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**ROYAL**  
**SOCIETY**  
NEW SOUTH WALES

# The Bulletin 473

## July 2023

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### A message from the President

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

On 19 June all members would have received an invitation to complete a brief, anonymous survey. This will enable Council to hear the views of the entire membership about the future of our Society as it enters its third century. More than 80 members have completed the survey thus far. It would be ideal if that number rises to around 600. [The survey closes on Friday 28 July](#). Do ensure that we receive the benefit of your insights. There will be an opportunity for further consultation as the Master Plan is being developed.



Late May and June have seen well-attended, high-quality, in-person lectures across NSW spanning a wide range of subjects. Our Southern Highlands Branch hosted Professor Toby Walsh FRSN FAA, Scientia Professor of Artificial Intelligence, UNSW for his presentation on “Machines behaving badly: the morality of AI”, which is reported on in the Branch report of this Bulletin. Our Western NSW Branch hosted Professor Wayne Hudson FAHA, Adjunct Professor at Charles Sturt University, Canberra. A report on his presentation on the topic of “[A new history of Australian political thought](#)” (YouTube link) is included in the Branch report.

In Sydney, Emeritus Professor Rosalind Croucher AM, President of the Australian Human Rights Commission, spoke to the audience in the State Library of NSW on “[Making rights a reality — the need for a Human Rights Act](#)” (YouTube link). Her talk is discussed in the Program Committee report. Dr Joseph Bevitt, Senior Instrument Scientist, Australian Nuclear Science and Technology Organisation (ANSTO) spoke at a joint meeting of the Australian Institute of Physics, Royal Australian Chemical Institute, RSNSW, and ANSTO about using state-of-the-art scientific techniques from the Australian Centre for Neutron Scattering to reveal the secrets of 26 objects from the Powerhouse collection.

Our Patron, Her Excellency the Honourable Margaret Beazley AC KC, Governor of New South Wales, hosted Australia’s Chief Scientist, Dr Cathy Foley AO PSM DistFRSN FAA FTSE at Government House, Sydney and presented her with her Distinguished Fellow Certificate. A summary of Cathy’s presentation on the “[Importance of scientific ideas and discovery to Australia’s future](#)” (YouTube link) is included in the Program Committee report later in this Bulletin.

I take the opportunity to remind you that at the next Ideas@theHouse on 10 August, Professor Emma Johnston AO FRSN FAA FTSE will speak about “[Ideas for marine stewardship and sustainability in a time of acceleration.](#)”

I also remind you that nominations for the Society’s Awards open on 01 July and close on 30 September. You should refer to our website for [full details](#) and the nomination forms because of the new structure being introduced this year. Nominations will be open for four Career Excellence Medals, Four Discipline Awards, and several postgraduate scholarships, early career research awards, service awards, and internal awards.

I end on the [sad note](#) that Emeritus Professor Jeremy Davis AM FRSN passed away on 13 June. Several members of the Society have expressed their condolences to his wife, Dr Jessica Milner Davis FRSN, Council member during 2022 and Secretary of the Awards Committee during 2021–2022. A memorial service for Jeremy will be held sometime in August.

We work for the Society and for NSW because we understand the need to enhance public discourse on a wide range of topics that are crucial to our future. Society members have

excellent ideas to contribute. In that spirit, I look forward to hearing your ideas and suggested ways to bring them to fruition.

Susan M Pond AM FRSN FTSE FAHMS  
[President, Royal Society of NSW](#)

## For your diary

- [RSNSW Online Presentation 2023-3](#) (Wednesday, 5 July, 6.30 – 8.00 pm AEST, live streaming on Zoom), *Thoughts on the Voice*, Panel comprising Emeritus Professor Peter Baume AC DistFRSN, Professor Megan Davis FRSN FASSA, Christopher Puplick AM, and Dean Ashenden
- [Hunter Branch Meeting 2023-3](#) (Thursday, 20 July, 5.30 for 6.00 – 8.00 pm AEST, Hunter Room, Newcastle City Hall), *Groundwater: When will we learn we can't drink money?*, Professor Craig Simmons FAA FTSE, Pro-Vice-Chancellor, College of Engineering, Science, and Environment, University of Newcastle
- [Southern Highlands Branch Meeting 2023-6](#) (Thursday, 20 July, 6.30 – 7.30 pm AEST, RSL Mittagong, Carrington Room), *A recent study of nuclear energy usage in Canada and the USA*, Robert Parker, Founder, Nuclear for Climate Australia
- [1314th Ordinary General Meeting and Open Lecture](#) (Wednesday, 2 August, 6.00 for 6.30 – 8.00 pm AEST, Gallery Room, Mitchell Building, State Library of NSW), *Convergence: the hybridisation of the future*, Associate Professor Catherine Ball in conversation with Maria MacNamara
- [Charles Perkins Centre Annual Lecture 2023](#) (Wednesday, 2 August, 5.30 – 7.00 pm AEST, University of Sydney Camperdown campus, venue to be advised), *Public health sovereignty and public reason: a comparative perspective*, Professor Sheila Jasanoff, Pforzheimer Professor of Science and Technology Studies, Harvard Kennedy School
- [Ideas@theHouse: August 2023](#) (Thursday, 10 August, 6.00 for 6.15 – 8.00 pm AEST, face-to-face at Government House (members-only registration), live streaming (from 6.30 pm), and subsequently on YouTube), *Ideas for marine stewardship and sustainability in a time of acceleration*, Professor Emma Johnston AO FRSN FAA FTSE, Deputy Vice-Chancellor (Research), University of Sydney
- [Western NSW Branch Meeting 2023-3](#) – conducted jointly with Charles Sturt University (Wednesday, 16 August, 6.00 – 8.00 pm AEST, Charles Sturt University, Panorama Avenue, Bathurst), *Behavioural Data Science as a Game Changer for Understanding the Interface between Human and Digital Systems in the New Digital Economy*, Professor Ganna Pogrebna, Executive Director, Artificial Intelligence and Cyber Futures Institute, Charles Sturt University
- [Southern Highlands Branch Meeting 2023-7](#) (Friday, 18 August, 6.30 – 7.30 pm AEST, RSL Mittagong, Carrington Room), *Crop productivity in a stressed environment*, Professor Richard Trethowan, Director, Plant Breeding Institute, Sydney Institute of Agriculture, University of Sydney

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

## Membership Survey – Prospects and Plans for the Future

The Council of the Royal Society of New South Wales will hold a workshop in August to develop a Master Plan for the next chapter of the Society as it enters its third century. In preparation, the Council is keen to canvass the views of members on what they like about the Society, how we can ensure that the Society remains relevant to the needs and aspirations of the membership and the broader community, and how the Society can appeal to a more diverse and inclusive membership.



