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ROYAL SOCIETY NEW SOUTH WALES

The Bulletin 510
November 2026

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A message from the President

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



Over the past year, I have worked with the Vice-President and others, including Council member Graham Town and Society member Tibor Molnar, to introduce a new category of Associate Membership for senior high school and university students and to establish an appointed early career researcher role on the Council, the intent of which is to increase the participation of, and engagement by, young people in the work of the Society. The Vice-President, Lindsay Botten, and the Secretary, Trevor Brown, finalised the necessary rule changes, which were supported overwhelmingly by Fellows and Members in the September ballot.

The changes create two categories of young Associate Members: for full-time students or those under 25, for whom membership and attendance at Ordinary General Meetings are free, and young adults aged 25 to 35, who pay a modest annual membership fee. Lindsay and Trevor also oversaw the call for expressions of interest for the early career researcher appointment on Council—a position that is key to our youth initiatives. Following a competitive EoI process and interviews, a recommendation has been put to the Council for its endorsement, with an announcement on the website and in next month's issue of the Bulletin to follow. Royal Societies in some other states are pursuing similar initiatives to increase engagement with younger generations.

In late September, I joined representatives of Australia's Royal Societies, the Learned Academies and the Royal Society of New Zealand in Canberra. Discussions focused on the changing landscape of research funding, including Australia's participation in Horizon Europe, a program that New Zealand joined several years ago. We also considered the growing need for organisations such as ours to demonstrate relevance and impact. For the Royal Society of NSW, our particular strength lies in our interdisciplinarity and our ability to bring together scholars, professionals and informed citizens to discuss issues of social significance.

On 15 October, the Southern Highlands Branch welcomed palaeoscientist Dr Michael Stein, who presented 'The Latest News on the Evolution of Crocodiles'. This was his second lecture to the branch. Earlier, in June 2026, Dr Stein had fascinated audiences with evidence from Australian and New Zealand palaeontology that revealed the remarkable diversity of crocodilian evolution in the Southern Hemisphere following a major extinction event. His latest presentation continued this story, exploring how Australia's distinctive crocodile lineage adapted in unexpected ways, including a return to terrestrial habitats. The report section of this Bulletin provides a summary of the lecture.

On 7 October, Scientia Professor Dennis del Favero, the inaugural recipient of the Society's Award in the Creative and Performing Arts, spoke at the State Library on 'iFire AI Simulation: Reformulating the Visualisation of Climate Disasters'. His work explores the use of AI-driven aesthetics and immersive visualisation to model and engage with uncertain scenarios, including extreme bushfires. The iFire platform is a three-dimensional immersive simulation system designed for emergency management agencies internationally.

Professor del Favero warned of the heightened fire risks associated with El Niño conditions following recent wet seasonal patterns. His simulations train firefighters using AI-generated models of changing wind and environmental conditions. Significantly, he emphasised collaborative immersive training rather than isolated individual learning. His presentation offered a compelling reminder that embodied and collective forms of knowledge remain essential, even in an age of increasingly sophisticated digital technologies. A recording of his presentation is available on YouTube, and a summary of the talk appears in the report section of this issue.

As we enter another Australian summer, many of us recall the catastrophic bushfires of 2019-20, followed by floods and the disruptions of the COVID pandemic. These events demonstrated how multiple crises can converge and compound one another, challenging communities, institutions and governments alike—a concatenation of crises. That theme forms the basis of the Royal Society of NSW and Learned Academies Forum to be held at Government House on 5 November: 'A Hinge of History: Tipping Points and Existential Risks.' The forum will bring together leading thinkers from science, medicine, technology, governance, economics, and philosophy to examine whether we are indeed living through such a hinge moment and what it may mean for Australia's future prosperity, security and resilience.

On 17 November, we will participate in the early celebration of the Australian Museum's bicentenary with 'Partners in Discovery: Celebrating Two Centuries of Science and Looking to the Future.' Later that week, on 19 November, the Southern Highlands Branch will host Dr Joseph Bevitt, Instrument Group Manager and Senior Instrument Scientist at the Australian Centre for Neutron Scattering. Dr Bevitt will speak on 'Revolutionising Palaeontology with Neutron Imaging', highlighting the transformative impact of advanced imaging technologies on the study of ancient life.

In closing, may I suggest that you put the date of Thursday, 25 February 2027 in your diary when we will gather again in the Stranger's Room of Parliament House for our Annual Dinner and the

Presentation of the 2026 Awards that will be announced at the Ordinary General Meeting to be held on Wednesday, 2 December 2026. The after dinner speaker will be Dr Cathy Foley AO DistFRSN FTSE FAA, the former Chief Scientist of Australia and the current President of the Academy of Technology and Engineering.

As always, I encourage members and friends of the Society to participate in these events and conversations. The breadth of topics, from youth engagement and scientific discovery to climate risk and existential challenges, reflects the Society's enduring commitment to fostering informed discussion across disciplines and contributing to public understanding of issues that matter.

