

THE BULLETIN 468

THE ROYAL SOCIETY OF NEW SOUTH WALES

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For Your Diary

- **01 FEB**<u>1310th OGM and</u>

 <u>Open Lecture</u>
- 15 MAR
 Jak Kelly Award and
 Scholarship presentations

1309[™] OGM AND OPEN LECTURE (FACE-TO-FACE)

Harnessing solar energy through catalysis to make chemicals and fuel

Wednesday, 7 December 2022, 6:30 PM



Scientia Professor Rose Amal AC FRSN FAA FTSE Scientia Professor of Engineering, UNSW Sydney

All are welcome (registration required).

See page 5 for more information



Patron of The Royal Society of NSW

Her Excellency The Honourable

Margaret Beazley AC KC

Governor of New South Wales



From the President

Beginning to write this column soon after the Society's Bicentennial Committee, which I have chaired since April 2021, held its final meeting in late October prompts me to review and express my appreciation for the work of this Committee and its succession of members and to highlight its enduring legacies.

The original Committee met for the first time on 4 September 2019 in the State Library of NSW. Members were Ian Sloan (Chair), Ragbir Bhathal, Robert Clancy, Stuart Midgley, Bruce Ramage (Secretary) and me. The Committee's purpose was to lead the development and delivery of the Bicentenary Program of the Society on behalf of Council.

Our research revealed that the Society celebrated its Centenary on 7 December 1921 beginning at 8 PM in the Society's House at 5 Elizabeth Street Sydney on the corner of Hunter Street. In his Presidential address delivered to the Society on 3 May 1922 and published in Volume 56 of the Journal and Proceedings, Ernest Clayton Andrews, BA, FGS, reported that:

The Centenary of our Society was celebrated on the 7th of December 1921, and His Excellency Sir Walter Davidson, the Governor of the State and Vice-Patron of the Society, attended by Major Egerton, was the chief guest. Short addresses dealing with the early history of the Society, together with the first papers presented, were delivered by Mr. R. H. Cambage, Professor W. E. Cooke, Professor Sir Edgeworth David, Mr. O. Hedley, Mr·. J. H. Maiden, and Dr. J. F. Watson.

Following extensive discussion at its first meeting, the Bicentennial Committee considered a range of ideas that converted into the events that many of you have enjoyed. They created much greater awareness of the Society's history and impact across the centuries. Events included: the exhibition, NEXUS, which closed on 30 June; the Garden Party on 12 March hosted at Government House by our patron; the Gala Dinner held in the Great Hall at the University of Sydney on 24 June; and a small reception hosted at Admiralty House by the Governor-General and his wife on 7 November.

As you will read below, records of these and implementation of foreshadowed ideas will endure as legacies of our bicentenary.

Early 2020 brought new members to the Bicentennial Committee — Sean Brawley, Barbara Gillam,



and John Hardie. Early 2020 also brought the headwinds of the unfolding COVID-19 pandemic which forced a deferral of the celebrations. The Minutes of the 17 August 2020 Executive Committee noted:

Given the pandemic and the uncertainty surrounding travel and when social distancing requirements may be lifted, it is suggested that the celebrations commence on 27 June 2021 and conclude on 24 June 2022. This change would necessitate the rescheduling of all events already planned.

The 200th Birthday Gala Dinner was transferred to 2022. The proposed European tour has been postponed until further notice.

NEXUS was due to open on 26 June 2021. Unfortunately, stay-at-home rules introduced for Greater Sydney to curb the highly transmissible B.I.617.2 (Delta) variant of SARS-CoV-2 compelled the State Library to close its doors at 5 PM on 25 June. The exhibition finally opened on 8 November 2021 follow-

ing an easing of restrictions. Eight past Presidents of the Society, several Distinguished Fellows, Fellows, Members, and representatives of kindred organisations could finally attend the official launch on 10 December 2021.

The Presidents' Chair was restored prior to its relocation to the State Library for display in the exhibition. This restoration was generously supported by financial contributions



from past Presidents Ragbir Bhathal, the late David Branagan, the late Edric Chaffer, Trevor Cole, George Gibbons, John Hardie, Donald Hector, Brynn Hibbert, Karina Kelly, Donald Napper, Ian Sloan, and Bruce Warren. A brass plaque to record the Society's appreciation for their generosity has been struck and will be affixed to the chair.

As another enduring legacy, the Bicentennial Committee began to write complete profiles for all Society Presidents since 1821, noting that there are many gaps. Marian Kernahan, who joined the Bicentennial Committee during 2021 and is leading this initiative, has asked for any information you, the reader, might have to contribute to this project. All profiles will be combined as one historical document that will be accessible on the Society's website and international repositories. A complete list of Presidents' names is already available. Please get in touch if you wish to contribute to this research. This project will transfer to the Publishing Committee.

In a similar vein, Davina Jackson, who became Secretary of the Bicentennial Committee in 2022, is collaborating with Robert Marks, Editor of the *Journal and Proceedings* of the Society, to publish the forthcoming author-alphabetical listing of all articles in the Journal since its inception in 1822 as a 'Bicentennial Bibliography'. The PDF will be uploaded to the Society's website and a range of national and international repositories.

In additional exciting news about the Journal, Robert Marks has confirmed that Smithsonian's Biodiversity Heritage Library will produce Digital Object Identifiers (DOIs) for all papers in the *Journal* published since 1865. This will permanently identify each article and link to it on the worldwide web. A wonderful achievement during our bicentennial year. Congratulations, Robert!

Discussions about other legacies are progressing. One is a proposed biennial Royal Society of New South Wales Bicentennial Oration featuring a distinguished speaker. The other is publication of the early history of the Royal Society of NSW and its antecedents as a full record of its achievements and societal influence in New South Wales up to the First World War.

As Chair of the Bicentennial Committee, I thank most sincerely its members who were there as the celebrations ended. They are Sean Brawley, Wendy Enevoldsen, John Hardie, Davina Jackson, Marian Kernahan, and Bruce Ramage.

Fellows of the Society provide expert support to New South Wales Government, serving on various Committees including but not limited to the Physical Sciences Fund, the Bushfire Commercialisation Fund, and the Future Economy Fund. Our Fellows are valued for their expert, independent advice. I thank those who I know have contributed over the years — Erik Aslasksen, Lindsay Botten, Annabelle Duncan, Bernard Pailthorpe — and the many others.

Erik Aslaksen also represented the Society as a judge for the 2022 Jak Kelly Award. The winner is Shankar Dutt, a PhD Candidate in the Research School of Physics at the ANU for his work on Sensing one molecule at a time: a pathway to personalized healthcare and early detection of Alzheimer's disease and multiple sclerosis. Fred Osman, Secretary and Awards Convenor for the Australian Institute of Physics NSW Branch, sent me a note to say that: Erik has judged 10 out of the 12 events. Prof Ian Sloan and Professor Heinrich Hora were the judges on the other occasions.

Winners of all 2022 Awards will be announced at the Society's final meeting of the year on 7 December. Scientia Professor Rose Amal AC FRSN FAA FTSE, winner of the Society's 2021 Cook Medal, will present her <u>lecture</u> Harnessing solar energy through catalysis to make chemicals and fuel. Please do your best to attend.

We now turn our attention to next year. Society members will soon receive their 2023 fee renewal notice. The fee remains unchanged from 2022. The notice provides you with a snapshot of plans for next year. I look forward to seeing you at many of the events.

I add here a request to each of you to contribute personally by nominating people you know as Members or Fellows so that the Society truly reflects the diverse mix of minds, ages and experiences from across the State.

I also ask that you consider making a donation, however modest. You will be aware from the Society's request for donations in June of the proposed establishment of Royal Society of NSW Bicentennial Scholarships to be offered in any academic field. A <u>tax-deductible donation</u> will encourage and support the leaders of tomorrow.

The Library Fund, which is also tax-deductible, will be seeking donations soon to support a professional librarian for a short-term project related to cataloguing the Society's precious collection of books.

This year, Council also brought the Society's <u>Bequest Program</u> up to date. Since its inception, the Society has benefited greatly from generous donations and bequests from both members and other benefactors.