An anonymous membership survey, which takes approximately 15 minutes to complete, has been designed with this in mind. Please contribute your ideas and complete the survey by the closing date of *Friday 28 July 2023*.

[Please click here to access the survey](#)

## NEWS

### Society Fellow, Warwick Anderson, wins the prestigious Bernal Prize

Society Fellow, **Professor Warwick Anderson FRSN FAHA FASSA FAHMS**, has been jointly awarded the Society for Social Studies of Science's prestigious Bernal Prize for having made 'distinguished contributions' to the field of Science and Technology Studies. The Bernal Prize is the Society's life achievement award, with past recipients including Emily Martin, Evelyn Fox Keller, Sheila Jasanoff, Steven Shapin, Donna Haraway, Bruno Latour, Mary Douglas, Joseph Needham, Robert Merton, and Thomas Kuhn.



Warwick Anderson is the Janet Dora Hine Professor of Politics, Governance, and Ethics in the Department of Anthropology at the University of Sydney and the leader of the Politics, Governance, and Ethics Theme in the Charles Perkins Centre. Beginning in the 1990s, Warwick Anderson has published path-breaking research on recent histories of science, medicine, environment, immunity, whiteness, and modernity.

The citation for his award notes that he "has been a major contributor to postcolonial science and technology studies through detailed studies of race, colonialism and citizenship, and in a series of profoundly influential programmatic works. Among his five award-winning monographs is *The Collectors of Lost Souls: Turning Kuru Scientists into Whitemen*, which was honoured with the Fleck Prize in 2010. He has led multiple science and technology studies programs, mentored scores of now-prominent scholars and convened multiple workshops that have shaped the field, and also modelled interdisciplinary scholarship with scientists in diverse fields. His works have challenged Eurocentrism in science and technology studies, pushing the field to engage with global histories of science and medicine with a focus on Australasia, the Pacific, Southeast Asia, and East Asia. In the time of COVID-19 and in the midst of massive degradation of the Earth's life-support systems, he is also recognised as a notably insightful and critical public intellectual."

The Council of the Royal Society of NSW extends its warmest congratulations to Professor Warwick Anderson on this esteemed recognition of his outstanding research career. For further information, please see the [announcement](#) on the Society for Social Studies of Science website.

## **Society Fellow, Gordon Wallace, elected to the Royal Irish Academy**

Society Fellow, **Distinguished Professor Gordon Wallace AO FRSN FAA FTSE** of the University of Wollongong, has been recently elected to the Royal Irish Academy – Ireland's leading body of experts in the sciences and humanities.



Gordon Wallace is a world-leading researcher and pioneer in materials science and advanced fabrication with particular interests in the development of deployable technologies to tackle challenges in energy and health where medical devices complement the body's own systems to treat disease and repair injuries.

Professor Wallace is the Director of the University of Wollongong Intelligent Polymer Research Institute, Director of the Australian National Fabrication Facility–Materials Node, Director of the Translational Research Initiative for Cellular Engineering and Printing, and previously served as Director of the Australian Research Council Centre of Excellence for Electromaterials Science. His research interests lie in organic conductors, nanomaterials, and non-destructive methods of characterisation, with his extensive scientific contributions having broken new ground in every aspect of materials research, in academic performance and outcomes, in training the next generation of researchers, and in facilities development.

Born and raised in Belfast, Gordon Wallace immigrated to Australia at the age of 14, where his family settled in Geelong. After undertaking undergraduate and PhD studies at Deakin University in Geelong, he commenced his research career at the University of Cork. Returning to Australia in 1986, he joined the University of Wollongong and maintained active collaborations with Irish research institutions including Dublin City University and Trinity College Dublin.

Professor Wallace's accolades during his distinguished career include an ARC Laureate Fellowship in 2011, the Eureka Prize for Leadership in Innovation and Science in 2016, NSW Scientist of the Year in 2017, and the award of an Officer of the Order of Australia (AO) in recognition of his substantial contributions to research, his commitment to research collaboration and innovation, and the subsequent economic, educational, technological and health benefits on a national and international scale that have been generated by his research activities.

The Council of the Royal Society of NSW extends its warmest congratulations to Professor Wallace on this further recognition of his outstanding research career.

## **King's Birthday Honours 2023**

The Society is delighted to learn of the awards to the following Society Fellows and Members who appear in the 2023 King's Birthday Honours List.

The following have been honoured as Members of the Order of Australia (AM).

**Marcela Bilek AM FRSN FAA**, Professor of Applied Physics and Surface Engineering at the University of Sydney, for significant service to physics and biomedical engineering.

**Merlin Crossley AM FRSN**, Professor of Molecular Biology and Deputy Vice-Chancellor (Academic Quality) at UNSW Sydney, for significant service to education and to molecular biology.

**Rebecca Ivers AM FRSN**, Scientia Professor of Public Health at UNSW Sydney, for significant service to community health through injury prevention research and education.

**James Renwick AM CSC FRSN SC**, Barrister with 12 Wentworth Selborne Chambers, for significant service to the law and to national security.

**Wendy Sharpe AM FRSN**, a renowned Australian artist, who received her honour for significant service to the visual arts and to the community.

**Phil Waite AM FRSN**, Emeritus Professor at UNSW Sydney, for significant service to medical science, and to tertiary education.

The following has been honoured with the Medal of the Order of Australia (OAM).

**John Dunnet OAM MRSN** for service to the print media industry.

## Latest composition from David Hush FRSN

The latest composition from **Dr David Hush FRSN**, “Three Pieces for Solo Flute”, is dedicated to, and has been recorded by, Dr Danielle Eden. Dr Eden has played flute and piccolo with Opera Australia for the past 20 years. “Three Pieces” may be heard on [Akiva Recordings](#).