Christina Slade FRSN
President
Royal Society of New South Wales

For your diary

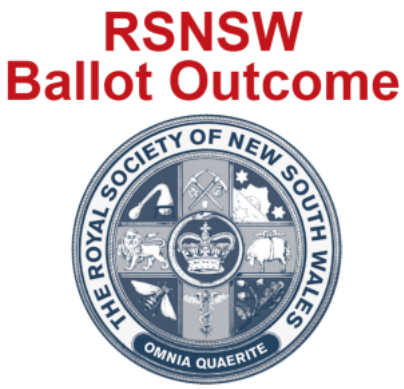
The Society's annual events program is published in the online Events Calendar, which is updated regularly. Upcoming events, organised by the Society in the coming months, are listed below and, in greater detail, in the following Events section. Events by cognate and partner organisations are included in the events section of this newsletter.

- Royal Society of NSW and Learned Academies Forum 2026 (Thursday, 5 November 2026, Government House, Sydney, by invitation and live streaming) *A Hinge of History: Tipping Points and Existential Risks*
- RSNSW Visits Program 2026-2 (Tuesday, 17 November 2026, from 5.30 pm) *The Australian Museum: Partners in Discovery: Celebrating Two Centuries of Science—and looking to the Future* — Preliminary Notice
- Southern Highlands Branch Meeting 2026-10 (Thursday, 19 November 2026, 6.30–7.30 pm AEDT, RSL Mittagong Carrington Room) *Revolutionising Paleontology with Neutron Imaging*, Dr Joseph Bevitt, Instrument Group Manager and Senior Instrument Scientist, Australian Centre for Neutron Scattering, ANSTO
- 1346th Ordinary General Meeting and Open Lecture (Wednesday, 2 December 2026, 6.00–7.30 pm AEDT, Michael Crouch Room, Mitchell Building, State Library of NSW, Shakespeare Place, Sydney) *Big Ideas from Small Patients: Improving the Outcomes of Children with Cancer,* Professor Michelle Haber AM FAHMS FAA, Co-Group Leader, Experimental Therapeutics and Molecular Oncology, Children's Cancer Institute
- Luncheon series: Provocations and Inspiration — December 2026 (Tuesday, 15 December 2026, 12.15 for 12.30 – 2.00 pm AEDT, Union, University and Schools Club, 25 Bent Street, Sydney) *Productivity in the age of artificial intelligence*, Emeritus Professor Roy Green AM FRSN, Special Innovation Advisor, University of Technology Sydney
- RSNSW 2027 Annual Dinner and Presentation of Awards (Thursday, 25 February 2027, 5.30 – 10.00 pm AEDT, Strangers' Room, Parliament House, Sydney) After-dinner speaker: Dr Cathy Foley AO DistFRSN FTSE FAA

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News

Ballot outcome: Rule change to increase young people's involvement in the Society



On Thursday, 3 September 2026, the President of the Society, Emeritus Professor Christina Slade, wrote to all members eligible to vote in Society elections to advise that the Council had recommended changes to the Rules of the Society that would support the increased participation of, and engagement by, young people by broadening the category of Associate Membership, and providing for an appointed Early Career Researcher member of the Council.

On Monday, 7 September 2026, all Society members eligible to vote in Society ballots received a notice from the electronic balloting service, Election Buddy, to vote electronically on three motions to vary Rule 13 (Associate Members), Rule 16 (The Council of the Society), and Rule 18 (Election of and appointment to the Council).

Results

At the close of voting at midday on Monday, 28 September 2026, some 227 votes had been submitted from 731 eligible voters, representing a return rate of 31%.

Change to Rule 13 — Associate Members
Votes in favour of the Rule change — 211 (92.95%)
Votes against the Rule change — 16 (7.05%)

Change to Rule 16 — The Council of the Society
Votes in favour of the Rule change — 212 (93.39%)
Votes against the Rule change — 15 (6.61%)

Change to Rule 18 — Election to and appointment to the Council
Votes in favour of the Rule change — 212 (93.39%)
Votes against the Rule change — 15 (6.61%)

Accordingly, all three motions were approved by Society members.

Changes to the Rules, as described in the Explanatory Memorandum, took effect from the close of the ballot, i.e., midday on Monday, 28 September 2026, with the updated Rules now available on the RSNSW website.

RSNSW Election Coordinator
28 September 2026

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Vale Dr William Eric Smith — RSNSW President 1970–1971



The Society was deeply saddened to learn of the death on 14 August 2026 of one of its former Presidents, **Dr William Eric Smith**, at the age of 95.

This news was reported to us by another former President of the Society, Emeritus Professor Ian Sloan AO DistFRSN FAA, who was a long-term colleague of Dr Smith in mathematics at UNSW.

Ian Sloan writes that 'Dr William Smith (Bill, later Will, at his request) was a long-serving member of the Applied Mathematics Department from around 1960 until the mid 1990s. He was a true gentleman, never saying an unkind word about anybody, even though he served through the famous war between Professors Blatt and Buchwald. He was a good bloke.'

The entry for Dr Smith in the RSNSW Presidential Profiles states: 'Mathematician Dr William Smith was educated at Sydney Technical Boys' High School in Paddington, NSW, then studied electrical engineering and physics at the University of Sydney, where he graduated with a BSc and the University Medal in 1952. During the mid-to-late 1950s, he worked for the Division of Electrical Technology at the Commonwealth Scientific and Industrial Research Organisation (CSIRO), which awarded him a scholarship to study at Oxford, where he graduated in 1956. On returning to the CSIRO, Dr Smith worked on precision electrical measurements, microwave spectroscopy and electromagnetic circuit theory. From around 1960 to 1984 he was a senior lecturer, associate professor, then an honorary professor with the School of Mathematics at the University of NSW. He was a Councillor of the Royal Society of NSW for many years, was its President 1970–1971, and received the Society's Medal in 1981.'

