Nann, Founder and Chief Executive Officer, Allegro Energy, Newcastle.

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News

RSNSW 2025 Annual Dinner and 2024 Awards Presentations

The Society's [2025 Annual Dinner and Awards Presentation](#) was held in the Strangers' Room of Parliament House, Sydney on the evening of Friday, 7 March 2024, under the kind patronage of the Honourable Stephen Kamper MP, Minister for Jobs and Tourism, Minister for Multiculturalism, Minister for Lands and Property, and Minister for Sport.

It was a wonderful occasion attended by 250 members and friends of the Society, including the [2024 Award winners](#) (shown in the adjacent image) who were presented with their awards by Her Excellency the Honourable Margaret Beazley AC KC, Governor of New South Wales and the Patron of the Society, and the President, Dr Susan Pond AM FRSN.



The annual dinner enjoyed significant and generous support, including a platinum sponsorship from the national research infrastructure capability, Bioplatforms Australia, gold sponsorships from each of UNSW Sydney and the University of Sydney, and a silver sponsorship from Quantum Law. In addition, there were tables of 10 organised by the University of New England, Western Sydney University, the University of Newcastle and its School of Biomedical Science and Pharmacy, and the Faculty of Science at the University of Sydney. Such sponsorships are vital to the event's success, underwriting the participation of the award winners, their guests, and dignitaries while enabling a significant surplus of approximately \$25,000 to be returned to the Society.

Professor Georgina Long AO FAHMS FAA, the 2024 joint Australian of the Year, who is recognised for her ground-breaking therapies for melanoma, delivered a thought-provoking after-dinner lecture titled *Advancing Science through Innovation and Equity*. A summary of her talk is shown below.

I believe in the power of scientific innovation, especially in cancer research, where groundbreaking advancements I have helped pioneer—like the ABC (brain) trial and the neoadjuvant NADINA trial—have transformed treatment approaches. By challenging conventional methods and embracing bold new strategies, my colleagues and I have worked alongside talented colleagues in my specialty to significantly improve survival rates for melanoma patients. Continuous learning and pushing boundaries are central to my work, and I firmly believe that courage drives innovation in medicine.

As a passionate advocate for melanoma prevention, I emphasise the urgent need for cultural change around sun safety, particularly among young people. Social media continues to glamourise tanning, and I call out its dangerous influence—because the reality is that over 90% of melanoma cases in Australia are preventable. My goal is to make sun safety as instinctive as wearing a seatbelt, ultimately striving to drive melanoma rates to near zero.

Beyond science, I speak openly about the persistent gender inequalities in medicine, research, and leadership. As a parent of three, I've navigated career challenges while also witnessing unconscious bias that undermines women's contributions. I urge workplaces to create environments where women feel empowered to share ideas, take risks, and lead with confidence—rather than being sidelined or doubted.

My message is one of courage—the courage to question the status quo, to embrace failure as a step toward progress, and to amplify women's voices in every field. I leave you with a call to action: recognise and challenge bias, create space for a broad range of perspectives, and ensure that progress toward equality is not delayed another 30 years. True impact comes not just from individual achievements but from the legacy we leave for future generations.

The Society gratefully acknowledges the outstanding work of the organising committee, chaired most ably by Ross Griffith FRSN, and including Pamela Griffith OAM FRSN, Selena Griffith FRSN. Marian Kernahan, Zile Yu MRSN, and Joanna Mendelssohn FRSN.

Some images from dinner taken by the Salty Dingo photographer are available [at this link](#) for viewing and downloading. A separate folder of [images of the Award winners](#) is also available.

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RSNSW Council Elections 2025

The 2025 Elections for the Council of the Royal Society of New South Wales are being held over a three-week period from noon on 10 March to noon on 31 March, with the results to be announced at the [Annual General Meeting](#) (AGM) of the Society on the evening of 2 April 2025.

The election is being held by electronic ballot.

All Members, Fellows, and Distinguished Fellows who were financial on 10 March would have received an email from the electronic ballot firm, ElectionBuddy Elections, at midday on 10 March, or shortly thereafter. This email includes a unique ballot link that provides a random, secret access key for each voter. Voter anonymity is assured by ballot settings that ensure that voter choices cannot be linked to any voter.