David is known for channelling J S Bach, and each piece has “a special connection to J S Bach”. David writes:

- Overture — The form of the first movement is founded on the French baroque model: an opening section in medium tempo imbued with dotted rhythms; a fast contrasting middle section; a reprise of the opening section. The composition of an overture for solo flute is unusual and presents a special challenge to the interpreter.
- Sarabande — The second movement reflects Bach's interest in the two-part binary form and has an introspective mood which recalls Bach's own Sarabande from his Partita for Solo Flute. The Sarabande closes with a dramatic cadenza-like coda designed to highlight the interpreter's virtuosity.
- Prelude à JSB — As the title may suggest, there is a close connection to the music of Bach. Rather than recall Bach's music for solo flute the Prelude draws more on the composer's writing for solo violin. In particular, the wide registral skips within the



## King's Birthday Honours



context of unfolding sequences are strongly evocative of techniques favoured by Bach in his music for solo violin.

## **Vale Emeritus Professor Jeremy Davis AM FRSN**

The Society is saddened by the passing of one of its Fellows, **Emeritus Professor Jeremy Davis AM FRSN**, on 13 June 2023.



Jeremy Davis, husband of Jessica Milner Davis FRSN, was Dean of the Australian Graduate School of Management from 1980 to 1989, a mere four years after the establishment of the School. He brought to the School an amazing intellect, borrowing from his experience as a Managing Partner at the Boston Consulting Group (in San Francisco and Paris) and his training at the Stanford Graduate School of Business and, before that, at Sydney University, where he was a University Medallist.

His influence was profound in both moulding the culture of the AGSM faculty and in shaping the lives of the many students that he taught. His skills did not go unnoticed at the University level, and he was quickly pressed into being President of the Academic Board and serving on the University Council.

For the past 40 years, he served on many boards and government bodies, amongst which were the private equity partnership, Champ Ventures, as a non-executive director, and as a director of Transurban Group, Singapore Power, and the SP Ausnet Group. He has also acted as chairman of AIDC Ltd and Capral Aluminium Ltd, and a director of Nucleus Limited and the Australian Stock Exchange. Jeremy Davis also served on the board of Pinchgut Opera for a number of years and became a Life Patron of the organisation.

Jeremy Davis was a Fellow of the Institute of Company Directors and a Fellow of the Royal Society of NSW, and was made a Member of the Order of Australia in January 2008 for service to tertiary education, particularly as an educator in the discipline of strategic management, through a range of academic administrative roles, and to business and commerce.

He will be sorely missed by all his friends and colleagues at the Royal Society of New South Wales, the University of New South Wales, and more widely.

A memorial service celebrating the life of Jeremy Davis will be held in August and all who knew him are warmly welcome to attend.

John Roberts AM FRSN and Robert Marks FRSN

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## **EVENTS**

### **RSNSW Online Presentation 2023-2**

#### **Thoughts on the Voice**

**Peter Baume AC DistFRSN**

**Megan Davis FRSN FASSA**  
**Christopher Puplick AM**  
**Dean Ashenden**

**Date:** Wednesday, 5 July 2023, 6.30 – 7.30 pm AEST

**Venue:** [Zoom webinar](#)

**Entry:** No charge

**All are welcome**



[Please click here to join the webinar](#)

**Summary:** Peter Baume AC, who served as Minister for Aboriginal Affairs in the Fraser Government is convening this panel on the Voice. He has invited Professor Megan Davis, a human rights lawyer of indigenous descent from UNSW, who has been at the forefront of the case in favour of the Voice. Chris Puplick, a former Liberal MP, will also be participating in the discussion. Dean Ashenden, an academic and author of the book 'Telling Tennant's Story,' which won the 2022 Australian Political Book of the Year, will bring his own re-evaluation of race relations in Tennant Creek based on his childhood experiences.

**Emeritus Professor Peter Baume AC DistFRSN** is a retired Australian doctor and politician. He was a Senator for New South Wales from 1974 to 1991, representing the Liberal Party. He served as Minister for Aboriginal Affairs (1980–1982) and Minister for Education (1982–1983) in the Fraser Government.

**Professor Megan Davis FRSN FASSA** is an Aboriginal Australian activist and international human rights lawyer. She was the first Indigenous Australian to sit on a United Nations body and was Chair of the UN Permanent Forum on Indigenous Issues. Davis is Pro Vice-Chancellor, Indigenous, and holds the Balnaves Chair in Constitutional Law at the University of New South Wales. She is especially known for her work on the Uluru Statement from the Heart.

**Christopher Puplick AM** is a former British-Australian politician, public servant, and public intellectual. He served as a Senator for NSW during the 1980s, after which he was appointed as President of the NSW Anti-Discrimination Board and the NSW Privacy Commissioner.

**Dean Ashenden** has worked as an academic and a political adviser, and in journalism. He has contributed to many print outlets, and was presenter of Radio National's "Education Issues" program. His "Telling Tennant's Story: The strange career of the great Australian silence" (Black Inc 2022) was the inaugural winner of the Australian Political Book of the Year award.

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## **Hunter Branch Meetings 2023-3**

**Groundwater: when will we learn we can't drink money?**

**Professor Craig T. Simmons FAA FTSE**

**Pro Vice-Chancellor**

**College of Engineering, Science, and Environment  
University of Newcastle**



**Date:** Thursday 20 July 2023, 5.30 for 6.00 – 8.00 pm AEST

**Registration:** [Registration is required](#) by 5.00 pm on

Wednesday 19 July 2023 through Membes. Max: 100 people

**Venue:** Hunter Room, Newcastle City Hall, 290 King St,  
Newcastle NSW

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

**Enquiries:** Via [email to RSNSW Hunter Branch Secretary \(Prof. Philip Bolton\)](#).

**Society Members, Fellows, and members of the public are welcome**

**Please register now**

**Summary:** Groundwater plays a pivotal role in many burning and contentious issues that shape our world. Whether it's our environment, our food and water security, or the risks of coal seam gas and fracking, mining, energy, and nuclear waste disposal, groundwater is always at stake. Groundwater delivers half of the drinking water for mankind and nearly half of the water for growing food. So why don't we hear more about it? Groundwater is no longer a resource we can ignore. Climate change and population growth will only add fuel to the fire that's burning beneath our feet. We are one of the driest inhabited places on earth: good groundwater management is fundamental to our survival. We need to make the invisible *visible* before it's too late. This talk exposes the massive challenges and opportunities for groundwater science, management, and policy nationally and internationally, and makes the case for an engaged and informed framework to manage what may be our planet's most precious resource.