We continue to 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.

It remains for me to wish you and your families well for year-end and New Year celebrations, wherever you plan to be.

Dr Susan M Pond AM FRSN President, Royal Society of NSW

Welcome to new members

The Royal Society of New South Wales warmly welcomes the following new members to the Society's ranks, effective from 19 October 2022.

Fellows

- · Professor Anita Wing Ho-Baillie
- Professor Michail Kagioglou

Recordings of the 2022 Forum now on YouTube

The Royal Society of NSW, together with its Learned Academy partners, is pleased to announce that the recordings from the 2022 Forum, *Reshaping Australia: Communities in Action*, are now available on the Society's YouTube channel. This year the Forum was held at Government House on Thursday 3 November 2022.

The recordings can be accessed directly from our YouTube channel or from the Reshaping Australia: Communities in Action Forum page on the Society's website. The latter provides links to the videos of each segment of the program and also access to the program brochure that includes summaries of each of the sessions and biographical information about



the speakers and panellists. Timing marks on each of the videos enable ready access to the individual components of each session.

1309th OGM and Open Lecture

Harnessing solar energy through catalysis to make chemicals and fuel

Scientia Professor Rose Amal AC FRSN FAA FTSE Scientia Professor of Engineering, UNSW Sydney



Date: Wednesday,

7 December 2022, 6:30 PM

Venue: Gallery Room, State Library of NSW,

Shakespeare Place, Sydney

Entry: Society members, \$10; Non-members, \$20;

Students, \$5

Registration: <u>Registration through Membes</u> is required before 2.00 PM on 6 December

All are welcome.

Summary

Catalysis is the heart of chemistry — most chemical reactions need catalysts — so we want to make these reactions efficient and the process as sustainable as possible. Turning to the Sun as an energy source to activate catalysts is an obvious place to focus our investigations because it reduces our reliance on unsustainable fossil fuels. There are a number of means in utilising the sun's energy to drive energetically demanding catalytic processes. We can use (i) electricity from photovoltaic transformation of sunlight to drive electro-catalytic reactions (electrocatalysis), (ii) heat of the sun to activate thermal catalyst (thermal catalysis), and (iii) light of the sun to excite electrons from valence band of a semiconductor to its conduction band (photo catalysis).

Professor Amal will present her ongoing research in harnessing the full solar energy spectrum (from ultraviolet to infra-red) to induce or/and enhance catalytic CO2 and NOx reduction. Using solar energy to catalytically reduce CO2 and NOx has the potential to convert the waste CO2 and NOx into fuel and feedstocks, allowing the dual opportunity to store the intermittent renewable energy as well as closing the anthropogenic carbon and NOx cycle.

About the speaker

Rose Amal received her PhD in Chemical Engineering from the University of New South Wales (UNSW) in 1991. She is the leader of the Particles and Catalysis Research Group at UNSW Sydney, and Co-Director of ARC Training Centre for the Global Hydrogen Economy. Rose's current research focuses on designing nanomaterials for solar and chemical energy conversion applications, and engineering systems for solar-induced processes, using the sun's energy to generate clean fuel.

Rose's numerous awards include the Freehills Award (2008), the NSW Science and Engineering Award for Emerging Research (2011), the ExxonMobil Award (2012) and being listed in 'Australia's Top 100 Most Influential Engineers' (2012–2015). She is a Fellow of the Australian Academy of Technology and Engineering (FTSE), a Fellow of Australian Academy of Science (FAA), a Fellow of the Institution of Chemical Engineers (FIChemE), an Honorary Fellow of Engineers Australia (HonFIEAust), a Fellow of the Royal Australian Chemical Institute (FRACI) and a Fellow of the Royal Society NSW (FRSN).

She has received the nation's top civilian honour — the Companion of the Order of Australia — as part of the 2018 Queen's Birthday Honours for her 'eminent service to chemical engineering, particularly in the field of particle technology, through seminal contributions to photocatalysis, to education as a researcher and academic, and to women in science as a role model and mentor'. Rose was named the 2019 NSW Scientist of the Year and awarded the CHEMECA medal and the James Cook Medal of the Royal Society of NSW in 2021.

Report: Royal Society of New South Wales and Learned Academies Forum

by Susan Pond (President)

I take the opportunity provided by this Bulletin to provide a report on the Royal Society of New South Wales and Learned Academies Forum held in Government House Sydney on 3 November 2022 under the gracious patronage of Her Excellency the Honourable Margaret Beazley AC KC.

This is the eighth that the Society has convened since the series began in 2015 with the inaugural Forum that addressed 'The Future of Work'.

'Reshaping Australia: Communities in Action' was held in partnership with the Academy of Health and Medical Sciences, Australian Academy of the Humanities, Australian Academy of Science, Academy of the Social Sciences in Australia, and Australian Academy of Technology and Engineering.

The Forum explored some of the latest research on the factors shaping disparities in social, economic and well-being outcomes for Australians and addressed four key areas — health, education, infrastructure, and the environment. Our Moderator, Julianne Schultz, conducted the day with style and empathy. All the presentations are available to view on our <u>YouTube Channel</u> and the gallery of images is here.

Bringing such accomplished speakers together with the engaged audience was an invigorating mix, especially in the wonderful setting of Government House. The 100-strong in-person audience included sixteen undergraduate students from seven Universities, including the Universities of Newcastle and Wollongong.

As Chair of the Planning Committee, I thank the members of the Forum Program/Planning Committees for their prodigious contributions. Their names, roles and bios are recorded in the <u>Brochure</u>. Elizabeth Geddes, ATSE's Communications Manager, Brand & Digital, designed the Brochure. Days like these are not conjured up by magic. They require the sustained and dedicated input of such a band of volunteers. I also thank the five Learned Academies and the Office of the Chief Scientist and Engineer for their continued in-kind and financial support.



Our Patron, Her Excellency the Governor of NSW (centre), with student participants at the Forum

The Program Committee met after the Forum to draw out action items that the Society or one or more of the Learned Academies could take on. We are also reviewing feedback about the planning process and the day itself. Society members who attended in person or online are invited to contribute their feedback directly to me.

Robert Marks is currently seeking papers from each presenter based on the Forum presentations for publication in the Society's *Journal and Proceedings* in June 2023. Julianne Schultz will turn her opening and closing comments into a paper that will shape the collection.

One disappointment on the day was the relatively low number of people in the live-stream audience. YouTube analytics from the day show that 40–45 people in the morning and 30–35 in the afternoon attended. Since then, however, the number of views of the recordings has picked up considerably, as has the number of subscribers to the Society's YouTube channel.

Council is exploring ways of extending the reach of the Society through better promotion of its excellent events, including the Forum, perhaps by engaging a part-time paid media and communications professional. If any member has this expertise and is willing to lend a hand, please get in touch.

Report: Program Committee

by Christina Slade (Chair, Program Committee) and Lindsay Botten (Webmaster)

Three Ordinary General Meetings have taken place since the last Bulletin. The 1306th OGM and Open Lecture was held online on Wednesday, 7 September. Associate Professor Claire Roberts of the University of Melbourne, a noted scholar of Chinese art was in discussion with sinologist and author, Emeritus Professor Nicholas Jose of the University of Adelaide, on the topic 'Is Fairweather an Australian artist? And does it matter?'. Claire Roberts described Fairweather's extraordinary life and work, vividly illustrated by his work. She focussed on his works, illuminatingly analysing paintings, and explored the impact of calligraphy on his practice. Nick brought his profound understanding of cultural relations between Australia and China, English and Chinese to the discussion. A recording of this presentation is available on our YouTube channel.

The 1307th OGM and Open Lecture was held faceto-face at the State Library of NSW on Wednesday 5 October, in celebration of the life of Professor Emeritus Geoff Harcourt. Emeritus Professor Robert Marks FRSN, the Society's Journal Editor led the discussion with a tribute to Geoff. Leading economists, Dr Don Russell, Chair of Australian Super, and Industry Professor Jane Drake-Brockman, University of Adelaide discussed 'The Global Economy and Australia's Outlook: Geoff Harcourt's contribution to the theory of productivity growth'. Both talked to pressing topics. Jane talked of the challenges to globalisation, and argued forcefully that free trade remains critical. Don focused on prices and inflation, and suggested that in spite of difficulties, the Australian economy remains strong. While both acknowledged head winds, they were optimistic. A recording of this presentation is available on our YouTube channel.