The Society extends its sincere condolences to Dr Smith's family, friends, and colleagues.

There was a memorial service at 11:30 on Friday, 2 October 2026 held at the Northern Suburbs Crematorium. For more information and service details, please see https://gregoryandcarr.com.au/memorial/LiV77KJ1Gg/dr-william-eric-smith/

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Merlin Crossley AM FRSN elected as a 2026 Australian Academy of Health and Medical Sciences Fellow

The Royal Society of NSW was delighted to learn that **Professor Merlin Crossley AM FRSN FAHMS** was recently elected as a Fellow of the Australian Academy of Health and Medical Sciences (AAHMS).

Professor Crossley is currently the Deputy Vice-Chancellor (DVC) Academic Quality at UNSW Sydney and previously served as DVC Education and Dean of Science. On 4 September 2026, his appointment as the next Chief Scientist at the Australian Museum Research Institute in early 2027 was announced by the Australian Museum Director and CEO, Ms Kim McKay AO FRSN.

Professor Crossley is a molecular biologist who specialises in using CRISPR gene editing to understand and treat human genetic diseases. He is a dedicated supporter of science communication and research and serves as Chair of The Conversation Media Group. He is also Chair of the Royal Society of NSW Awards Committee.



The citation for Professor Crossley's Academy Fellowship will be included here as soon as it becomes available on the AAHMS website.

The Council of the Society warmly congratulates Professor Merlin Crossley on this latest recognition of his outstanding achievements and research.

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Society Fellows elected as 2026 Academy of Social Sciences Fellows

The Royal Society of NSW was delighted to learn that three of its Fellows, **Professor Lisa Adkins FRSN FASSA**, Dean of the Faculty of Arts at the University of Sydney, **Hugh Mackay AO FRSN**, distinguished psychologist and social researcher, and **Professor Jill Newby, FRSN FASSA**, Professor of Clinical Psychology at UNSW Sydney and based at the Black Dog Institute, were recently elected as Fellows of the Academy of Social Sciences in Australia.

Professor Lisa Adkins is a distinguished sociologist whose influential research examines post-industrial societies, work, finance, wealth and inequality. Her research is central to the asset economy thesis, which argues that assets are replacing commodities as the dominant economic form. Her empirical work shows how income from assets—especially housing—can outpace wages, making homeownership more precarious and reshaping class and inequality. Earlier research explored service labour, unemployment, austerity, reproductive labour, capital and gender. Across her career, Adkins has combined conceptual and empirical innovation, reframing major debates on housing affordability, social class, employment and gender while providing important frameworks for understanding contemporary societal change.



Hugh Mackay is a distinguished Australian social psychologist, researcher, and author who has spent more than six decades studying Australian society through extensive qualitative research and public engagement. His influential *Mackay Report* series, launched in 1979, produced over 100 reports examining social attitudes and trends. An accomplished writer, he has authored 25 books spanning social analysis, psychology, ethics, and fiction. Mackay describes his mission as "explaining us to ourselves," helping Australians understand and adapt to social change. His



current work focuses on social fragmentation, loneliness, and the importance of connection, cooperation, and kindness as essential human survival skills.



Professor Newby is an expert in Clinical Psychology, specialising in digital mental health interventions for adults and young people with depression and anxiety. Her work focuses on developing accessible, affordable, effective and scalable psychological and lifestyle-based treatment programs for these common mental health conditions, testing their efficacy in clinical trials, and making them available to the community. She is particularly interested in how digital mental health and artificial intelligence tools can be used to deliver better, more personalised care for mental health. Most of my research is focused on depression and anxiety, but my work also focuses on the overlap between these conditions and chronic physical illness, anxiety about illness (called health anxiety), and how misinformation and online health information (like searching Dr Google) affect how people interact with the healthcare system.

The Council of the Society extends its warm congratulations to both Professor Adkins and Professor Newby on this further recognition of their outstanding research.

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Events

RSNSW & Learned Academies Forum 2026: 5 Nov. 2026



Date: Thursday, 5 November 2026, 8.30 am for 9.00 am – 5.00 pm AEDT.
Venue: Government House, Sydney: in person by invitation and by live streaming.
Registration: Members of the Royal Society of NSW have been invited to apply for a face-to-face place at the event. Registration for the livestream is now open through this link.
Program: The day's program is now available on the website event notice
Entry: No charge.

The Forum is held under the auspices of Her Excellency the Honourable Margaret Beazley AC KC, Governor of New South Wales. The Royal Society of New South Wales acknowledges the generous support of Her Excellency and the Office of the NSW Chief Scientist and Engineer.

LIVE STREAM

Please click here to register for the live stream

Summary

Derek Parfit writes: “We live during the hinge of history… If we act wisely in the next few centuries, humanity will survive its most dangerous and decisive period… What now matters most is that we avoid ending human history.” (On What Matters, 2011 vol. 2)

Humanity may be entering a period in which actions of a single generation shape the long-term trajectory of civilisation. Climate instability, rapid technological transformation, geopolitical tension, and social fragmentation are converging in ways that may constitute a ‘hinge of history’.