**Professor Craig Simmons** is a leading groundwater scientist, recognised for contributions to groundwater science, science leadership, education, and policy reform, working across the public and private sectors. Craig was Foundation Director of the ARC National Centre for Groundwater Research and Training and Pro Vice-Chancellor (Research) at Flinders University. He has also served as the Executive Director for Mathematics, Physics, Chemistry, and Earth Sciences at the Australian Research Council.

Craig is Pro Vice-Chancellor of the College of Engineering, Science, and Environment at the University of Newcastle where he provides executive leadership to the Schools of Architecture and Built Environment, Engineering, Environmental and Life Sciences, Information and Physical Sciences, and Psychological Sciences. He is a Fellow of the Australian Academy of Science, Australian Academy of Technology and Engineering, and American Geophysical Union. He has received numerous awards including the Australian Academy of Science's Anton Hales Medal for distinguished contributions to research in the Earth Sciences, South Australian Scientist of the Year, Australian Water Professional of the Year, Australian Award for University Teaching, and International Association of Hydrogeologists Presidents' Award. He is a lead author of the United Nations World Water Development Report "Groundwater: Making the Invisible Visible" and was co-author of the IPCC Sixth Assessment Report.

**Southern Highlands Branch Meeting 2023-6**

## **A recent study of nuclear energy usage in Canada and the USA**

**Robert Parker**

**Founder, Nuclear for Climate Australia**



**Date:** Thursday, 20 July 2023, 6.30 – 7.30 pm AEST

**Venue:** RSL Mittagong, Carrington Room

**All are welcome**

**Summary:** Robert Parker's talk will detail his recent research, concluding with an outline of the benefits he sees to rural and regional Australia from a program of nuclear energy based on both some small and some larger plants as described in his photographs, interviews, etc. He will discuss his views on the benefits to community growth, stability, and education and quote the findings of the UN and EU reports that recommend nuclear energy to be the most sustainable and low-carbon energy source for the future. He also supports the belief that it eliminates the need to industrialise our landscapes and requires very few changes to our existing grid.

As former President and Vice-President of the Australian Nuclear Association, **Robert Parker** was tasked with carrying out investigations of current advances in the nuclear fuel cycle for power generation. Since his last lecture to the RSNSW Southern Highlands branch in 2022, Robert has recently conducted a study tour to Canada and the USA, examining in detail Canadian small modular reactor (SMR) activity. During this time, he met with the Canadian Nuclear Safety Commission among many others, and received a full briefing on BWRX 300 SMR being built at Darlington on Lake Ontario. Robert holds a Master of Nuclear Science from ANU, a Master of Engineering Science from UNSW, and a Bachelor of Civil Engineering from UNSW.

## **1314th Ordinary General Meeting and Open Lecture**

**Convergence: the hybridisation of the future**

**In conversation:**

**Associate Professor Catherine Ball**  
**Futurist, Author, Researcher, Rebel**

**and**

**Maria MacNamara**  
**Director, Government Affairs and**  
**Innovation Strategy, Kyndryl**



**Date:** Wednesday, 2 August 2023, 6.00 for 6.30 – 8.00 pm AEST

**Venue:** Gallery Room, State Library of NSW, Shakespeare Place, Sydney

**Entry:** Society members, \$10; Non-members, \$20; Students, \$5.

**Registration:** [Registration through Membes](#) is required before 2.00 pm on 2 August

**Drinks:** available from a cash bar from 6.00 pm

**All are welcome**

[Please click here to register](#)

**Summary:** Convergent technologies are accelerating business model evolution, and also changing our tolerance and social licence around them. How can we accept technologies we don't understand? Is there trust when it comes to taking these hardware and software into our homes? Would you let your children have an implantable device, or even offer up your genome as proof of ID?

As the world mixes the human and the technological, we are entering Industry 5.0 — the Internet of Things has become the Internet of Bodies. How much privacy are we willing to hand over in order to protect the cyber security of life as usual? All these questions have been around for some time, but they have never been so pressing.

With the rise and rise of Generative AI, the scaling of technology seems to have caught some by surprise: including our regulators and governance leaders. Associate Professor Catherine Ball PhD DSc will aim to open some of Pandora's box and demystify where we are and what future we are looking at. Ultimately, we still have consent. We can still turn it all off. Can't we?

### **About the Speakers**

An Associate Professor in the practice of engineering at the Australian National University, **Dr Catherine Ball** is a scientific futurist, speaker, advisor, author, founder, executive producer, executive director, and company director working across global projects where emerging technologies meet humanitarian, education, and environmental needs. Catherine also likes to create businesses and champion movements, collaborate with peers, and advise game-changers.

Catherine Ball is a sought-after voice across the start-up, futurist, and tech world, working globally across a wide range of projects from creating documentaries and world-leading conferences and events, to advising on the use of novel approaches (e.g., drones) across environmental and humanitarian projects. She is a proponent of community engagement with STEM (Science, Technology, Engineering, and Mathematics), and seeks to demystify emerging tech.

As a 'social architect' and a champion of diversity and inclusion, Catherine Ball aims to connect people from different backgrounds across common themes. Working to protect the natural environment and empowering all members of society through mutual education are core aspects of the projects on which Catherine chooses to spend her time and energy. Catherine continues to support Australia as being the world leader in the advancement of ethically driven technological applications.

Catherine lives in Queensland with her husband and two sons. She holds a BSc Honours (Environmental Protection) and a PhD (Spatial Ecology, Descriptive and Predictive Statistics) from the University of Newcastle-upon-Tyne in the United Kingdom.