On 23 November at 6 PM, we held the 1308th OGM at the State Library where Professor Geraint Lewis FRSN FLSW, Professor of Astrophysics at the Sydney Institute of Astronomy gave the 2021 Pollock Memorial lecture on the topic 'Most of our universe is missing!: Adventures in the dark side of the cosmos'. In his presentation, Geraint Lewis took the audience on a fascinating tour of the 'dark side', outlining the history and the present understanding based on contemporary observations that reveal the presence of dark matter and dark energy. A recording of this presentation is available on our YouTube channel.

November was a particularly busy month. On Monday 14 November at 9 AM, a joint RSNSW/Law Society of NSW Public Lecture (on line) was presented by Linda Greenhouse, a Senior Research Scholar, Yale Law School and President, American Philosophical Society talking on 'The US Supreme Court: A Rogue Court in a Fragile Democracy'.

On 30 November, the University of Sydney hosted the 2021 Poggendorf Lecture, from 4–6 PM at the Ground Floor Auditorium in the Michael Spence Building. Professor Richard Trethowan, Professor of Plant Breeding and Director of the Plant Breeding Institute, Sydney Institute of Agriculture discussed 'A plant breeder's perspective on food security and climate change'. The recording of this event will be made available on YouTube shortly.

The final meeting of the year — the 1309th OGM — will take place at the State Library on 7 December followed by the 2021 James Cook Medallist, Professor Rose Amal.

The event program for the year in <u>Sydney</u>, the <u>Hunter region</u>, the <u>Southern Highlands</u>, and in <u>Western NSW</u> is also available on the Society's website at the preceding links.

Report: Southern Highlands Branch (October)

by Anne Wood (Branch Secretary)

Judging a jest: humour and censorship

Dr Jessica Milner Davis University of Sydney; Brunel University London

Our audience on October 20 was in for a very different experience as far as the Southern Highlands branch popular



monthly lecture series is concerned. Dr Jessica Milner Davis is a research associate at the University of Sydney and at Brunel University London's Centre for Comedy Studies Research. A member of Clare Hall, Cambridge, UK, and Fellow of the Royal Society of New South Wales, she has twice served as president of the International Society for Humour Studies (ISHS) and co-ordinates the Australasian Humour Studies Network (AHSN). Her publications deal with farce, satire, the comic tradition in European theatre and cross-cultural studies of humour in Australia, the UK, Japan and China.

According to Jessica, of all types of humour, satire is the one that most often falls foul of the law. Since by definition it sets out intending to criticise something, it can readily give offence. But in the present prickly age of self-entitlement, even jests supposed by their makers and (most of an) audience to be relatively harmless can have adverse results.

Most societies have some restraints or controls on the use of humour. These can range from formal censorship by editorial, legal, or even political decision to internalized controls such as cultural conventions and personal taste in humour. All humourists must negotiate their way around such constraints, although Australia prides itself on having fewer than some (e.g. Japanese culture about laughter and smiling, or the PRC's ubiquitous internet scrubbing of jokes and memes).

This talk explored some famous Australian cases where humour was found to be offensive: these occurred in spheres ranging from the workplace to newspaper cartooning and even restaurant reviewing. How does Australian culture — normally so indulgent about piss-taking and joking — perform when an offended party complains about humour, and where does justice lie? The answer reveals a complex interaction between reactions reflecting personal and cultural values and complaints that are driven by economic and power considerations. It also shows that the law can be a very blunt instrument when it comes to analysing humour and its effects, and that public opinion may often disagree with its judgments. Needless to add here that gales of laughter escaping from the 61-person audience during the presentation of these famous cases would not have gone unnoticed in the corridors of the Mittagong RSL.

This was a memorable lecture in so many ways, reflecting Jessica's deep knowledge of her research findings and analysis. An excellent presentation. In 2018 she received the ISHS Lifetime Achievement Award for her interdisciplinary research and publications on humour and laughter. With legal scholar Sharyn Roach Anleu, she has edited Judges, Judging and Humour (Palgrave Macmillan, 2020) and her latest book is Humour in Asian Cultures: Tradition and Context (Routledge Studies on Asia in the World, 2022).

Report: Southern Highlands Branch (November)

by Anne Wood (Branch Secretary)

Green Steel

Dr Samane MaroufiCentre for Sustainable Materials and Research Technology
SMaRT, UNSW



Dr Maroufi's field of research

is high temperature metallurgical processes and ironsteel making to develop new science and technology for the recycling of waste. SMaRT was founded in 2008 by UNSW Scientia ProfessorVeena Sahajwalla, best known for her patented *Green Steel* invention.

Maroufi described the latest research break-throughs by SMaRT@UNSW's Green Steel Polymer Injection technology (PIT), in industrial trials with partner Newcastle based Molycop. These trials are clearly showing how various wastes can be used to more sustainably make steel in electric arc furnaces. Wastes such as plastics and coffee grounds now join waste rubber tyres as alternative sources of coal and coke as vital carbon source ingredients for steel making. They can also provide the element hydrogen which vastly improves the efficiency and energy required for the manufacturing process.

Coffee is one of the most popular beverages worldwide. Maroufi emphasised that the significant

amount of waste in the form of spent coffee grounds (SCGs) provides a high carbon content which can be readily used for iron and steelmaking applications. She added that the use of SCGs in the ferrous industry will not only be helping in the reduction of greenhouse gas emissions, but also in energy consumption.

This approach of substituting a traditionally used fossil material with a bio-based waste material is a key step towards the formation of a fossil-free ferrous industry. Maroufi added that it also assists in decreasing mining costs, energy consumption and associated greenhouse emissions.

In conclusion, it seems that the most desirable outcome of this ground-breaking research would be the complete elimination of the coke in the steel-making process. Australian steelmakers are leaders in this space globally. They have been the first to be able to take up all of these technological advances, and show that it can be done. Maroufi made clear that steelmakers have to meet the demands of quality requirements no matter what changes are being made to traditional methods. She emphasised that the metal produced 'doesn't have any memory of whether the parent material that went in was coal or coffee'.

The 50-person audience obviously enjoyed and appreciated Maroufi's very well presented lecture, as judged by the depth of questioning at the end of the evening.

Your Bulletin

This omnibus edition of the *Bulletin* is a combined November/December edition and is the last one for 2022. Apologies to members who were expecting an issue at the beginning of November, but a lot has been on the Society's agenda in recent weeks. We have tried to capture all news and activities held over

the last few weeks in this expanded issue. Reports on the recently held Pollock and Poggendorff Lectures, as well as the webinar held in conjunction with the Law Society of NSW on 14 November, will appear in the first issue of 2023.

Membership renewals

You will be receiving an email shortly, if it hasn't already arrived, advising you that it is that time of year again when membership renewals are due. As the President has indicated in her column in this *Bulletin*, your continued engagement and participation in the activities of the Society are greatly appreciated and we look forward to that continuing. The Society is building on the achievements of its Bicentennial year and will offer an exciting program of events and opportunities for cross-disciplinary networking in 2023.

Our *Journal and Proceedings* continues to bring interesting ideas and information to its readership.

In next year's issues we intend to publish, among other articles, the presentations given at the Society's recent Forum held at Government House and online. If you would like to subscribe to the hard copy version of the *Journal*, you can do so when you renew your membership.

If you would like to provide support for the Society's Bicentennial Scholarship Scheme at the time of renewal, please do so via: https://royalsoc.org.au/donate. Donations to the Society's Scholarship Fund are tax deductible. The scheme encourages research excellence in young people. Any donation, no matter how small, will help the Society secure its future.

Society Fellow, Michelle Leishman, awarded a 2022 NSW Premier's Science Prize

The Council of the Royal Society of NSW was delighted to learn that one of its Fellows, Distinguished Professor Michelle Leishman FRSN of Macquarie University has received the NSW Premier's



Science Prize for Excellence in Biological Sciences at an Awards Ceremony held at Government House Sydney on the evening of 2 November 2022.