If you believe you are *eligible to vote but have not received such an email*, please email the [Society's election coordinator](#). Before writing, please check your inbox carefully, and also your spam folder, for an email from ElectionBuddy Elections. Reminder emails for those who have not voted are scheduled for midday on Friday 21 March, Friday 28 March, and Sunday 30 March.

The ballot provides for the:

- Procedural Business of the Annual General Meeting
 - Confirmation of the Minutes of the 157th Annual General Meeting
 - Confirmation that the Annual Report of Council and the Financial Statements for 2024 be received
 - Confirmation of the proposed Auditors for 2025
- Election of Office-Bearers and Council members

Election of Office-Bearers and Members of Council

Listed below are the nominations for the incoming Council received by the Secretary by 5.00 pm AEDT on Friday, 28 February 2025.

For those Office-bearer and Councillor roles for which there are more nominees than available positions, an election is required.

For roles in which there are the same number or fewer nominees than there are available positions, the candidates will be declared elected at the AGM without the need for a ballot.



Council Elections 2025
Voting: 10–31 March

In all cases, candidates were invited to provide an optional statement outlining how their expertise and experience fit them for these roles and will benefit the Society. These statements are available through the links below and are provided as information on the electronic ballot form.

Office/Role	Candidate
President	Christina Slade FRSN (elected unopposed)
Immediate Past President	Susan Pond AM FRSN (ex officio)
Vice-President	Lindsay Botten FRSN (elected unopposed)
Secretary	Trevor Brown FRSN (elected unopposed)
Librarian	Stephen Garton AM FRSN (elected unopposed)
Webmaster	Graham Town FRSN (elected unopposed)

Councillors	Rosalind Croucher AM FRSN
(2 vacancies)	Davina Jackson FRSN
	Sarah Jones FRSN
	Toner Stephenson MRSN
	Zile Yu MRSN

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Merlin Crossley AM FRSN on Higher Education

For those amongst the RSNSW membership who follow universities and are interested in university affairs, Society Fellow **Professor Merlin Crossley AM FRSN**, Deputy Vice-Chancellor (Academic Quality) at UNSW Sydney, writes a regular (approximately monthly) opinion column for the online news, analysis, and opinion website, [Future Campus](#), that is focused on tertiary education and which is published approximately three times a week.



Merlin's interesting and thought-provoking articles regularly explore themes of leadership, education, the challenges faced by universities, policy matters, and navigating change. To catch up on Professor Crossley's back articles in Future Campus, please use the following [search link](#).

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Events

158th AGM and 1330th OGM and Open Lecture

158th Annual General Meeting and 1330th Ordinary General Meeting

Date: Wednesday, 2 April 2024

Time: AGM 6.00–6.30 pm; OGM: 6.30–8.00 pm;

Optional Supper: 8.00–9.30 pm AEDT

Venue: (*) AGM/OGM: Michael Crouch Room, Mitchell Building, State Library of NSW, Shakespeare Place, Sydney

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

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

Supper: An optional supper will be available at the Mordeo Bistro and Grill on Deutsche Bank Place (cnr Hunter and Phillip streets), Sydney following the OGM

Registration: AGM/OGM: [Please register](#) by 2.00 pm AEDT on Tuesday, 1 April 2025

Supper: [Please register](#) by 5.00 pm AEDT on Friday, 28 March 2025

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

Supper: \$60 per person (non-refundable) for a fixed menu meal, with drinks extra.

Live streaming: The meeting will be [live streamed as a Zoom webinar](#)

All are welcome, although only voting members of the Society may attend the AGM



158th AGM and 1330th OGM
Council Elections 2025
10–31 March

Please note the following changes and use the following links.

- 1. The face-to-face event is now in the Michael Crouch Room on Level 1 of the SLNSW Mitchell Building**
- 2. Live streaming via Zoom will be available**
- 3. A post-meeting supper at Mordeo, requiring a separate registration, has been organised.**

REGISTER NOW

**for the face-to-face AGM/OGM
by 2.00 pm AEDT on 1 April**

REGISTER NOW

**for the optional supper at Mordeo
by 5.00 pm AEDT on 28 March**

LIVE STREAM

**Join the live stream via Zoom
at 6.00 pm AEDT on 2 April**

Annual General Meeting

Rule 4(c) of the Society's Rules requires that an Annual General Meeting (AGM) be held in April of each year. The formal business of the Annual General Meeting, including the election of Council Members, is conducted via an **electronic ballot** in accordance with Rule 18.