**Maria MacNamara** has specialist expertise in policy, strategy, and digital transformation. She recently completed a transformation of Australia's global diaspora organisation, Advance.org, and is currently the Director of Government Affairs and Innovation Strategy at Kyndryl. Maria is an Industry and Professional Fellow at UTS, chairs the strategy board

for the ARC Training Centre for Information Resilience (CIRES), and is a member of the Business School's Board of Advice at the University of Sydney. She is a non-executive Director of Portal Ideas, the Spark Festival, and sits on the Advisory Boards of the AUKUS Forum, IdeaSpies, and Zitavi. Maria recently retired from the Advisory Board of Internet 2.0 and the Advisory Council for the Commissioner of the Australian Federal Police.

## Charles Perkins Centre Annual Lecture 2023

**Public health sovereignty and public reason:  
a comparative perspective**

**Professor Sheila Jasanoff**

**Pforzheimer Professor of Science and Technology Studies  
Harvard Kennedy School**



**Date:** Wednesday 2 August 2023, 5.30 pm – 7.00 pm AEST

**Venue:** University of Sydney, Camperdown Campus — venue to be confirmed

**Registration:** [Registration through the University of Sydney](#) is required

**Entry:** Free

**All are welcome**

[Please click here to register](#)

*The 2023 Charles Perkins Centre Annual Lecture is presented jointly by the University of Sydney Charles Perkins Centre and the Sydney Law School.*

**Summary:** Drawing on varied policy responses to the Covid-19 pandemic, Professor Jasanoff argues that national health policies reflect underlying social compacts regarding the mutual obligations of citizens, experts, and the state. This approach helps make sense of wide divergences in measures taken by states worldwide to combat Covid-19 and ensure recovery.

This talk challenges conventional understandings of modernity as the product of two trajectories that sustain each other and improve human futures: one of advances in science and technology and the other of social progress. Progress is here imagined as always in-the-making, riding on the wings of scientific enlightenment. There is no room for backsliding in this view, only the horizon of greater emancipation.

But what if this idea of modernity is itself an imaginary overlaid on less tidy epistemic and political commitments? What if, instead of perfection through knowledge and reason, modernity is a patchwork of opaque delegations whereby control over minds, bodies, and nature's workings is handed over to experts with quasi-sovereign power to regulate their respective domains? Empirically exploring these questions provides insights into contemporary debates on populism and loss of trust in science.

## Ideas@theHouse: August 2023

**Ideas@theHouse**

**presented by**



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



**Ideas for marine stewardship  
and sustainability  
in a time of acceleration**

**Professor Emma Johnston  
AO FRSN FAA FTSE  
Deputy Vice-Chancellor  
(Research)  
University of Sydney**

**Date:** Thursday, 10 August 2023, 6.15 for 6.30 – 8.00 pm AEST (live streaming from 6.30 pm)

**Venue:** Government House Sydney (by formal invitation for members-only), live streaming, with a YouTube recording thereafter

**Entry:** No charge

**Registration:** Society members will receive an email in early July 2023 inviting them to register for a formal invitation from Government House Sydney to this event. A link to the live stream will be provided closer to the event.

**Summary:** Our ocean ecosystems are facing great challenges. Human impacts are growing, leading to rapid changes in ecosystem structure and function. Accelerating ecological processes, tipping points and vicious cycles suggest a rapid worsening of conditions.

In this talk, Professor Johnston will describe the key drivers of ecological acceleration, how they act in concert, and the implications for marine and coastal social-ecological systems. She will then present ideas for converting vicious cycles to virtuous ones through effective environmental stewardship.

Finally, Professor Johnston will present a case study of the recent Australian State of Environment Report and how sustainability has been addressed by the inclusion of three new dimensions in this report: centering Indigenous perspectives, developing well-being assessments, and linking to the UN Sustainable Development Goals.

**Professor Emma Johnston** is a leading authority in marine ecology, a sustainability and diversity champion, and a chief author of the Australian State of Environment Report 2021. Professor Johnston is the Deputy Vice-Chancellor (Research) at the University of Sydney. She has held the roles of Pro Vice-Chancellor (Research) and Dean of Science at UNSW and is a past President of Science & Technology Australia (STA). Professor Johnston has led major research projects for industry, government, the Australian Research Council, and the Australian Antarctic Science Program, and has contributed to the development of national and international research priorities and plans. She is a Director of the Great Barrier Reef Marine Park Authority and a Governor of the Ian Potter Foundation. Professor Johnston was made an Officer of the Order of Australia (AO) in 2018 for distinguished

service to higher education, particularly to marine ecology and ecotoxicology, as an academic, researcher, and administrator, and to scientific institutes.

## Western NSW Branch Meeting 2023-3

**Behavioural data science as a game changer for understanding the interface between human and digital systems in the new digital economy**

**Professor Ganna Pogrebna**

**Executive Director  
Artificial Intelligence and Cyber Futures Institute  
Charles Sturt University**



**Date:** Wednesday, 16 August 2023, 6.00 — 8.00 pm (AEST)

**Venue:** Engineering Building, Building 1305, Charles Sturt University, Bathurst

**Entry:** Free

**Registration:** [Registration through Eventbrite](#) is required for the face-to-face and online events

**All are welcome**

**Please register now**

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

**Summary:** Behavioural data science refers to a new field, combining cross-disciplinary methods from behavioural science, economics, psychology, data science, and computer science to design new modelling approaches in order to better understand and predict three strands of behaviour: (i) human behaviour (e.g., consumer decision making); (ii) algorithmic behaviour (e.g., detecting and preventing algorithmic bias as well as understanding the interactions between algorithms and humans); and (iii) systems behaviour (e.g., designing complex but effective systems to maximise people's potential). This talk will introduce the field as well as discuss its impact on a number of domains including cybersecurity, financial services, talent management, leadership, and others. Using concrete practical examples, it will demonstrate how behavioural data science not only offers new models and methods, but also changes the game across a number of applications, providing major innovations in the context of the New Digital Economy and Industrial Revolution 4.0, which are delivered to citizens and customers in effective, transformative, and disruptive ways.