Professor Leishman is a plant ecologist globally recognised for groundbreaking research on invasive plants and pathogens, climate change impacts and adaptation, and urban greening. She has a reputation for finding creative solutions to big issues in conservation.

Regularly advising government, industry, and other expert panels, Michelle plays a critical role in guiding policy and managing threats from invasive plant species in NSW and Australia. This includes leading research to model current and future cli-

mate suitability for over 700 exotic plant species, translated into an easy-to-use online tool for natural resource managers.

In collaboration with the NSW Government and nursery and garden industry, Michelle is leading the development of the innovative Ornamental Plant Risk Assessment Tool. This provides the evidence base for the Gardening Responsibly Program, a voluntary certification scheme promoting the use of plants with low weed risk. She also leads the collaborative Which Plant Where research program, a five-year program to facilitate climate-resilient urban greening. The Which Plant Where climate-ready plant selector tool is the first of its kind globally.

In recognition of her contributions, Michelle was recently made a Fellow of the Royal Society of NSW and last year was named as Eminent Ecologist by the *Journal of Ecology*.

The Society warmly congratulates Michelle Leishman on this well-deserved recognition of her outstanding research.

Winners of the Bruce Piasecki and Andrea Masters Writing Prize

On 12 October 2022, the Royal Societies of Australia announced the joint winners of its inaugural Bruce Piasecki and Andrea Masters Award for Writing on Social Change.



This new annual award recognises dynamic non-fiction writers between 18 and 40 years of age in the Australasia/Oceania Region who aim to ignite positive social change through published work on any theme exploring key business and society issues. Themes include, but are not limited to, climate change, racial/gender equality, sustainability, innovation, and new approaches to lessen war and social stresses.

This year's winners come from diverse backgrounds, but each brings a passion for getting their message out to as wide an audience as possible.

Dr Anika Molesworth is a farmer, scientist, and storyteller. She is widely recognised for her work in agriculture and food systems and for generating climate change awareness. She is passionate about the effects of



climate change on food production and hence the need for food producers to think differently about their processes. The prize is awarded for her book *Our Sunburnt Country* and her program of future work in this area. On receiving news of her award Anika said:

I am thrilled to be recognised by The Royal Societies of Australia and New Zealand in the Bruce Piasecki and Andrea Masters Writing Prize for my writing on climate change, food security, and farming systems. With the world facing a multiplicity of challenges, it is critical that we communicate and engage with these issues so that they may be addressed and overcome quickly. It is a great honour to win this Award and it has given me a boost of confidence and encouragement for future writing endeavours. This Prize will go towards the creation of more books and communications to connect people with how climate change is impacting farmers

and the food they produce, and the role we all play in implementing climate change solutions.

Dr Niraj Lal is a physicist and science communicator who delights in explaining natural phenomena to everyone, including our youngest. He is both an academic and popular writer and a presenter on TV, radio and other



media. The prize is awarded for his comprehensive science communication work and his program of social engagement for the future. He says:

It's a real honour to be a joint recipient of this prize. I'm thankful for my teachers, supervisors, and mentors for teaching me to write, and for the generosity of Bruce Piasecki and Andrea Masters in establishing the award. Social change is a challenging goal — to target, achieve and measure, and recognition like this is wonderful and encouraging.

For me, the real value of awards like this is in their ability to support work to continue; which is my intent — with the energy transition, communicating the wonders of nature, and supporting social change through freedom of information. My particular focus remains communicating beyond those already in the know and those on the same page. I'm donating 10% of the prize money to the Freedom of the Press Foundation and Digital Rights Watch Australia to support writing for social change with freedom from surveillance.

Each wins a half share of the AU\$10,000 prize money generously sponsored by Dr Bruce Piasecki, the President and founder of the AHC Group Inc and founder of the Creative Force Foundation Inc (US), and a New York Times best-selling author of multiple titles, and Sebastian Vanderzeil, a Brisbane investor specialising in deep decarbonisation, climate resilient infrastructure and sustainable agriculture.

The award is offered with the kind support of the Royal Society of New Zealand Te Apārangi.

Society Fellow, Ben Eggleton, appointed as PVC (Research) at the University of Sydney

Society Fellow, Professor Ben Eggleton FRSN FAA FTSE, has just been named as the new Pro Vice-Chancellor (Research) at the University of Sydney. He commenced his new role in November 2022.



Professor Eggleton is currently the Director of the University of Sydney Nano Institute, Co-Director of the NSW Smart Sensing Network (NSSN), and a Professor in the School of Physics where he leads a research group in photonics, nanotechnology, and smart sensors.

In his new role, he will have responsibility for key areas in the University's research portfolio including research policy, performance and conduct including clinical trials, research reporting, compliance, research integrity, and ethics management. Professor Eggleton obtained a PhD degree in Physics from the University of Sydney and was founding Director of the ARC Centre of Excellence for Ultrahigh bandwidth Devices for Optical Systems (CUDOS) that was headquartered in the School of Physics from 2003–2017. He was a recipient of a NSW Scientist of the Year Award (Physics and Astronomy) in 2008, Eureka Prize for Leadership in Science in 2011, Eureka Prize Winner of the Defence Science and Technology award in 2020 and the Academic of the Year at the 2022 Defence Industry Awards. Ben is also a Fellow of the Australian Academy of Technological Sciences and Engineering (ATSE) and the Australian Academy of Science (AAS).

The Royal Society of NSW extends its warmest congratulations to Professor Eggleton on his appointment as Pro Vice-Chancellor (Research) at the University of Sydney.

Society Fellow, Anatoly Rozenfeld, awarded NSW Premier's Awards for Outstanding Cancer Researcher of 2022

The Council of the Royal Society of NSW was very pleased to learn that one of its Fellows, Distinguished Professor Anatoly Rozenfeld FRSN of the University of Wollongong, was recognised as the winner of Outstanding



Cancer Researcher of the Year in the 2022 NSW Premier's Awards for Cancer Research at a ceremony held on 9 November.

Professor Rozenfeld is the Director and founder of the UoW Centre for Medical Radiation Physics and is world renowned for his research work on semiconductor radiation detectors and their application in radiation therapy, radiation protection, nuclear medicine and space sciences. His career began in Ukraine, applying his knowledge of radiation physics at Chernobyl in the years following the nuclear disaster.

His decision to channel his knowledge of nuclear physics to help improve cancer treatment was a very personal one, as his mother died of a brain tumour when he was just 10 years old. 'She was 34 at the time and she was a medical doctor herself. In the 1960s in Ukraine there was no advanced radiation imaging for cancer diagnostic and medical treatment for cancer', Professor Rozenfeld said. He added that 'I've dedicated my life to ensuring no one else has to suffer like my mother and I feel incredibly honoured and privileged to have been recognised by the cancer community with this award'.

Professor Rozenfeld has published more than 400 articles, five book chapters, holds 19 granted patents, has attracted more than \$17M in competitive grants, and also delivered many keynotes, invited talks and seminars around the world.

The Society warmly congratulates Anatoly Rozenfeld for this well-deserved recognition of his highly influential research.

To learn more, please read the <u>article on the University of Wollongong media site</u>, from which this news item was sourced.

Society Fellow elected as 2022 Fellow of the Academy of Social Sciences in Australia

The Royal Society of NSW is delighted to learn of the recognition of one of its Fellows, Professor Hans Pols FRSN FAHA FASSA of the University of Sydney, as one of the new Fellows of the Academy of Social Sciences



in Australia, elected in November 2022.

Professor Hans Pols is Professor at the School of History and Philosophy of Science at the University of Sydney and a fellow of the Academy of the Social Sciences in Australia, the Australian Academy of the Humanities, and the Royal Society of New South Wales. He is interested in the history of colonial medicine and the transformation that medical research and medical practices underwent during the process of decolonization. His research has focused on the Dutch East Indies and Indonesia, and on psychiatry and mental health. His book *Nurturing Indonesia*:

Medicine and Decolonisation in the Dutch East Indies was published by Cambridge University Press in 2018 (the Indonesian translation appeared as Merawat Bangsa: Sejarah Pergerakan para Dokter Indonesia Zaman Kolonial (Jakarta: KOMPAS, 2018)).