Members, Fellows, and Distinguished Fellows, who are financial at the commencement of the ballot, will have received an email from the Society's Election Coordinator via the electronic balloting company, Election Buddy. This email will include a unique ballot link that provides a random, secret access key for each voter. Voter anonymity is assured by ballot settings which ensure that voter choices cannot be linked to any voter.

The **ballot** will run from **12.00 noon AEDT on Monday, 10 March to 12.00 noon AEDT on Monday, 31 March** and will address:

- Procedural Business:
 - Confirmation that the [Minutes of the 157th Annual General Meeting](#) be accepted as a true record

- Confirmation that the [Annual Report of Council and the Financial Report for the year ending 31 December 2024](#) be received (*)
- Confirmation of the proposed Auditors for 2025
- [Election](#) of Office-bearers and Council members.

Information about the election of Office-bearers and Councillors is available from this [news post](#).

The [Agenda](#) for this meeting is now available from the [Meetings page](#) of the website.

Ordinary General Meeting

The 1330th Ordinary General Meeting will follow the Annual General Meeting and includes a presentation by Professor Hugh Durrant-Whyte FRS FREng FIEEE Hon FIEAust, the NSW Chief Scientist and Engineer.

The [Agenda](#) for this meeting is now available on the [Meetings page](#) of the website.

Engineering the Future

Professor Hugh Durrant-Whyte FRS FREng FAA FIEE HonFIEAust

NSW Chief Scientist and Engineer



Summary: Professor Durrant-Whyte has worked as an engineer in academia, industry and government for over forty years during which time he has witnessed and been an active participant in great change – driven primarily by the growing power of information and communication technologies. He believes that the next forty years of engineering will deliver even more profound change for humanity through the intersection of four technology domains – Digital, Biology, Materials and Energy:

- The digital and information age is still in its infancy. The positive potential of artificial intelligence (AI) and robotics to enable more productive lives, to make better decisions and to undertake tasks not yet possible, is just beginning. While mindful of the perils, Australia stands to benefit substantially from these developments – from increased and bespoke manufacturing activity, through smarter defence, to managing fragile ecosystems. New physics, in quantum, photonics and organics, will also drive unprecedented advances in information technology hardware, from computing to sensing and communications.
- The revolution in biology in the last two decades rivals that of the early information age. Biology is increasingly an engineering discipline as it becomes more concerned with design, computation and manufacturing. Engineering is already at the heart of new and developing biology industries from RNA to synthetic meats. Engineering thinking is also driving new directions in biology: the use of computational AI in protein structure prediction; understanding life as a complex web of protein nano-machines; and the use of tools from synthetic biology and gene editing to create new proteins and organisms. I believe that as biology becomes an engineering technology, its impact will surpass even that of the information age.
- Materials science has changed beyond all recognition from forty years ago: what was once mainly about metal forming and finishing, is now about nano-structures and internal architectures, meta-materials and additive manufacturing, and about

carbon and novel organics. This has been driven by a new understanding of materials at the atomic scale, by additive manufacturing technologies, and by the increasing use of novel chemistries – both organic and inorganic. Materials science is increasingly the key to progress across many engineering disciplines: from modern aerostructures and buildings, through energy storage and transmission, to silicon and compound semiconductors for sensing and computing.

- The existential threat of climate change has brought a huge focus on new ways of producing, storing and managing energy. Renewable energy, in particular, is seeing unprecedented innovation and investment in all areas: from harnessing solar and wind generation of energy, to storage in batteries and hydrogen derivatives, to new methods of managing decentralised electricity grids. This, in turn, is driving a revolution in foundational technologies of electrical engineering, materials chemistry and computation. Global investment is also unprecedented and with this provides an opportunity for Australia to create a significant national industry in the coming decades.

This talk will discuss this future vision of engineering.

Hugh Durrant-Whyte is the NSW Chief Scientist & Engineer and Natural Resources Commissioner.

Previously from:

- 2016–18, Hugh was Chief Scientific Advisor to the UK Ministry of Defence
- 2014–16 and 2002-2010, he was a Professor and ARC Federation Fellow at the University of Sydney
- 2010–2014, he was CEO of National ICT Australia (NICTA)
- 1995–2010, he was Director of the ARC Centre of Excellence for Autonomous Systems and of the Australian Centre for Field Robotics (ACFR).