The RSNSW Forum brings together leading thinkers across science, medicine, technology, governance, economics and philosophy to examine whether we are indeed at such a hinge point —and what this means for Australia’s future prosperity, security, and resilience.

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RSNSW Visits Program 2026-2 — 17 Nov. 2026

The Australian Museum
Partners in Discovery: Celebrating Two Centuries of Science—and looking to the Future



Date and Time: Tuesday, 17 November 2026 5.30–8.30 pm AEDT
Venue: The Australian Museum, cnr William and College Streets, Sydney (enter via the ramp on College St)
Registration: Registration is **required before 2.00 pm on Monday, 9 November 2026**.
Entry: RSNSW members, $60; Non-members and guests, $60
Enquiries: By email to programs@royalsoc.org.au

REGISTER NOW

Please register before
2.00 pm AEDT on Monday, 9 November 2026.

The Royal Society of New South Wales is delighted to invite members and their guests to a unique evening at the Australian Museum as part of the lead-up to the Museum's Bicentenary celebrations in 2027.

Presented exclusively for the Royal Society, this special after-hours event offers an opportunity to experience a preview of the Australian Museum's new Bicentenary documentary before its official release.

The preview will be followed by a panel discussion, chaired by Kim McKay, the Director and CEO of the Australian Museum and Fellow of the Royal Society of NSW. The panellists will be Emeritus Professor Robert Clancy, Fellow of the Royal Society of NSW and Professor Shane Ahyoung of the Australian Museum.

The evening will open with drinks and canapés in the Wild Planet space, with further opportunities for questions and discussion following the panel.

Event Highlights

- Exclusive preview screening of the Australian Museum Bicentenary documentary in the Museum's Theatre.
- Panel discussion exploring the Museum's remarkable 200-year history, our shared roots and intertwined contributions to Australian science, future directions and opportunities to advance scientific knowledge and public engagement.
- Drinks and canapés with speakers and guests.

Whether your interests lie in science, history, museums or the development and dissemination of knowledge in Australia, this promises to be a memorable evening celebrating two centuries of achievement while looking ahead to the future of science, discovery and public knowledge.



Kim McKay AO FRSN is the Director and CEO of the Australian Museum, Australia's first museum and the nation's leading cultural and scientific institution. Appointed in 2014 as the Museum's first woman leader, Kim has overseen a major transformation program, including the award-winning Project Discover redevelopment and significant growth in public engagement. A respected environmental advocate and communications leader, she co-founded the Clean Up Australia and Clean Up the World campaigns and has held senior roles with National Geographic and Discovery Channel. In 2008, she was appointed an Officer of the Order of Australia for distinguished service to the environment and the community.



Professor Shane Ahyong is Acting Chief Scientist and Senior Principal Research Scientist at the Australian Museum. An internationally recognised marine biologist, he is a world authority on crustacean evolution and classification, including mantis shrimps, crabs and lobsters. Over a career spanning more than 30 years, he has described more than 300 new species and published extensively on marine biodiversity. Shane serves on several national and international scientific bodies, including the International Commission on Zoological Nomenclature and the World Register of Marine Species. He is currently listed among Stanford University's top 2% most influential scientists worldwide.



Professor Emeritus Robert Clancy is the Foundation Professor of Pathology at the University of Newcastle Medical School and a clinical immunologist. His interest in the history of science is reflected in organising and running five European tours, including 'The History of Medicine and Pharmacy, Following the Course of the Black Death: From Venice to London' (with Christine Clancy) and 'The History of Science: Venice to Cambridge' for the Royal Society, and others to Antarctica. Author of numerous texts, including the book 'The Long Enlightenment: The History of Science in Australia From Its Beginning To Mid 20th Century', which includes the sciences and their integration with the Australian Museum and the Royal Society of NSW. Robert is a Fellow of the RSNSW.

Registrations are now open. We encourage early booking to avoid disappointment.

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Southern Highlands Branch Meeting 2026-10 — 19 Nov. 2026

Revolutionising Palaeontology with Neutron Imaging



Dr Joseph Bevitt
Instrument Group Manager and Senior Instrument Scientist
Australian Centre for Neutron Scattering
ANSTO

Date: Thursday, 19 November 2026, 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

ENQUIRIES

By email to the Branch Chair

Summary: Palaeontology and evolutionary studies are dependent on the physical measurement of bone dimensions to determine relationships between organisms, age at death, interpret

lifestyles, predator-prey interactions and physical adaptations to a constantly changing world. These measurements demand the physical extraction of specimens from their surrounding rock, risking damage to small and fragile bones and loss of contextual information associated with the environment at that time. For this reason, 3D imaging using X-rays has become a critical tool for the investigation and preservation of fossilised remains, which can now be investigated while remaining in their original matrix.

For many fossil localities, the applicability of X-rays is limited due to the prevalence of minerals that are opaque to X-rays, and therefore obscure the fossil remains. This is where neutron imaging comes in.

The application of neutron imaging to palaeontology has been pioneered at ANSTO. It remains a relatively new tool for palaeontology, yet it has revolutionised the field for two reasons: a high sensitivity to hydrogen, and greater ability to penetrate through iron-rich minerals such as pyrite.