Professor Pols is currently leading a research project, funded by the Australia Research Council, on the history of community mental health in Australia. The project team consists of a psychologist, a psychiatrist, two historians, four consumers of mental health care, and several students, and has developed methodologies of co-production to gain comprehensive insights into the development of mental health care practices in Australia.

Further information about his career and achievements can by found in the <u>laudation on the ASSA</u> <u>website</u>.

The Royal Society of NSW extends its warmest congratulations to Professor Pols for this recognition by the Social Sciences Academy of his achievements.

Society Fellow named as Engineers Australia Professional Engineer of the Year

The Council of the Royal Society of NSW has been delighted to learn that one of its Fellows, Distinguished Professor Karu Esselle FRSN from the University of Technology Sydney has been named as Engineers Australia Professional Engineer



of the Year for 2022 at a ceremony held in Sydney on 6 October 2022.

Professor Esselle, an internationally renowned researcher in electromagnetic and antenna engi-

neering, is a Fellow of the IEEE, Engineers Australia, and the Royal Society of NSW, and a Director of Innovations for Humanity Pty Ltd. His current work includes a soon-to-be-announced project with the potential to provide low-power, low-cost, high-throughput internet access from anywhere in the world and advance the control of implanted medical devices.

The Society extends its warmest congratulations to Karu Esselle on this recognition of his achievements. Further information about his career and achievements can be found on the UTS website.

Society Fellows, Mary O'Kane and Barney Glover, appointed to the Australian Government panel developing the Universities Accord

On 16 November 2022, the Commonwealth Minister for Education, the Hon. Jason Clare announced the panel charged with developing the Australian Universities Accord that will provide a long-term plan for Australia's higher education system.

Leading the team is Society Fellow, Emerita Professor Mary O'Kane AC FRSN



FTSE — former Vice-Chancellor of the University of Adelaide, former NSW Chief Scientist and Engineer, and currently Chair of the NSW Independent Planning Commission. Also, a member of the six-person panel is Society Fellow Professor Barney Glover AO FRSN FTSE — currently Vice-Chancellor of Western Sydney University and a former Vice-Chancellor of Charles Darwin University.

Other members of the panel are Ms Shemara Wikramanayake, the Managing Director and Chief Executive Officer of Macquarie Group; the Hon. Jenny Macklin, former Minister for Families, Community Services, and Indigenous Affairs; Professor Larissa Behrendt AO FASSA, Professor of Law and Director, Academic and Research Programs in the UTS Jumbunna Institute for Indigenous Research and Education; and the Hon. Fiona Nash, who

currently is Australia's first Regional Education Commissioner and a former Minister for Regional Development, Regional Communications, and Local Government and Territories.

Speaking at the announcement, Mr Clare noted that this will be the first broad review of the higher education system since the Bradley Review, and an opportunity to look at everything from funding and access, to affordability, transparency, regulation, employment conditions, and how higher education and vocational education and training can and should work together.

Key areas for the review are:

- · new targets and reforms for lifelong learning
- greater access and participation for students from 'under-represented backgrounds'
- funding and contributions, including a review of the coalition's Job Ready Graduates program
- · regulatory and workplace relations
- VET and HE connections with an emphasis on student experiences
- a competitive international education sector
- the research pipeline and collaboration between universities and industry 'to drive greater commercial returns'.

To read more about this review, please consult the <u>Minister's announcement</u> and an article in the <u>Sydney Morning Herald</u>.

Society Fellow, H Deep Saini, appointed as Vice-Chancellor of McGill University, Canada

Society Fellow, Professor H Deep Saini FRSN, has just been announced as the incoming, 18th Vice-Chancellor of the highly-ranked McGill University in Montreal, Canada.



Professor Saini who was elected as a Fellow of the Royal Society of NSW in 2017, during his tenure as Vice-Chancellor at the University of Canberra, is curently the Vice-Chancellor of Dalhousie University in Halifax, Nova Scotia in

Canada.

Deep Saini is an accomplished resarcher in plant biology, with a MSc in botany from the Punjab Agricultural University and a PhD in plant physiology from the University of Adelaide. He has worked at four of Canada's U15 universities, including as a Vice-President of University of Toronto and principal of the university's Mississauga campus, Dean of the Faculty of Environment at the University of Waterloo, and Director-General of the Plant Biology Research Institute at the Université de Montréal, prior to his executive appointments at the University of Canberra and Dalhousie University.

The Royal Society of NSW extends its warmest congratulations to Professor Saini on his forthcoming commencement as Vice-Chancellor of McGill University from 1 April 2023.

To learn more, please read the <u>announcement</u> on the McGill University website.

Society Fellow, Trevor McDougall, awarded the 2022 Prime Minister's Prize for Science

The Council of the Royal Society of NSW is delighted to learn that one of its fellows, Scientia Professor Trevor McDougall AC FRS FRSN FAA of the University of New South Wales, has been award-



ed the Prime Minister's Prize for Science in 2022. The prize, valued at \$250,000, recognises significant advancement of knowledge through science.

Professor McDougall, who is a global leader in oceanography, is recognised for his discoveries of new ocean mixing processes and his work to redefine the thermodynamic definition of seawater, now adopted by the Intergovernmental Oceanographic Commission as the new international standard. This work has had a transformative impact on the study of oceanography and ocean thermodynamics, and in furthering our understanding of the role of the ocean in regulating the Earth's climate.

Professor McDougall was elected as a Fellow of the Australian Academy of Science in 1997, a Fellow of the Royal Society of London in 2012, a Fellow of the Royal Society of NSW in 2015, and a Fellow of the American Geophysical Union in 2018. He was made a Companion of the Order of Australia (AC) in 2018 for 'eminent service to science, and to education, particularly in the area of ocean thermodynamics, as an academic, and researcher, to furthering the understanding of climate science, and as a mentor of young scientists'.

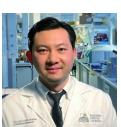
The Council of the Royal Society of NSW extends its warmest congratulations to Professor McDougall on this highly-deserved recognition of his outstanding research achievements and impact.

For further information and background, together with a <u>video</u> summarising Professor McDougall's contributions to oceanography, please see the <u>announcement on the Department of Industry</u> website.

Recent RSNSW Edgeworth David Medal winners recognised at 2022 Prime Minister's Science Prizes

Winners of the 2019 and 2020 Edgeworth David Medal of the Royal Society of NSW, respectively Professor Si Ming Man, of the Australian National University, and Associate Professor Brett Hallam of UNSW Sydney, have been (respectively) awarded the Frank Fenner Prize for Life Scientist of the Year and the Prize for New Innovators in the 2022 Prime Minister's Prizes for Science, announced on 21 November 2022.

Professor Si Ming Man was awarded the 2022 Frank Fenner Prize for Life Scientist of the Year for his work in advancing understanding of the fundamental process of inflammation. This work



has made progress towards the discovery of new therapies for inflammatory diseases and cancer. He is currently involved in clinical testing for a new class of antimicrobial drugs that could improve the global issue of antibiotic-resistant bacteria. He is also involved in clinical studies looking into the roles of immune receptors in early diagnosis and personalised therapy for bowel cancer patients.

Professor Brett Hallam was awarded the 2022 Prize for New Innovators for the commercialisation of his innovative technology that has dramatically improved the performance of solar cells. His discoveries have improved the performance of solar cells by 10%, a significant increase in the field, and have con-



tributed to an improved global economy. In 2021, technologies founded by Associate Professor Hallam have provided benefits to Australian consumers of approximately \$500 million and \$17 billion globally, with these figures rapidly increasing as the industry continues to expand.

The Council of the Royal Society of NSW extends its warmest congratulations to both Professor Si Ming Man and Professor Brett Hallam on this further recognition of their outstanding research achievements and the impact of the research, and is delighted that both have been recipients of the Society's Edgeworth David Medal that recognises distinguished contributions by young scientists under the age of 35.

For further information and background, together with videos capturing the work of Professors Man and Hallam, please see the announcement on the Department of Industry website.