Hugh is a world-leading authority on machine learning and robotics and their applications in areas that include cargo handling, mining and defence. He has published over 300 research papers, graduated over 70 PhD students, and has won numerous awards and prizes for his work, including being named 2010 NSW Scientist of the Year and 2008 Engineers Australia NSW Engineer of the Year.

In his career, he has worked with many major companies and has co-founded three successful start-up companies. He is particularly well known for his work with Patrick in delivering the automated container terminals in Brisbane and Port Botany, and for his work with Rio Tinto in pioneering and delivering the automated “Mine of the Future”. He is an honorary Fellow of Engineers Australia, a Fellow of the IEEE, a Fellow of the Royal Academy of Engineering, a Fellow of the Australian Academy of Science, and a Fellow of the Royal Society of London.

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Lunchtime series: Provocations and Inspirations — 15 April 2025

Extreme Earth: Antarctica’s climate warning for the future and what we can all do about it

Professor Chris Turney

Pro Vice-Chancellor (Research)
University of Technology Sydney



Date: Tuesday, 15 April 2025, 12.15 for 12.30 – 2.00 pm AEST

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 on Tuesday,
8 April 2025. Places are limited

Flyer: downloadable via [this link](#)

Dress: Smart business casual (jacket preferred)

Cost: \$60 (RSNSW members), \$70 (non-member guests)

REGISTER NOW

**for Provocations and Inspirations
by 2.00 pm AEDT on 8 April**

ENQUIRIES

**by email to
RSNSW Events**

This is the second in a new, exciting series of lunchtime activities that, over a period of 12 to 18 months, will explore a highly complex topic of major importance to Australia today. The aim of the series is to explore the topic in-depth and to identify ways to influence the broader discourse. We want to provoke and inspire action.

Antarctica is the planet's barometer for understanding the impacts of global heating. In this talk, Chris Turney will explore how the vast southern ice sheets serve as both witness and harbinger of our planet's changing climate. By exploring ice core data spanning thousands of years, glacial retreat and shifting marine ecosystems, we can decode the story of the Earth's past and gain insights into our possible futures. Chris will highlight recent research expeditions that have revealed the worrying acceleration in ice mass loss, rising sea levels and temperatures, and the implications for communities across Australia and worldwide. But in this most extreme of environments, there is also hope. Not just as a warning of what might come to be but how this vast region might help avert the worst impacts of a changing climate... and what we can all do to take action, today.

Professor Chris Turney is an internationally recognised climate and Earth scientist at the University of Technology Sydney. A former Australian Research Council Laureate Fellow, Chris has pioneered the development of new records of climate, environmental and carbon-cycle changes from the tropics to the poles. By extending instrumental observations in remote and extreme environments back over millennia, his work has plugged key knowledge gaps around the world to reveal new insights into the Earth system and modes of variability, helping identify tipping points and future impacts. Passionate about accelerating the transition to 'net-zero' carbon emissions, Turney is leading the development and deployment of Australian technologies and ideas globally at speed and scale. To help make this a reality, Chris was a Founding Director, Inventor and Scientific Advisor to the New Zealand-based cleantech company CarbonScape which has developed technology to convert plant material into locally-produced, sustainable, carbon-negative bioengineered graphite for lithium-ion batteries (www.carbonscape.com). He is also a non-Executive Director of Cicada Innovations, Australia's leading incubator of deep tech ventures, and the NSW Government's Environment Protection Authority (EPA). Chris is

also the podcast host for 'Unf*cking the Future' with Imagine Entertainment, exploring the sobering climate reality our planet faces today and the common-sense solutions that can be implemented now to save it.