This presentation draws on high-profile palaeontological studies conducted using the DINGO neutron imaging instrument at ANSTO to demonstrate not just the complementarity of neutrons with X-rays, but the unprecedented discoveries being made. The method has become a game-changer for Australian palaeontology, attracting specimens for study from around the globe. This talk highlights the advantage of neutrons in revealing cartilaginous soft-tissue remains, complete internal organs, stomach contents and entire organisms that are invisible to traditional X-ray tomography.

The talk will wrap up with recent, unpublished technical developments in neutron imaging at ANSTO, and the future direction for neutron capabilities and applications in Australia.

Dr Joseph Bevitt is a 3D imaging scientist and group manager for the Imaging and Strain Scanning Group at ANSTO's Australian Centre for Neutron Scattering. Joseph pioneers the use of neutrons, often in combination with synchrotron X-rays, to digitally excavate and reveal fossils, their exceptionally preserved soft-tissue structures, stomach contents and environmental interactions.

Joseph obtained a PhD in Chemistry from the University of Sydney in 2006, weaving a career in teaching, research policy, administration and management before transitioning to research in 2018. Joseph is a former NSW Branch President of the Royal Australian Chemical Institute (RACI), Research Fellow of the Jilin University Dinosaur Evolution Research Centre, recipient of the RACI Nyholm Lectureship, AONSA Neutron Award and Powerhouse Research Fellowship Member of the IUCr Commission on Crystallography in Art and Cultural Heritage.

He actively engages the public imagination, reaching global audiences via the media with diverse discoveries such as the partially digested remains of a dinosaur in the stomach of an ancient crocodile, evidence of recycling of mummified animal offerings in Ancient Egypt, the world's oldest fossilised heart, and the earliest evidence of fruit-eating by animals. His research has featured in Science, Nature, National Geographic, The Conversation, Catalyst, natural history documentaries, Australian postage stamps and coins. Aiming to bridge the gap between science and art, his works have been exhibited in the MAAS Powerhouse Museum's *Out of Hand* and *The Invisible Revealed* exhibitions, the latter achieving the Museum and Galleries National Award for Research in 2022.

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1346th OGM and Open Lecture — 2 Dec. 2026

Big Ideas from Small Patients: Improving the Outcomes of Children with Cancer



Professor Michelle Haber AM FAHMS FAA
Co-Group Leader, Experimental Therapeutics and Molecular Oncology
Children's Cancer Institute

Date and Time: Wednesday, 2 December 2026, 6.00–7.30 pm AEDT
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
Registration: Please register before 2.00 pm on Wednesday, 7 October
Entry: OGM: Members, $20; Non-members, $30; Students, $0
All are welcome

REGISTER NOW

Please register before 2.00 pm AEDT on Wednesday, 2 December 2026

Business of the Meeting

The Agenda for the Ordinary General Meeting will be made available on the Meetings page of the website.

Summary: Childhood cancer has seen remarkably improved rates of survival over the past 80 years. Despite increased survival rates, many child cancers remain refractory to current treatments. Prrofessor Haber's team has identified critical genes that drive childhood cancers, developed novel therapies that translate to the clinic, and has developed novel diagnostics to avoid relapse and death

Professor Michelle Haber is Co-Group Leader, Experimental Therapeutics and Molecular Oncology, at Children's Cancer Institute, having stepped down as Executive Director, a role she held for 25 years. She is internationally recognised for her research developing novel therapeutic and diagnostic approaches to improve outcomes for children with acute lymphoblastic leukaemia and neuroblastoma. She has identified and validated several molecular targets that drive the growth and development of childhood cancer, identified promising new drugs to inhibit the action of these targets, and combined existing and new treatments into novel therapeutic approaches that have been translated into international clinical trials. She has brought new standards of care to Australian children with cancer, exemplified by her establishment and leadership of the ZERO Childhood Cancer national personalised medicine program, which is enabling every Australian child with cancer to have therapy tailored to the specific genetic and biological characteristics of their individual tumour.

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Luncheon series: Provocations and Inspirations — 15 Dec. 2026

Productivity in the age of artificial intelligence



Emeritus Professor Roy Green AM FRSN
Special Innovation Adviser
University of Technology Sydney

This event has been rescheduled.

Date and Time: Tuesday, 15 December 2026, 12.15 for 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 before 2.00 pm AEDT on Thursday, 10 December 2026
Cost: $75 (RSNSW or UUSC members); $85 (non-members/guests). A warm meal and wine will be served.
UUSC dress code: Business Dress. To avoid embarrassment, please note that a jacket and tie are required. Denim, trainers and shoes with white soles are not permitted. Attendees not dressed appropriately may be refused entry by the Club.
Flyer: Downloadable from this link.

REGISTER NOW

PROGRAM FLYER

Please register before
2.00 pm AEDT on 10 December 2026

Productivity in the age of artificial intelligence

This series started as an exploration of the Future Made in Australia (FMiA) program that will see government funding of $22.7 billion over the next decade focused on two major streams: net-zero transformation and economic security and resilience. Nothing could have greater relevance in the current geopolitical circumstances. The topics covered this year have specifically focused on the techno-economic challenges that the FMiA faces, particularly in light of the developments in the geopolitical situation around the world that have emerged this year.

Closer to home, productivity growth remains the most fundamental challenge for the Australian economy. A lack of productivity growth constrains the rate at which the economy can grow, and that has profound economic consequences for the standard of living in the face of an ageing population and labour shortages. In this talk, Roy Green, an internationally renowned expert in the field of productivity, will explore how Australia can benefit from the rapid advances being made in artificial intelligence (AI).