Society Fellow, Simon Ringer, appointed as PVC (Research Infrastructure) at the University of Sydney

Society Fellow, Professor Simon Ringer FRSN FTSE, has just been named as the new Pro Vice-Chancellor (Research Infrastructure) at the University of Sydney.



Professor Ringer is currently the Director of Core Research Facilities at the University of Sydney, and a Professor of Materials Science and Engineering in the School of Aerospace, Mechanical, and Mechatronic Engineering.

In his new role, he will have responsibility for strategy, policy, and advice relating to research infrastructure, technology, and services, including access to major national and international research facilities and leadership of the University's core research facilities.

Professor Ringer has worked at UniSA, Monash University, UNSW, and in Sweden, Japan, and the USA. At the University of Sydney, he has held various leadership roles including as centre director of the Australian Centre for Microscopy and Microanalysis, as an inaugural Multi-Disciplinary Initiative Director with AINST (now Sydney Nano), and as Director of Core Research Facilities. He is an internationally renowned physical metallurgist, having led ground-breaking atomic-scale materials design for next-generation high-strength structural steels, semiconducting materials for nano-electronics, and new lightweight alloys that can dramatically offset our particulate and CO2 emissions. Several examples of his fundamental materials science research have been translated into industrial materials engineering practice.

In addition to these academic and research roles, Professor Ringer currently serves as Secretary of the Fellows and Members Committee of the Royal Society of NSW.

The Society extends its warmest congratulations to Professor Ringer on this appointment as Pro Vice-Chancellor (Research Infrastructure) at the University of Sydney.

Society Fellow appointed to International Science Council Committee

The Council of the Royal Society of NSW was delighted to learn that one of its Fellows, Emeritus Professor Roy MacLeod OAM FRSN FASSA FAHA, along with the Hon. Mr Robert French AC



FASSA, have been appointed to the International Science Council (ISC) Committee for Freedom and Responsibility in Science for 2022–2025, following their nomination by the Academy of Social Sciences in Australia.

The Committee monitors individual and generic cases of scientists whose freedoms and rights are restricted as a result of carrying out their scientific research, and provides assistance in such cases where its intervention can provide relief and support activities of other relevant actors. The Committee advises the ISC Governing Board on key aspects of its mission to be the global voice for science.

The Society extends its warmest congratulations to both Roy MacLeod and Robert French.

From the Archives: 200th Birthday Greetings from around the world

by Bruce Ramage (Secretary)

As previously foreshadowed, the next instalment of birthday wishes is a selection from around the world.

Royal Society Te Aparangi of Aotearoa New Zealand

The Council of the Royal Society Te Apārangi of Aotearoa New Zealand passes on its heartfelt congratulations to the Royal Society of New South Wales on its bi-centenary. We wish you well on your quest to continue enriching lives through knowledge over the next 200 years to address the many new challenges and opportunities ahead.

We look forward to working in tandem with the RSNSW to explore, discover and share the use of this new knowledge to ensure a brighter future for all.

E kore e ngaro; he takere waka nui. (We will never be lost; we are the hull of a great canoe)

Ngā mihi nui, nā

Brent Clothier FRSNZ President, Royal Society Te Apārangi

Academy of the Social Sciences in Australia

Congratulations to the Royal Society on 200 years advancing knowledge and scholarship in the Sciences, Arts, Social Sciences and Humanities. The Academy of the Social Sciences in Australia looks forward to continuing its strong and active association with the Society across a broad range of issues.

Professor Richard Holden FES FASSA President

The Royal Society of Queensland

It is very easy for Queensland and New South Wales to set aside any traditional rivalry when celebrating the birth of The Royal Society of New South Wales. For it shares its early story with The Royal Society of Queensland.

When inviting Queensland to contribute a message, your President Dr Susan Pond wrote, 'In 1821, Sir Thomas Brisbane ... founded the Philosophical Society of Australia to which the Society traces its

origins.' We have in common, much more than the name Brisbane. Queensland was a part of New South Wales until 1859 and in that year The Philosophical Society of Queensland was founded, taking its name from the New South Wales parent, and continuing in unbroken succession the Enlightenment tradition of independent scholarly enquiry that has been the foundation of our two organisations since their origin. As the word 'philosophy' shifted its meaning over the years, the Queensland Society as with New South Wales changed its name and sought Royal patronage, which in itself was an acknowledgement of a scholarly tradition dating back to the foundation in 1660 of the Royal Society of London.

It is possible to envisage a day when the adjective 'Royal' no longer resonates with contemporary society, but I cannot envisage a day when we can dispense with the need for an institution dedicated to independent curiosity-led and evidence-led experimentation, discovery and analysis while importantly also recording local science history. As the proliferation of Internet sites conveying misinformation and disinformation attests, our wider society more than ever needs to respect knowledge and respect those who generate and disseminate it.

Your foundation is our foundation; for the first 38 years your history was our history; and your celebration of your origin is our celebration too. Congratulations and best wishes on achieving 200 years! May the Royal Society of New South Wales successfully navigate the next century effectively *enriching lives through knowledge*.

Dr Ross A. Hynes President

CSIRO

Congratulations to the Royal Society of New South Wales on two centuries of knowledge and intellectual contributions for the betterment of all Australians.

For more than 100 years, CSIRO has proudly stood shoulder to shoulder with the Royal Society to help guide our nation to a better future. Our organisations are both driven by the transformative power of science and technology, and by a fierce dedication to Team Australia.

The role of science, knowledge, and collaborative innovation has never been more critical to unlocking a better future for everyone. On behalf of your National Science Agency, CSIRO, I want to thank you for your partnership, dedication and continued leadership in pursuit of that future.

Dr Larry Marshall Chief Executive

Geological Society of Australia

The Geological Society of Australia would like to congratulate the Royal Society of New South Wales on its 200th Anniversary. The Royal Society is an important learned academic society that contributes to open debate on scientific issues of relevance to society with a multidisciplinary lens. It celebrates scientific achievements and provides a forum for open and honest debate, and brings together scientists from diverse employment and discipline backgrounds. The 200-year anniversary is a testament to the standing the society has in the New South Wales and Australian scientific community.

Professor Peter Betts President

Royal Society of South Australia

On behalf of the Royal Society of South Australia, I sincerely congratulate the Royal Society of New South Wales to their Bicentenary and 200 years of achievements as a learned society in Australia. The RSNSW has been foundational for the advancement of knowledge in Australia and has to be applauded for its contributions to sciences and society at large. We wish you all the best to continue the vibrant, inspirational activities.

Professor Sabine Dittmann President

NSW Minister for Science, Innovation and Technology

The Royal Society of New South Wales (RSNSW) brings together some of Australia's most influential leaders and scholars (including four Nobel laureates) to discuss the big issues, underpinned by the key values of evidence, diversity and inclusion.

Being able to celebrate 200 years is an incredible milestone and testament to the sustained excellence of the RSNSW and its ongoing contribution to the wellbeing of NSW, Australia and the world.

With the NSW Government having just launched its 20-year R&D Roadmap to boost our research and development capabilities, we could not ask for a better representation of our world-leading capacity to produce, share and apply knowledge than the RSNSW. Here's to the next 200 years.

The Hon. Alister Henskens SC MP Minister for Science, Innovation and Technology Minister for Skills and Training

NSW Chief Scientist & Engineer

The Office of the Chief Scientist & Engineer (OCSE) celebrates this landmark year for the RSNSW. The RSNSW's mission to provide authentic and authoritative information across a diversity of sectors is more critical than ever as we face some of humanity's greatest challenges.

The RSNSW is an invaluable resource to the NSW Government, bringing together leaders in academia, business, government and the not-for-profit sector, and providing expertise in science, engineering and many other disciplines.

The NSW Government, through OCSE, is proud to sponsor the RSNSW and support its continued contribution to the enrichment of lives through knowledge and enquiry.

Professor Hugh Durrant-Whyte NSW Chief Scientist & Engineer

Australian Academy of the Humanities

I write on behalf of the Council and Fellows of the Australian Academy of the Humanities to offer our warmest congratulations as you celebrate the 200th anniversary of the Royal Society of NSW.