**Professor Ganna Pogrebna** is a pioneer in behavioural data science and is the Executive Director of the Artificial Intelligence and Cyber Futures Institute at Charles Sturt University. Blending behavioural science, AI, computer science, data analytics, engineering, and business model innovation, Ganna helps businesses, cities, charities, and individuals to better understand why they make the decisions they make and how they can optimise their behaviour to achieve higher profit, better social outcomes, as well as flourish and bolster their wellbeing. Her recent projects focus on smart technological and social systems, cybersecurity, human-computer and human-data interactions and business models. Her most impactful projects concentrated on [cybersecurity as a](#)

[behavioural science](#) as well as [applications of behavioural data science to the media industry](#). Her digital security risk-tolerance scale (CyberDoSpeRT) is widely used in Australia and abroad. Ganna's contributions to risk analytics and modelling was recognised by the Leverhulme Research Fellowship award. In January 2020, she was also named as the winner of TechWomen100 — the prize awarded to leading female experts in Science, Technology, Engineering and Mathematics in the UK. She has also been named as one of 20+ [Inspiring Data Scientists by the AI Time Journal](#). Ganna runs the [Data Driven blog on YouTube](#) as well as [Inclusion AI blog](#). Her work is regularly covered by the traditional as well as social media. Ganna is one of the [contributors to the Oxford Handbook of AI Ethics](#). She is also currently co-editing the Cambridge Handbook of Behavioural Data Science, which is due to be published in 2023 by Cambridge University Press.

## Southern Highlands Branch Meeting 2023-7

**Can plant breeding help us manage the challenges of climate change and food insecurity?**

**Professor Richard Trethowan**

**Director, Plant Breeding Institute  
Sydney Institute of Agriculture  
University of Sydney**



**Date:** Thursday, 17 August 2023, 6.30 – 7.30 pm AEST

**Venue:** RSL Mittagong, Carrington Room

**All are welcome**

**Summary:** As agricultural production systems become increasingly marginal in many parts of the world, will genetic technologies continue to play a significant role in mitigating the impacts of climate change? The Green Revolution saw crop productivity skyrocket in most agricultural systems, however, the rate of increase in productivity has largely plateaued since the turn of the century. The extent to which plant breeding can meet these future challenges will be discussed using wheat, Australia's major grain crop, as an example.

**Richard Trethowan** holds the Chair of Plant Breeding and is currently Director of the Plant Breeding Institute in the School of Life and Environmental Sciences at the University of Sydney. He has extensive experience in international agriculture, particularly in wheat breeding and genetics. He has led many national and international initiatives that aim to improve the productivity, sustainability, and profitability of agricultural systems. In 2021, he was awarded the Royal Society of NSW Poggendorff Lectureship.

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## REPORTS

### Program Committee Report

The Society provides an active program of events through the Hunter, Southern Highlands, and Western NSW branches, and in Sydney. With events held recently by the branches

reported on separately in this Bulletin, this section focuses on the two most recent events held in Sydney.

### **Report on recent events in Sydney**

On 7 June, following the 1313th OGM, Emeritus Professor Rosalind Croucher AM FAAL, President of the Australian Human Rights Commission, delivered a lecture titled "[Making rights a reality — the need for a Human Rights Act for Australia.](#)"

(YouTube link) The lecture attracted a strong audience with a number of lawyers, including Michael Kirby, AC CMG. Ros' elegant talk traced her own journey from scepticism to a strong commitment to a Human Rights Act for Australia. She guided us through her time as an academic lawyer focussing on the fields of equity, trusts, property, inheritance, and legal history, her role as Dean of Law at Macquarie University, and as President of the Australian Law Reform Commission.

According to Ros, Australia needs a national Human Rights Act to require parliamentarians and public servants to consider human rights in their decisions. It would provide the framework through which to assess human rights issues in a rapidly changing world, where new technology introduces challenges not envisaged in current legislation. As she explained, a Human Rights Act could have provided safeguards to help prevent the appalling social impact of Robodebt by requiring legislation to protect rights to social security and a decent standard of living.

The second event held in Sydney during June was the seventh in the Ideas@theHouse series, held at Government House Sydney on 14 June, and hosted by Her Excellency the Honourable Margaret Beazley AC KC, Governor of NSW. The presentation was delivered by Dr Cathy Foley AO PSM DistFRSN FAA FTSE. Since taking up her position as Australia's Chief Scientist in January 2021, Dr Foley has crisscrossed the country "looking over the vastness of the whole Australian science and research ecosystem" and leading the national conversation about Australia's Science and Research priorities. In her presentation titled "[Importance of scientific ideas and discovery to Australia's future](#)" (YouTube link), and conversation with the audience, Cathy's messages were that although science is humanity's superpower and essential to solving the challenges that we face as a race and a planet, it must be deployed as "science PLUS". "The problems we face are trickier than a pure science approach alone can solve." Dr Foley gave several illustrative examples of solutions being achieved at scale, and with social licence, by embedding science in many other systems of knowledge and in national and global decision-making. Dr Foley challenged us to collaborate widely, respect the value of fields of knowledge far from our own, be comfortable with ambiguity, and remain intrigued by the unknown "especially if that unknown includes approaches to knowledge we are not used to weaving together."

### **The Society and social media**

The Society's presence on social media platforms is slowly but surely growing. Our [Facebook page](#), [LinkedIn channel](#), [Twitter feed](#), and [YouTube channel](#) continue to attract and engage followers and viewers, and we continue to build a repository of events on



YouTube. Our YouTube channel now has in excess of 560 subscribers and more than 120 videos online that have received almost 60,000 viewings.

The icons below will take the reader to our pages on these platforms, from where they 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 also encourage your friends and colleagues to do so.*

Christina Slade FRSN  
Chair  
RSNSW Program Committee



## Hunter Branch Report

### Society Member named in King's Birthday Honours List

Royal Society of NSW Member and Hunter Branch Committee member, Mr John Fletcher McLellan Dunnet, was named in the King's Birthday Awards announced on June 14, 2023. John was awarded the Medal of the Order of Australia (OAM) for his service to the print media industry in a career that extended from the 1960s to his retirement as an active newspaperman in 2007.



In addition to being a long-serving newspaperman in regional NSW, with a strong belief that a local newspaper should engage closely with the community it served, John Dunnet has served as President of Country Press NSW (1986-88) and was later elected as President of Country Press Australia (1995-97). He served on the Country Press Australia Board between 1986 and 1997 and was appointed as the representative of Country Press Australia on the Australian Press Council (APC) between 1997 and 2015.