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Southern Highlands Branch Meeting 2025-3

Using Precision Medicine to Eradicate Childhood Cancer

Associate Professor Mark Cowley

Deputy Director, Enabling Platforms and Collaboration
Children's Cancer Institute



Date: Thursday, 17 April 2025, 6.30–7.30 pm AEST

Venue: RSL Mittagong, Carrington Room

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

All are welcome

Summary: Cancer is the leading cause of disease-related death for young people (0-18) in the developed world, with 1000 newly diagnosed cases every year in Australia (400,000 worldwide), making this a significant health concern. Every child's cancer is unique, making it difficult to work out the optimal treatment plan for each child, using existing clinical tests. At the Children's Cancer Institute and the Kids Cancer Centre at Sydney Children's Hospital, Randwick, we have created the Zero Childhood Cancer Program, which is the world's most comprehensive national-scale Precision Medicine program to tackle childhood cancer. We have shown that by deciphering the patient's cancer genome in real-time (that is, identifying all of the genetic alterations that drive that patient's tumour), and matching each patient to a specific targeted therapy, we can more than double survival in Australian children with the worst prognosis cancers. Now we are seeking to understand the benefits of Precision Medicine for all Australian and some NZ children with cancer.

In this lecture, Professor Cowley will describe our innovative approaches to Precision Medicine, how this helps us understand the molecular basis of almost every tumour, and how this leads to better clinical outcomes. As a computational biologist, Mark Cowley will also touch on how we are harnessing Artificial Intelligence and new hybrid cloud computing technology to handle these massive, sensitive datasets.

Mark Cowley is the Deputy Director of the Children's Cancer Institute in Sydney and leads the Computational Biology Group there. He is also an Associate Professor at UNSW Medicine and co-leads several significant initiatives, including the Luminesce Alliance Data Enabling Platform and the ACRF Childhood Cancer Liquid Biopsy Program. Known internationally for his expertise in genomics and precision medicine, Mark focuses on the rapid analysis of children's cancer genomes to design personalised cancer care, a key component of the ZERO Childhood Cancer program. He also develops liquid biopsy diagnostic methods and novel data analysis approaches to enhance cancer treatment and research. Before joining the Children's Cancer Institute in 2018, Mark spent 11 years at the Garvan Institute, where he developed bioinformatics methods for genomic medicine, particularly for rare genetic diseases and rare adult cancers.

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1331st OGM and Open Lecture

Rethinking Mobility in a Changing Climate

Scientia Professor Jane McAdam AO FASSA FAAL

School of Law and Justice

UNSW Sydney

Date: Wednesday, 7 May 2025, 6.00–7.30 pm AEST

Venue: [Zoom webinar](#)

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

Entry: No charge

All are welcome



LIVE STREAM

**Join the live stream via Zoom
at 6.00 pm AEST on 7 May**

ENQUIRIES

**by email to
RSNSW Events**

Business of the Ordinary General Meeting

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

Summary: Every second, someone is displaced by a disaster. Each year, many more people are displaced internally by disasters than by conflict – the vast majority in the Asia-Pacific region. Climate change will amplify the problem as worsening cyclones, floods, bushfires, droughts and food insecurity force millions from their homes, potentially rendering some areas permanently unsafe. Most people will move within their own countries, including through evacuations, but some may be displaced across borders. Some may not be able to move at all; yet others may be displaced multiple times. When it comes to legal and policy responses to climate mobility, there is no one-size-fits-all approach. While the challenges of addressing climate change and disasters are immense, much can be done to alleviate displacement and its human costs – if we act now. This address will examine how law and policy is responding to the challenge of climate mobility at a time when every region of the world is being impacted by more frequent and intense disasters. What do affected communities want? How could greater preparedness lead to greater protection? How can migration itself be a form of adaptation to climate change?

Jane McAdam AO is Scientia Professor of Law, Australian Research Council Laureate Fellow and the Founding Director of the Kaldor Centre for International Refugee Law at UNSW Sydney, where she leads the Evacuations Research Hub. She is a Fellow of the Academy of the Social Sciences in Australia and the Australian Academy of Law, and an Honorary Associate of Oxford's Refugee Studies Centre. Professor McAdam publishes widely on international refugee law and forced migration, with a particular focus on evacuations and mobility in the context of climate change and disasters. Her legal analysis has been adopted by courts, governments and UN bodies, and her work has been highly influential in the development of international, regional and national policy frameworks. Professor McAdam serves on multiple international committees and was joint Editor-in-

Chief of the *International Journal of Refugee Law* (2014–24). In 2021, she was appointed an Officer of the Order of Australia (AO) ‘for distinguished service to international refugee law, particularly to climate change and the displacement of people’. She won the Australian Human Rights Commission’s Law Award in 2022 and was the inaugural winner.