This remarkable milestone reflects the enduring importance of the Society as a trusted and respected Australian institution dedicated to the pursuit of knowledge. It also signifies an organisation that has successfully adapted to reflect the changing needs of society and the science and research endeavour.

We are particularly delighted to see an increasing number of leading humanities scholars among the Society's membership, and to have played a role in supporting the rich and stimulating multidisciplinary forums on issues of national importance which have become a hallmark of the Society's work.

Once again, our congratulations on reaching this significant milestone.

Emeritus Professor Lesley Head FASSA FAHA President

The Royal Society of Canada

On behalf of all members of the Royal Society of Canada I would like to send our very best wishes to The Royal Society of New South Wales on this very special occasion. While not present in person we are with you in spirit.

We congratulate you for your contributions over the last 200 years and wish you every success in your future endeavours. There is no doubt that organisations such as the RSNSW will play an important role in addressing important societal issues as we move forward.

Professor Jeremy N. McNeil, CM, FRSC President

The Royal Institution of Australia

On behalf of the Royal Institution of Australia, we extend to the Royal Society of NSW our congratulations on your milestone of 200 years of contribution to the promotion of philosophical and scientific discourse and discovery in Australia.

The Royal Institution of Great Britain was founded by Sir Joseph Banks in his home to promote science, particularly his discoveries in Australia and in July 1867 when you become the Royal Society of NSW, I believe we became kinsmen.

On this special occasion we celebrate your achievements and look forward to your future.

Peter W Yates AM Chairman

Report on the Society's 'NEXUS' exhibition

by John Hardie and Wendy Enevoldsen

The Royal Society of New South Wales celebrated the 200th anniversary of its foundation from July 2021 to June 2022. One of the major events the Society held during this period was its Bicentennial exhibition 'NEXUS' designed to highlight the Society's achievements and its contributions to the development of NSW and Australia over the 200-year period. It was held in the Jean Garling Room of the State Library of NSW (where some of the Society's library collection is housed) from 8 November 2021 to 30 June 2022.



General view of the NEXUS exhibition in the Jean Garling Room

Introduction

The planning and staging of the Society's NEXUS exhibition came under the oversight of the Society's Bicentennial Committee. The Committee formed a small Working Group to coordinate and manage the exhibition in all its phases. It comprised the Society's Librarian, John Hardie (Chair), the Secretary, Bruce Ramage, the Executive Officer, Wendy Enevoldsen, the Society's Honorary Archivist, Hannah Hibbert, and initially, Council member Dr Davina Jackson. This group wrote, curated, produced, promoted and managed all aspects of the exhibition, including its launch, management of volunteers and special tours, and liaison with the State Library.

This significant exhibition aimed to highlight and display some of the Society's important archives,

most of which are held in the State Library, the obvious choice as the location for the exhibition. The idea of having an exhibition to celebrate the bicentenary of the founding of the Society's oldest antecedent was first discussed with Dr John Vallance, the State Librarian, in 2020. Planning for the exhibition determined that it should not only tell the story of the Society's origins and progressive development through its various iterations, but also showcase some of its current and past membership and their influences on intellectual thought and practice nationally and globally. It would be the first time since the 1920s that any of the Society's archives had been on display to the public. It would also provide an opportunity to highlight the 'services' of the Society: its library, events, community, awards and publications.

The State Librarian challenged us to ensure that the exhibition answered his question of 'so what?' in relation to the Society. This encouraged the group to create depth and breadth for the exhibition. The construct of dividing the exhibition up into the themes of *Origins*, *Ideas*, *Advances* and *Impacts* was developed in direct response to this.

Working with the State Library

The State Library was kind enough to provide a page on its 'What's On' section of its website dedicated to the exhibition. It also provided the use of a panel sign to be placed in the foyer of the library to advise visitors of the location of the exhibition.

Because the exhibition was unable to open when originally planned on 26 June 2021, the State Librarian generously provided two extensions to the duration of the exhibition, first to 31 March 2022 and then to 30 June 2022 from its revised starting date of 8 November 2021.

The Society was the first external organisation to put on an exhibition in this state cultural institution.

The Society gleaned advice from State Library staff about suitable designers for the exhibition. The Society was successful in locating an experienced professional museum graphic designer to realise our conception for the exhibition. Virginia Bucking-

ham has proven to be the perfect choice as she has designed many exhibitions for cultural institutions in the past, including for the State Library.

The generous support of the State Librarian and staff for NEXUS was formally acknowledged in the title panel of the exhibition (along with an appropriate Acknowledgement of Country), by the President during her speech at the NEXUS Launch and during the private tours with Her Excellency the Governor of NSW and the NSW Science Minister.

Location

The Jean Garling Room on the ground floor of the Mitchell Wing of the State Library of NSW was offered by the State Library as the only suitable and available location for our exhibition. No alterations could be made to the room for the exhibition. The State Librarian generously provided two heritage display cases for the display of archival objects in the room, one of which was from his office.

Exhibition content

The title *NEXUS* was chosen for the exhibition as the following two definitions of the word apply equally to the Society:

- a connection or series of connections linking two or more things
- a central or focal point.

We were acutely aware that exhibitions are normally written for comprehension by a 7-year-old. Given our audience would be a highly educated one, we didn't try to dumb down the language used in the exhibition and targeted it at HSC level. Text was used in the four main wall panels printed onto phototex and attached to the walls, each corresponding to one of the exhibition themes, in the large introductory wall panel near the entrance to the exhibition, and in the object labels, both on the wall and in the showcases.

A matrix was created to ensure that the various characteristics of the Society were incorporated into the exhibition in some way (e.g. women, youth, literature, art, science, philosophy, branches, high flyers, Distinguished Fellows etc). We associated three major influencers in the history of the Society with each

of the four themes of the exhibition: *Origins, Ideas, Advances* and *Impacts.* These were:

- Origins: Alexander Berry (1781–1873), Sir Thomas Brisbane (1773–1860) and Dr Henry Grattan Douglass (1790-1865)
- *Ideas*: Joseph Maiden (1859–1925), Thomas Keneally (b 1935) and Baron Robert May of Oxford (1936–2020)
- Advances: Ida Browne (1900–1976), Sir Ernest Fisk (1886–1965) and Professor Michelle Simmons (b 1967)
- Impacts: Professor Elizabeth Blackburn (b 1948), Professor Thomas Maschmeyer (b 1966) and Professor Brian Schmidt (b 1967).

Each had his or her major area of expertise shown below their image on the wall. We used images which showed the context in which each worked. Where we showcased a living person in the exhibition, we provided them with the opportunity to review what we had written about them.

Beside the four themes were displayed short quotes pertinent to the aims of the Society from four of its Distinguished Fellows: Professors Peter Baume, Jill Trewhella, Barry Jones and Kurt Lambeck.

Acrylic object labels in the showcases also included relevant images to allow us to tell more of a story around the context of the objects, given the strict word limits for each label.

The integration of the large board table into the exhibition was achieved by creating a table runner for placement on the table during opening hours (it was not possible to leave it there as the room was used by the State Library at other times). The runner gave us an opportunity to showcase the wide range of topics of the lectures delivered at the Society's ordinary general meetings and other events. Even though the runner was approximately six metres long, we were only able to include lecture titles from the previous 15 years. The position of the runner's leading edge (falling from the front of the table) welcomed visitors and allowed us to create a visible sign or title for the exhibition that could be seen as visitors came towards the room.

A chronology or timeline showing key dates in the Society's history was printed on phototex and attached to the wall adjacent to the stairs at the back of the room. It helped to summarise the historical context of the exhibition for visitors at the end of their viewing of its content.

A video monitor and stand were purchased so that a background video could be shown in a continuous loop during exhibition opening hours. The video contained an introduction to the exhibition by the President and the reflections on the Society by a selection of Past Presidents.

The timeline, some past-presidential biographies and some images from NEXUS were repurposed for the Society's Bicentennial gala dinner on 24 June 2022. Other opportunities to repurpose NEXUS content in the promotion of the Society should be explored.