Productivity growth has underpinned the rise in living standards since the Industrial Revolution. But productivity has stalled across advanced economies, nowhere more so than in Australia. Does AI offer the prospect of reigniting productivity growth, without destroying humanity in the process? And if so, how? This talk is based on a recent report, *Turning AI into Productivity*, which argues that instead of trying to compete in the frontier model race, middle powers like Australia have a once-and-for-all chance to benefit from the application of AI to a range of industrial processes. But such an outcome will not happen automatically. It will require clever, well-coordinated national policy interventions

Roy Green is Emeritus Professor and Special Innovation Adviser at the University of Technology Sydney, where he was previously Dean of the UTS Business School. He has undergraduate degrees from the University of Adelaide and a PhD in economics from the University of Cambridge. Roy has pursued a career in universities, government, and industry and has published widely on innovation and productivity. His most recent Routledge book (with Dr Phillip Toner) is *Understanding Productivity,* and a commissioned report (with Dr John Howard) is *Turning AI into Productivity*. Currently, Roy chairs the Advanced Robotics for Manufacturing (ARM) Hub and is on the boards of CSIRO, SmartSatCRC and the Industry Capability Network (ICN). He is a Fellow of the RSNSW.

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RSNSW Annual Dinner & Presentation of Awards — 25 Feb. 2027



Date and Time: Thursday, 25 February 2026 5.30–10.00 pm AEDT
Venue: Strangers' Room, Parliament House, Sydney
Registration: Registration is **required before 5.00 pm on Monday, 15 February 2027**
Entry: Members, $225; Non-members and guests, $225; Table of 10: $2250
Enquiries: By email to rsnswevents@royalsoc.org.au
All are welcome

The Society's Annual Dinner and Award Presentations will be held at Parliament House, Sydney, on Thursday, 25 February 2027, in the Strangers' Room, the building's principal dining room with expansive views across the Domain to the Harbour.

We will honour the 2026 winners of the Society's prestigious Career Excellence and Discipline Awards.

Our after-dinner speaker is Dr Cathy Foley AO DistFRSN FTSE FAA, Australia's former Chief Scientist, the current President of the Australian Academy of Technological Sciences and Engineering, and a widely acknowledged leader in science, innovation and national policy.

The Society gratefully acknowledges our Gold Sponsors, *UNSW Sydney* and the *University of Sydney*.

Accessibility

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

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

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

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

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

How to register

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

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

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

All enquiries should be sent by email to RSNSW Annual Dinner enquiries.

REGISTER NOW

Please register before
5.00 pm AEDT, 15 February 2027

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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.

Hunter Branch Report: 24 Sept. 2026

Presentation Report— 24 September 2026

Healthy Soils, Healthy Hunter: Building a Sustainable Future

Professor Ravi Naidu
Laureate Professor and Founding Director
Global Centre for Environmental Remediation
University of Newcastle



On the evening of 24 September, Professor Ravi Naidu, the Director of the Global Centre for Environmental Remediation at the University of Newcastle, presented an important talk titled 'Healthy Soils, Healthy Hunter' before an audience of approximately 30 people at the Newcastle Exhibition and Convention Centre.

In his presentation, Professor Naidu argued that the Hunter region's transition must go beyond recycling and renewable energy and also restore the land left degraded by mining. His central point was that the Hunter's future depends on rebuilding healthy, functioning soils that support safe communities, productive land, clean water, biodiversity and new economic opportunities.

He acknowledged that mining built the region's prosperity. The Hunter contributes nearly $100 billion to the NSW economy and supports more than 380,000 jobs, and its economy is now diverse. He said those industrial skills should be redeployed into remediation, rehabilitation and environmental services rather than lost. Mining has also left a legacy of topsoil loss, erosion, acid mine drainage, tailings dams and community health concerns. Emerging contaminants such as PFAS, antibiotics and plastics add to the challenge.

Professor Naidu criticised rehabilitation that stops at planting trees. He said it often lacks scientific grounding, long-term monitoring and clear soil-health targets. He called for defining end land uses before mines close, rebuilding soil structure and nutrient cycles, recovering critical minerals from tailings, and using AI tools such as erosion prediction. He also stressed a "One Health" view linking soil, food, animals and people.

He set out five priorities:

- Speed up rehabilitation.
- Protect soils and innovate.
- Strengthen partnerships, including with Traditional Owners and small and medium enterprises.
- Build regional capability.
- Measure progress and share results openly.

In conclusion, he said rehabilitation is not just a cost but that it can create exportable industries and jobs. His call to action was to adopt a shared regional vision, turn evidence into action, and make the Hunter a global leader by 2035.

A recording of this presentation is now available on our YouTube channel.

Lindsay Botten FRSN
Bulletin Editor

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Presentation Report: 1345th OGM —7 Oct. 2026



On the evening of Wednesday, 7 October 2026, an audience of approximately 30 people who attended the 1345th Ordinary General Meeting of the Royal Society of NSW heard a fascinating presentation, titled 'iFire AI Simulation System: Reformulating the visualisation of climate disasters', delivered by **Scientia Professor Dennis Del Favero FRSN FAHA**, Professor of Digital Innovation and Executive Director, iCinema Research Centre at UNSW Sydney.
Scientia Professor Dennis Del Favero presented iFire, a UNSW-led project that uses artificial intelligence and immersive simulation to improve preparedness for extreme bushfires. Unlike conventional scientific models, which represent fire primarily through data, or artistic depictions, which convey experience, iFire combines both approaches. Its goal is to help researchers, emergency responders, and residents understand unpredictable fire behaviour and make better decisions under uncertainty.