Mr Dunnet said the tides of economic change, largely driven by the digital revolution, had seen regional print media fall away in Australia and overseas since the beginning of this century as social media forms spread globally. "Sadly, many Australian regional communities have lost their local papers in recent years, especially when the Covid menace was at its worst."



Mr Dunnet's strong commitment to inform and engage with society has continued since his retirement. This has included serving as a founding and active member of the Committee of the Hunter Branch of the Royal Society of NSW since 2019. He said that in this role he sees an opportunity to continue to help broaden the opportunities for communities across NSW to gain access to the contemporary areas of excellence in the fields of science, the arts, literature, and philosophical endeavor.

The Hunter Branch collectively extends its congratulations to John and wishes to thank him for his continued service as a member of the Hunter Branch Committee.

Philip Bolton FRSN  
Secretary

## Southern Highlands Branch Report

### Presentation Report — 15 June 2023

#### Machines behaving badly: the morality of AI

**Professor Toby Walsh FAA FACM FAAAS  
Scientia Professor of Artificial Intelligence  
UNSW Sydney**

Toby Walsh began his lecture with the statement that we had spent the last 50 years dreaming of Artificial Intelligence, then the last 40 years trying to build some. We are now at the exciting point where AI seems to be leaving the laboratory, leaving many people uncertain of the effects, good and bad, that AI will now bring to our lives.

ChatGPT, the popular chatbot from Open AI, was chosen by Toby to demonstrate the huge influence that AI is having on our lives already. ChatGPT is the fastest-growing app ever, faster than Twitter, Facebook, and Snapchat. It was launched on 30 November 2022 and two months later had 100 million users. Today, only six months later, it has over one billion users. It is now in the hands of Microsoft Search, my AI, Skype, and numerous others. Toby described this extraordinary growth of chatbots as a Cambrian explosion.

All large corporations are racing to include this new functionality in their systems. You can ask bots such as ChatGPT to converse with you on any topic of your choice, such as asking it to write a poem in the style of William Shakespeare or any other poet that you like. It can write your business letters, and tell you jokes in any genre you choose. Toby emphasised that this functionality is only one of the many facets of the generative AI capability. He described ChatGPT as offering us just a glimpse of the future, for these bots can do much more than chat. Generative AI can be used to generate, among many others, images, videos, music, voices, and works of art.

Recently an eye-catching image of the Pope in a white puffer jacket appeared in the media. Toby asked the 85-person audience for a show of hands of those who had seen it – nearly everyone had. He added that when he had first seen it, he assumed it was a photograph of the subject from someone who had excellent skill in the electronic manipulation of photographs. Later information revealed the image as a complete fake generated by AI. Toby added that fakery in photographs had been going on with great skill for over 100 years, but that this image of the Pope was completely different in that it required no skill at all! To generate this image, someone had simply typed into the appropriate app, “I want a photo-realistic picture of the Pope in a white puffer jacket”. The picture was generated automatically.

With such capability in the hands of over one billion people right now, it is quite clear that AI brings unlimited possibilities for both good and bad outcomes in our world today. An image of the Pentagon being exploded in a fiery attack appeared in the media recently. The Stock Market immediately dropped, with millions of dollars being wiped from the

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bourse. It was the work of a deep fake, which took only seconds to cause such public fear and consternation. A fascinating lecture.

Anne Wood FRSN  
Chair  
Southern Highlands Branch

## Western NSW Branch Report

### Provocations Lecture Report – 15 June 2023

#### A new history of Australian political thought

**Professor Wayne Hudson FAHA**  
**Australian Centre for Christianity and Culture**  
**Charles Sturt University, Canberra**

In conjunction with the Western NSW Branch of the Royal Society of New South Wales, Charles Sturt University is conducting its Provocations Public Lecture series that celebrates research at the University. The second in this series was presented on Thursday, 15 June at the Charles Sturt Canberra campus in Barton, ACT by Professor Wayne Hudson FAHA on the topic "[A new history of Australian political thought](#)" (YouTube link).

Wayne Hudson, an intellectual historian and a critical realist social philosopher, discusses the originality of Australia's political thought. In the lecture, he applies a philosophically informed global intellectual history methodology to Australian political thought in contrast to the national intellectual history approach that dominates historiography. This approach combines macro- and micro-history: it looks wide to find the relevant data, and it seems small to notice international influences, materials in languages other than English, changes in geography and context, changes in the meanings of English words and English words with Australian meanings. To do so, he contests the conceptuality which currently governs the field and introduces new evidence.

Some scholars argued that Australian political thought refers to ideas about politics here rather than political thought or political philosophy in a technical sense. There is, of course, merit in attending to ideas that shaped political arrangements. However, the relationship between work on political concepts and policy outcomes must be researched and not assumed. In this lecture, Wayne takes political thought to be about the delineation and thematisation of political concepts and not primarily the ideas of politicians, although the two may sometimes overlap. He also takes 'originality' to mean sociohistorical and not romantic originality. Hence he does not necessarily assume that originality is a good thing and emphasises that, at this stage, he is only at the beginning of his research. He has not yet been able to consult all of the existing scholarships, let alone most Masters and PhD theses. Hence what he said may need considerable qualification as the research proceeds.

With these qualifications, Wayne suggests: (a) that there was much more Australian political thought than historians have imagined, (b) that much of it was original, and (c)

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that understanding this originality can help us both to change the national imaginary and to strengthen our projection into Asia.

To show originality, Wayne alleges that he shows that the reception of cultural capital does not make Australian political thought unoriginal. He then suggests that there are between 40 and 50 different strands of political thought in Australia and discusses several in some detail. He then found over one hundred political thought intellectuals in Australia, including at least twenty who are original by international standards, including Jethro Brown, Hedley Bull, Raewyn Connell, Elizabeth Gross, Agnes Heller, Philip Pettit and Peter Singer.

Finally, Wayne suggests that these findings have implications for the reform of the Australian national imaginary.