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Southern Highlands Branch Meeting 2025-4

Rare or Everywhere – Life in a Hostile Universe

Professor Geraint Lewis FRSN FLSW

Sydney Institute of Astronomy

School of Physics

University of Sydney



Date: Thursday, 15 May 2025, 6.30–7.30 pm AEDT

Venue: RSL Mittagong, Carrington Room

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

All are welcome

Summary: Is there alien life on alien worlds? As we look out into the universe, we find more and more planets, but our search for extraterrestrial life has so far yielded nothing. In this talk, Geraint Lewis will explore our scientific understanding of life in the universe, our continuing search for the signatures of alien civilisations, and address the question of “where is everybody?”. We will find that, whilst life may be common, intelligent life and star-crossing civilisations appear vanishingly rare, and we might be alone in the universe.

Born and raised in Old South Wales and passionate about astrophysics, **Geraint Lewis** spends his time unravelling the dark side of the universe, the dark matter and energy that dominate the cosmos. As a Professor of Astrophysics at the Sydney Institute of Astronomy, his research focuses on cosmology, gravitational lensing and galactic cannibalism, as well as exploring why our universe appears to be just right for complexity and life, publishing more than four hundred research articles. He also undertakes a broad array of award-winning science outreach, bringing the wonders of the cosmos to broad audiences through public speaking and writing, including publishing several world-renowned books on the mysteries of the cosmos.

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Hunter Branch Meeting 2025-2

From Test Tubes to Megawatts: How Research Sparked a Battery Business

Professor Thomas Nann

Founder and Chief Executive Officer

Allegro Energy

Newcastle



Date: Thursday, 15 May 2025, 5.30 pm for 6.00 – 7.00 pm

(AEST)

Venue: NEX, Newcastle Exhibition and Convention Centre, 309 King Street, Newcastle West

Registration: [Registration is required](#) by 2.00 pm AEST on Wednesday, 14 May follow

Entry: Members, \$15; Non-members, \$25; Students, \$5

All are welcome

REGISTER NOW

**for this event
by 2.00 pm AEDT on 14 May**

ENQUIRIES

**by email to the
Hunter Branch Secretary**

Summary: Translating research outcomes into real-world impact is (almost) every academic's dream. However, the journey from academia to business is steep and fraught with challenges. These include navigating negotiations with technology transfer offices, bridging the 'valley of death' to develop the first minimum viable product, and mastering the complexities of running a business—a skillset far removed from the academic environment.

In this presentation, Thomas will share insights into this transition, touching on the science behind his work but also focusing on his journey from academia to leading a rapidly growing business.

Thomas Nann is the CEO and co-founder of Allegro Energy, an Australian company based in Newcastle. Allegro Energy provides sustainable, high-performance energy storage solutions, mainly focussing on long-duration energy storage using Allegro's proprietary microemulsion flow battery technology. Thomas is an experienced speaker, leader, innovator and entrepreneur. He has many years of experience in leading academic research and research organisations, manufacturing facilities and commercialising research outcomes. Climate change mitigation and renewable energy have always been his passion. After completing his PhD in electrochemistry and his Habilitation in nanomaterials, he led numerous academic and industrial projects in the field of renewable energy generation and storage.

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Branch and Program Reports

Report from the Activities with Impact Program

The Society provides an active program of events through its Hunter, New England North West, Southern Highlands, and Western NSW branches, and in Sydney. 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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**Activities
with Impact**

Report: RSNSW 2024 Postgraduate Student and Early Career Research Awards Presentations, 5 March 2025

The Society's 2024 Awards for Postgraduate Students and Early Career Researchers were presented at a ceremony kindly hosted by the University of Technology on the evening of Wednesday, 5 March 2025.

The evening was introduced by Professor Christian Turney, Pro-Vice-Chancellor (Research) and Professor Sally Cripps, Director (Technology) of the Human Technology Institute at UTS, with the awards ceremony and presentations being compered by renowned ABC science journalist and presenter of the ABC Science Show, Robyn Williams AO FRSN, who introduced each of the awards winners and interviewed them on their research following their presentations. The Society's President, Dr Susan Pond AM FRSN, presented the awards.

It is understood that interview excerpts will be presented on the ABC Science Show later this year.