The project builds on iCASTS, an immersive training system used at Australian and Chinese underground mine sites. That work demonstrated that people understand and remember risk more effectively through simulated experience than through warnings or manuals alone. iFire applies this insight to bushfire preparedness using shared 360-degree environments rather than individual headsets, allowing groups to rehearse emergencies collectively.

iFire is being developed in three stages. Version 1.0 reconstructed historical fires as fixed, three-dimensional scenarios. Version 2.0 lets users alter variables—including wind speed, wind direction, temperature and humidity—to generate nonlinear scenarios and observe consequences immediately. Version 3.0 aims to place physics-simulated fires in any location and generate adaptive scenarios using local terrain, vegetation and climate data.

Case studies included plantation and grassland fires in South Australia and Victoria, plus an extreme North American fire. Applications range from firefighter training in risk perception, situational awareness and decision-making to community education through mobile phones and public installations.

Professor Del Favero argued that realistic, safely graduated exposure can build resilience without placing participants in danger. By translating complex fire data into accessible, immersive experiences, iFire seeks to strengthen public understanding, professional training and life-saving responses to increasingly severe climate emergencies.

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 now available for viewing and downloading.

Lindsay Botten FRSN
Bulletin Editor

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Southern Highlands Branch Report

Presentation Report— 15 October 2026

Evolution of our Australian Crocodiles Part 2

Dr Michael Stein
Palaeoscientist
Archer Palaeontology Laboratory
UNSW Sydney



Michael Stein revisited the Southern Highlands Branch immediately on his return from another period of field work. He spoke mainly of Riversleigh in north-western Queensland, one of the world's most significant fossil deposits and a UNESCO World Heritage Site. Riversleigh is particularly important for understanding crocodile evolution because it preserves evidence of crocodilian diversity that is largely absent from the modern Australian landscape. Its ancient limestone deposits preserve an extraordinary record of Australian wildlife including mammals, birds, reptiles and crocodilians.

The fossils span much of the last 25 million years, providing scientists with an exceptional opportunity to investigate how Australia's mammals evolved as the continent's climate and environment changed. They clearly demonstrate a crocodilian diversity that is largely absent from

the modern Australian landscape. Ancient Australia is shown to have supported a much wider variety of crocodilian forms, playing different ecological roles and displaying adaptations suited to different habitats.

The fossilised remains of the different Mekosuchines of ancient Australia show clearly that the crocodiles of that time were not merely versions of the crocodiles we see today. At Riversleigh, study of the fossil skulls, teeth, jaws and other skeletal remains gives evidence of the huge differences in their body forms, size and likely lifestyle. Some appear to have been adapted to life in rivers and wetlands while others seem to have developed features suggesting they could move effectively on land.

This was an intriguing lecture, expertly delivered and visually presented by a master in his field.

Anne Wood FRSN
Chair, 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 a growing following as we continue building our event repository on YouTube.

Our YouTube channel now has more than 2,920 subscribers, and the 259 full-length videos and 'shorts' online have received over 1,023,000 views.

The social media icons at the end of this newsletter will take readers to our pages on these platforms, 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.