## Forthcoming Events

The next event in the Provocations Public Lecture series, titled "[Behavioural Data Science as a Game Changer for Understanding the Interface between Human and Digital Systems in the New Digital Economy](#)", will be presented by **Professor Ganna Pogrebna**, Executive Director of the Artificial Intelligence and Cyber Futures Institute at the Charles Sturt University Campus, in Bathurst on Wednesday, 16 August (6.00 pm AEST).



Professor Pogrebna is a pioneer in behavioural data science and in her talk she will introduce the field, discuss its impact on cybersecurity, financial services, talent management, leadership, amongst other areas, and demonstrate how this new field not only offers new models and methods but also provides major innovations in the context of the New Digital Economy and the Industrial Revolution 4.0.

Registration for this event is available on [Eventbrite](#) and a recording of the event will be made available on the Society's YouTube channel.

[Future events](#) in the Provocations lecture series include:

- *Rural and regional health*, Professor Allen Ross (Wednesday, 18 October, CSU Orange campus)
- *Thirst for power - The rivers of conflict in Southeast Asia*, Professor Lee Baumgartner (Thursday, 16 November, CSU Albury campus).

Nilima Mathai  
Secretary  
Western NSW Branch

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## VIDEOS

### Recordings of Recent Events on YouTube

All online presentations and all face-to-face presentations held in Sydney are recorded and uploaded to the Society's YouTube channel. These can be accessed directly from

[YouTube](#) or from the website [Presentations page](#).

For convenience, the video links below provide direct access to recordings from the most recent two months together with the most popular recordings from earlier this year. We hope that these will be of interest to members.

ROYAL SOCIETY NEW SOUTH WALES

Charles Sturt University

Western NSW Branch Meeting 2023-2  
Thursday, 15 June 2023 at 6.00 pm AEST  
Venue: Charles Sturt University, Canberra and live streaming

**A new history of Australian political thought**

Professor Wayne Hudson  
Australian Centre for Christianity and Culture  
Charles Sturt University

YouTube logo

Portrait of Professor Wayne Hudson

Seal of the Royal Society of New South Wales

YouTube recording of the lecture delivered at the Society's Western NSW Branch 2023-2 meeting by Professor Wayne Hudson FAHA of the Australian Centre for Christianity and Culture, Charles Sturt University on the subject of *A new history of Australian political thought*. An abstract of the talk and the biography of the presenter is available from the [online event notice](#).

ROYAL SOCIETY NEW SOUTH WALES

Ideas@theHouse  
presented by  
Her Excellency The Honourable Margaret Beazley AC KC  
Governor of New South Wales

Wednesday, 14 June 2023 at 6.30 pm AEST  
Livestreamed from Government House and recorded for YouTube

**Importance of scientific ideas and discovery to Australia's future**

Dr Cathy Foley AO PSM DistFRSN FAA FTSE  
Australia's Chief Scientist

YouTube logo

Portrait of Dr Cathy Foley

Seal of the Royal Society of New South Wales

Coat of Arms of New South Wales

YouTube recording of Ideas@theHouse: June 2023 from 14 June 2023 on the subject of *Importance of scientific ideas and discovery to Australia's future*, delivered by Dr Cathy Foley AO PSM DistFRSN FAA FTSE, Australia's Chief Scientist. An abstract of the talk and the biography of the presenter is available from the [online event notice](#).

**Making rights a reality: the need for  
a Human Rights Act**



**Emeritus Professor Rosalind Croucher AM FAAL**  
**President**  
**Australian Human Rights Commission**



YouTube recording of the 1313th Ordinary General Meeting from 7 June 2023 on the subject of *Making rights a reality — the need for a Human Rights Act for Australia*, delivered by Emeritus Professor Rosalind Croucher AM FAAL, President of the Australian Human Rights Commission. An abstract of the talk and the biography of the presenter is available from the [online event notice](#).

**Artificial Intelligence myths debunked —  
how AI is transforming  
humanity for the global good**



**Professor Michael Blumenstein**  
**Acting Dean, Faculty of Engineering and IT**  
**University of Technology Sydney**



YouTube recording of the RSNSW Online Presentation 2023-1 held on 3 May 2023 on the subject of *Artificial Intelligence myths debunked — how AI is transforming humanity for the global good*, delivered by Professor Michael Blumenstein FACS of the University of Technology Sydney. An abstract of the talk and the biography of the presenter is available from the [online event notice](#).

Reconstructing ancient oceans,  
sea-level fluctuations, the deep carbon cycle,  
and biodiversity

Professor Dietmar Müller FAA FAGU  
School of Geosciences  
University of Sydney



YouTube recording of the 1312th Ordinary General Meeting and 2019 Clarke Memorial Lecture held on 5 April 2023 on the subject of *Reconstructing ancient oceans, sea-level fluctuations, the deep carbon cycle, and biodiversity*, delivered by Professor Dietmar Müller FAA FAGU, Professor of Geophysics, at the University of Sydney. An abstract of the talk and the biography of the presenter is available from the [online event notice](#).

Her Excellency The Honourable Margaret Beazley AC KC  
Governor of New South Wales



Thursday, 2 March 2023 at 6.30 pm AEDT  
Live Streaming at Government House Sydney

Aristotle on life and thought  
in the sub-lunary sphere

Dr John Vallance FRSN FAHA  
State Librarian of NSW



YouTube recording of Ideas@theHouse held at Government House on 2 March 2023 in which Dr John Vallance FRSN FAHA, State Librarian of NSW, presented on the topic of *Aristotle on life and thought in the sub-lunary sphere*. An abstract of the talk and the biography of Dr Vallance is available from the [online event notice](#).

**Drones, Smart Munitions, and Cyberspace:  
the 21st Century Defence Challenge and  
its implications for Australia**

**Major General (Retd) Fergus (Gus) McLachlan AO  
and  
Colonel (Retd) Andrew Condon**



YouTube recording of the 1310th Ordinary General Meeting on 1 February 2023 on the subject of *Drones, Smart Munitions, and Cyberspace: the 21st Century Defence of Ukraine and its implications for Australia*, featuring Major General (Retd) Fergus (Gus) McLachlan AO and Colonel (Retd) Andrew Condon CSC. An abstract of the talk and the biographies of the presenters is available from the [online event notice](#).

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Edited by: [Lindsay Botten](#) FRSN, Webmaster, Royal Society of NSW

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