The award winners presenting on the evening of 5 March, together with their research topics, were:

- Mr David Sweeney, University of Sydney (Jak Kelly Award) — *Finding the Galactic Underworld: the hunt for stellar corpses*
- Mr Muyang Li, University of Sydney (Scholarship Winner) — *Measuring and correcting instance-dependent error in semi-supervised learning*
- Mr Joel Sved, University of Sydney (Scholarship Winner) — *Machine Learning Assisted Optimisation of Integrated Silicon Photonic Circuits*
- Ms Linqing Tian, UNSW Sydney (Scholarship Winner) — *Nanoparticles and Drug Discovery*
- Dr Fei Deng UNSW Sydney (Early Career Researcher Citation) — *Advances in CRISPR-based Diagnostics*
- Dr Jennifer Matthews, University of Technology Sydney (Early Career Researcher Citation) — *The Coral Diet: symbiosis, supplements, and survival*
- Dr Cynthia Turnbull, Australian National University (Early Career Researcher Citation) — *Modifying the immune system one protein at a time.*

[Further information about the presenters and their talks](#) is available from the website event notice.

A [gallery of images](#) from the occasion is available from the preceding link and [offline recordings](#) of each of the presentations is available from our [YouTube channel](#).





From left to right: Mr Robyn Williams, Mr Muyang Li, Dr Fei Deng, Dr Cynthia Turnbull, Ms Linqing Tian, Dr Susan Pond, Mr Joel Sved, Mr David Sweeney, and Dr Jennifer Matthews.

Sally Cripps FRSN
Chair, RSNNSW Program Committee

Lindsay Botten FRSN
Webmaster, Royal Society of NSW

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Hunter Branch Report

Presentation Report— 20 March 2025

Our Magnetic Sun

Dr Hannah Schunker

ARC Future Fellow
School of Information and Physical Sciences
University of Newcastle

The first lecture for 2025 hosted by the Royal Society of NSW Hunter Branch was presented at the Newcastle Exhibition Centre on Thursday, March 20th. In this lecture, an audience of about 30 heard from Dr Hannah Schunker about her research on our Sun's magnetic field, carried out over 14 years at the Max Planck Institute in Göttingen, Germany, and since 2020 as a lecturer and Australian Research Council Future Fellow at the University of Newcastle.

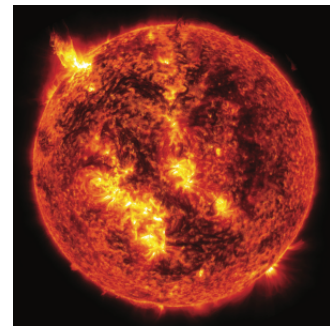


Although not as obvious as sunshine, the Sun's magnetic affects us through *space weather*. Visible effects of space weather are the auroras that occasionally light up our southern skies, but the invisible effects on our communication and energy networks are becoming increasingly significant. Blackouts can result from magnetic fields generating currents in long-distance power lines, such as occurred in Quebec in 1989. Furthermore, radio transmissions, GPS and over-the-horizon radar can be disrupted by effects on the ionosphere. These effects make the prediction of space weather important so that we may protect the electricity networks and satellites we increasingly depend on.

Space weather arises from ejections of mass from the Sun's corona and these are driven by its magnetic activity. Regions of high activity, which we see as sunspots, are where magnetic field lines emerge from deeper in the Sun and from where the ejections, which we see as solar flares, occur.

Sunspot activity follows an 11-year cycle but it is necessary to predict space weather on a shorter timescale. To do that we need to understand the dynamics of the interior of the Sun

and how its magnetic field is generated. We cannot observe that directly, and Dr Schunker explained how we can try to infer it using methods of seismology from observations of the Sun's surface. This is supported by observations of the Sun made by spacecraft since the 1990s and the lecture was illustrated by many beautiful images recorded by these spacecraft.



After her lecture, Dr Schunker fielded questions from the audience about space weather and its effects, as well as about the dynamics of the Sun that causes it. Lively discussion continued among about 15 participants during dinner at the Exhibition Centre following the lecture.