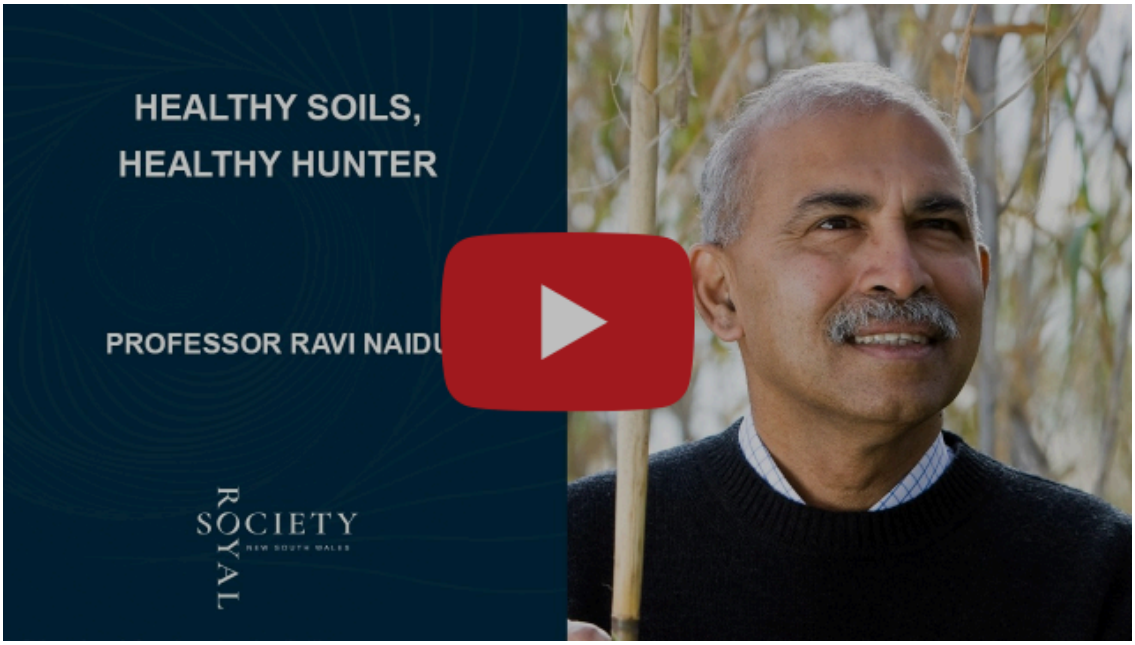
Recent recordings uploaded to YouTube

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 1345th Ordinary General Meeting (7 October 2026) on *iFire: AI Simulation System: Reformulating the visualisation of climate disasters*, delivered by Scientia Professor Dennis Del Favero FRSN FAHA, Professor of Digital Innovation and Executive Director, iCinema Research Centre at UNSW Sydney. 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 Hunter Meeting 2026-3 of the Royal Society of NSW (24 September 2026) on *Healthy Soils, Healthy Hunter: Building a Sustainable Future*, by Professor Ravi Naidu, Laureate Professor and Founding Director of the Global Centre for Environmental Remediation at the University of Newcastle. 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 seventh meeting of the Society's Provocations and Inspirations lunchtime series held at the Union, University, and Schools Club in Sydney (15 September 2026), at which Dr John Gattorna, Deborah Ellis, and Associate Professor Sanjoy Paul spoke on *Australia's supply chain security: Sovereign supply chain capability and economic resilience*. 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 1344th Ordinary General Meeting (2 September 2026) on *Ecosystem restoration at scale, reintroducing native species and managing threats – nearly a decade of the Wild Deserts project*, delivered by Scientia Professor Richard Kingsford AO FRSN, Director of the Centre for Ecosystem Science at UNSW Sydney. A summary of the lecture and a brief biography of the presenters are available from the online event notice.



YouTube recording of the presentation from 1 September 2026, Ideas@theHouse titled '*The increasing importance of sport in today's world*', delivered by Matthew Allen AM, Vice-President of the Australian Olympic Committee. The online event notice provides a summary of the lecture and the presenter's biography.



YouTube recording of the presentation from the New England North West Branch Meeting 2026-2 of the Royal Society of NSW (12 August 2026) on *Perspectives on Autism, Neurodiversity, and Resilience*, by Professor Vicki Bitsika AM FRSN, Discipline Convenor of Neuroscience, University of New England and panellists: Dr Wayne Arnold, Jane Weier, Georgia Vu and Assoc. Prof. Tavveer Hussain MRSN (Moderator). A summary of the presentation and brief biographies of the presenter and panellists are available from the online event notice.



In Conversation with Professor Maike Osborne. In this series, Christina Slade, President of the Royal Society of NSW, will be speaking with some of the very many distinguished Australians who live and work outside Australia. The first of these distinguished guests is Maike, formerly Michael, Osborne —a Professor of Machine Learning at Oxford University and a leading figure in Bayesian optimisation, probabilistic modelling, AI safety, and the social impacts of automation. Her journey spans Western Australia, ANSTO, and New College, Oxford. She contrasts Bayesian AI with pattern-based LLMs and describes Mind Foundry's transparent approach to defence sensing and insurance risk. Her influential 2013 paper with Carl Frey reshaped global thinking on automation's labour impacts. As a trans academic leader, she highlights AI's human dimensions—uncertainty, risk, identity, ethics, and work.



In Conversation with Professor Ian Jacobs. In this, the second in the series of conversations, Christina Slade speaks with Ian Jacobs, a British-Australian medical researcher and university leader, who reflects on his journey from a North London childhood to Cambridge, medical training, and a distinguished career across UCL, Manchester, Cambridge and UNSW, where he served as Vice-Chancellor. Known for pioneering ovarian-cancer screening and founding The Eve Appeal, he discusses how

public education shaped his path and compares UK–Australian higher-education systems. He now chairs City St George's, University of London, bringing long experience in research, policy and institutional leadership.



YouTube recording of the presentation from the 1343rd Ordinary General Meeting (1 July 2026) on *The Importance of Understanding Water and Climate Change for Aboriginal People*, delivered by Professor Bradley Moggridge FRSN FTSE, Associate Dean (Indigenous Leadership and Engagement), Faculty of Science, University of Technology Sydney. A summary of the lecture and a brief biography of the presenters are available from the online event notice.



YouTube recording of the presentation from the sixth meeting of the Society's Provocations and Inspirations lunchtime series held at the Union, University, and Schools Club in Sydney (14 July 2026), at which Tim Buckley, Founder and Director of Clean Energy Finance, spoke on *Australia's energy security: Technology options in an uncertain world*. 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 1342nd Ordinary General Meeting (1 July 2026) on *Thin-film photovoltaics — the enabling engine for next-generation tandem solar cells*, delivered by Scientia Professor Xiaojing Hao FRSN FAA FTSE, an ARC Laureate Fellow and Deputy Director of the ARC Research Hub for Photovoltaic Solar Panel Recycling and Sustainability, School of Photovoltaic and Renewable Energy Engineering, UNSW Sydney. A summary of the lecture and a brief biography of the presenters are available from the online event notice.

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

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

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