George Willis FRSN FAA
Chair, RSNSW Hunter Branch

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Southern Highlands Branch Report

Presentation Report— 20 March 2025

The Curator and the Cats: The Curious Story of Professor James Stewart and the Archaeology of Ancient Cyprus in Australia

Dr Craig Barker

Head, Public Engagement
Chau Chak Wing Museum
University of Sydney

Dr Craig Barker presented a fascinating and fully illustrated lecture to a large, appreciative audience in the Carrington Room at Mittagong RSL on the life and times of James Stewart (1913 -1962), one of the most important figures in the development of academic archaeology in Australia. Along with A.D. Trendall, he founded in 1947 the Department of Archaeology at the University of Sydney, Australia's first university department dedicated to teaching the discipline.

Barker is of the view that Stewart stamped his mark on the way the subject was taught and researched for decades to follow.

James Rivers Barrington Stewart was Sydney-born and Cambridge-trained. After graduation, he visited Cyprus where he devoted himself to exploring early Bronze Age

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civilisation, conducting his first excavations in 1937-1938. His life changed dramatically in 1940, when he was commissioned in the Cyprus Regiment which garrisoned the Suez Canal. In 1941 he was captured and became a prisoner of war. It was in this period that he developed a reliance on cats for warmth, his fondness for them developing into a deep attachment.

On release from prison, Stewart returned to Australia. In 1949, he took up the position of Senior Lecturer under Trendall in the new Department of Archaeology at Sydney University.

Unfortunately, it was not long before he severely tested the

patience and goodwill of his university colleagues and students by moving back to his family home at Mount Pleasant, Bathurst, which he treated as an extension of the Sydney University Department of Archaeology, expecting his students to spend time at the 'Mount'!

The 'Mount' housed his amazing research library (which was ultimately bought by the Fisher Library). It featured rooms full of Bronze Age Pottery and to no one's surprise "upwards of twenty indoor and outdoor cats". He died of cardiac failure at Bathurst in 1962 and was buried in the vegetable garden at Mount Pleasant.

A captivating lecture.

Anne Wood FRSN

Chair, RSNSW Southern Highlands Branch

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.

The YouTube channel now has over 1,400 subscribers, while the 189 full-length videos and 'shorts' that are online have received over 167,000 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 uploaded to 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 recordings from recent months. We hope that these will be of interest to members.



YouTube recording of the presentation from the Hunter Branch Meeting 2025-1 (20 March 2025) on *Our Magnetic Sun*, delivered by Dr Hannah Schunker, ARC Future Fellow in the School of Information and Physical Sciences at the University of Newcastle. A summary of the lecture, and a brief biography of the presenter, are available from the [online event notice](#).



A compilation of offline recordings made by the winners of the RSNSW 2024 Awards for Postgraduate Students and Early Career Researchers speaking on their research. The presentation ceremony, at which each of the award winners spoke and were interviewed by Robyn Williams AO FRSN FAA, host of the ABC Science Show, was kindly hosted by the University of Technology on the evening of Wednesday, 5 March 2025. Those appearing in the video include Mr David Sweeney from the University of Sydney, winner of the RSNSW Jak Kelly Award; Bicentennial Scholarship Winners: Mr Muyang Li of the University of Sydney, Mr Joel Sved of the

University of Sydney, and Ms Linqing Tian from UNSW Sydney; and Bicentennial Early Career Research and Service Citation winners: Dr Fei Deng of UNSW Sydney, Dr Jennifer Matthews of the University of Technology Sydney, and Dr Cynthia Turnbull of the Australian National University. The [online event notice](#) provides a summary of each of the presentations and of the presenters' biographies.



YouTube recording of the presentation from the October Ideas@theHouse (20 February 2025) titled *Where Worlds Collide: Exploring the wild/domestic animal-human interface in One Health* and delivered by PrDr Sarah Britton, Director, One Health Unit of the Interim Australian Centre for Disease Control. The [online event notice](#) provides a summary of the lecture and the presenter's biography.



YouTube recording of the presentation from the 1329th Ordinary General Meeting (5 February 2025) on *Inspired by Nature, Designed by Science*, delivered by Distinguished Professor Ian Paulsen FRSN FAA, Director of the ARC Centre of Excellence in Synthetic Biology at Macquarie University. 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 1328th Ordinary General Meeting (4 December 2024) on *Social media and smartphones for youth: What's the story?*, delivered by Scientia Professor Helen Christensen AO FASSA FAHMS, Professor of Psychiatry and Mental Health, UNSW Sydney and Honorary Professorial Fellow at the Black Dog Institute. 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, Webmaster, Royal Society of New South Wales

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