Objects

Conservation requirements meant that we were unable to utilise several Society objects that we had intended to use, for example, the Society's Letter Book containing hand written correspondence with the Society from eminent scientists of the 19th and early 20th centuries, and the Society's own copy of the 1821 Kamay commemorative plaque. The National Trust's exhibition 'Inquiring Minds', showing in part at the same time as NEXUS, had on display the minute book of the Philosophical Society of Australasia, which meant it was unavailable for NEXUS.

The State Library ensured that the Society's painting of Rev W B Clarke by Giulio Anivitti (1876), which is stored in the State Library, was fit for display. It also framed one of its copies of the Kamay commemorative plaque issued by the Philosophical Society of Australasia in 1821 so that it could be displayed in the exhibition. The plaque label was particularly challenging to write, needing to balance the context of the historical event with current perceptions.

The Society was able to provide eight items from its offsite collections for inclusion in the exhibition, one of which, an Australian \$20 banknote (now out of circulation) containing an image of Lawrence Hargrave, was kindly lent by an affiliate of the Society.

Other items included the President's Chair from Science House, the restoration of which several Past Presidents had generously contributed to, as well as two debossing tools used in the bookbinding of the Society's book collection. All other items were selected from the Society's archives housed in the State Library, as well as a small number kindly lent by the Library itself. Items brought into the Library were the subject of a loan agreement organised by the Library's Registrar which covered them from an insurance perspective and included condition reports, both on arrival and on exit. The table runner and video player and stand were not included in the loan agreement.

We are indebted to Emeritus Professor Lindsay Botten for video production of the Past Presidents' video. The original intention was for the video to include a range of material — scholarship winners, forums etc. It became apparent very quickly that we didn't have sufficient time to achieve this. The Society's Librarian made contact with as many Past Presidents as he could locate and organised for them to be filmed in the Jean Garling Room to offer their observations about the Society during their association with it. He provided three questions to them in advance so that they could prepare for the interview. Only the responses to the first question were included in the final video.

Sponsorships

The Presidents' Chair displayed in the exhibition was restored prior to its relocation to the State Library for the exhibition. This work was generously supported by financial contributions from the following Past Presidents: Ragbir Bhathal, the late David Branagan, the late Edric Chaffer, Trevor Cole, George Gibbons, John Hardie, Donald Hector, Brynn Hibbert, Karina Kelly, Donald Napper, Ian Sloan, and Bruce Warren. A brass plaque recording their contributions is being created for affixing to the chair.

Additional sponsorships were received for the exhibition launch in December 2021. A 50% discount was provided by FX framing for the restoration and reframing of the original watercolour of the Society's seal by Archibald Liversidge (1881).



View of NEXUS showing the table runner

Promotion

The Society promoted the exhibition on a blog page on its website and featured it on a slider about it on the Home page. The Society's *Bulletin* advertised the exhibition in many of its issues during the period of exhibition opening. Society Fellow Yves Hernot wrote about the exhibition in French for *Le courier australien*, a francophone daily.

Postcards advertising the exhibition were placed around the State Library and sent to other relevant organisations. They were also inserted into the exhibition booklet available and handed to visitors at the exhibition, along with the Society's brochure.

Several other organisations including the National Trust, the Royal Australian Historical Society and the Teachers Guild of NSW were provided with information about the exhibition and some included it in their newsletters to members. The Society had intended to include information about the exhibition in the State Library's Friends newsletter but due to the long lead times for the publication and the uncertainty around the opening of the exhibition in 2021 due to COVID, this did not occur.

In the latter part of the exhibition's opening a quarter page advertisement was run in two succeeding issues of the *Sydney Morning Herald's Spectrum* section issued on Saturdays. A 50% discount was offered by the publisher, Nine, and was accepted. The advertisement coincided with the addition of an extra day in a week's opening schedule (Saturday). At the same time a new Tuff-line skin was designed

and produced for the display sign in the Library's foyer amending the days open and displaying the words 'Final weeks'.

Launch

The exhibition was originally due to be launched at a private function at the State Library of NSW on Friday 25 June 2021 and to be open to the public the following day. However, due to uncertainties about COVID lockdowns, this was postponed. Indeed, the State government imposed public health restrictions for the Greater Sydney region on that day. This was very disappointing but the Library, also closed, was able to let the exhibition be moth-balled until it could be opened later in the year.

With the easing of restrictions in the latter part of 2021, a new launch was planned for 10 December. This was preceded by a soft opening of the exhibition on 8 November three days a week — Monday, Thursday and Sunday afternoons.

The State Librarian, Dr John Vallance, was asked to open the exhibition due to his personal support for it. Approximately 70 people attended, including two Distinguished Fellows of the Society, as well as representatives of kindred organisations including the Presidents of the Linnean Society of NSW and the Australian Institute of Physics, NSW Division. Attendees were given special guided tours of the exhibition in groups of around 15–20 people following the opening.

A gift pack including Nexus postcard, RSNSW Brochure and the NEXUS Booklet was given to each guest who attended the launch. The launch doubled as the Christmas function for the Society, and it was the last Society event of the year.

Private tours

The opportunity to have a guided private tour of the exhibition was extended to several external organisations, including the Teachers Guild of NSW and the NSW Science Teachers Association. Only the former took up the opportunity to engage with the exhibition. Led by Dr Fred Osman, the President of the Guild, the Society's Librarian gave a special tour of the exhibition for the 12 attendees.



The President's Chair with its wall label in front of the Exhibition's introductory panel

Being unable to attend the launch, our Patron, Her Excellency the Governor of NSW and Mr Dennis Wilson, accompanied by the State Librarian, were afforded a private guided tour of NEXUS on 30 November 2021. This was led by the President, with the Librarian and Executive Officer providing information about the themes and objects in the exhibition. The Society's Secretary was also in attendance. Ms Enevoldsen gave a short speech using the theme of bees to highlight connections with Government House, and objects in the exhibition: Rev W. B. Clarke, the Society's Seal and the table runner.

The State Library Council and State Library Foundation use the Jean Garling Room as their meeting room. Even though they did not accept a private tour, we have no doubt that they could not have missed the exhibition and hope that they reviewed the content. We are also aware that at least one NSW State Parliamentarian used the room during the exhibition period.

The Science Minister in the NSW government, Mr Alister Henskens SC MP, was keen to view the exhibition and was given that opportunity on 5 May 2022. He was escorted through the exhibition by the President with the assistance of former Treasurer David Beale.

Volunteers

The exhibition could not have been maintained without the assistance of a small group of dedicated volunteers. They comprised Wendy Enevoldsen, David Beale, Guy Loucks (until March 2022), Bruce Ramage, John Hardie, Evelleen Richards and Ross Griffith (the latter two only in the last two months of the exhibition). The Society is very grateful for their vital contribution to the operation of this bicentennial initiative.

One volunteer hosted the exhibition for each opening which was not ideal as it required the volunteer to be present for the full three or four hours. However, it was not possible to achieve shared hosting as insufficient volunteers came forward from the Society's membership.

A comprehensive volunteers guide was developed by the Executive Officer with input from the Librarian covering all aspects of exhibition hosting, including details of security, video operation, what to display on the table at the entrance to the exhibition, how to display the table runner and so on. An induction meeting with all volunteers was held on 3 November 2021 prior to the opening of the exhibition and the exhibition explained in detail with reference to the guide.

Visitors and opening hours

The total number of visitors to the exhibition was 971. This comprised a mixture of Society members and the general public, as well as those visiting as part of special private tours. A Visitors Book was on display which allowed visitors to comment on the exhibition. The comments were invariably positive. Many visitors also provided contact information which will allow contact to be made at a later date with a view to inviting them to become members or to become involved with the Society in other ways.



Dr John Vallance launching NEXUS with the Society's President Dr Susan Pond

The Jean Garling Room is not usually open to the public and has been set up primarily as a venue for meetings of the Library Council and the Library Foundation, with a bespoke board table in the centre of the room, and not as an exhibition space. This did not appear to hamper the enjoyment by visitors of the exhibition. However, it meant that NEXUS was not on the State Library's directional signage. This made the task of attracting visitors to the exhibition more difficult.

We liaised with the State Library's information officers stationed in each of the Mitchell and Macquarie Street foyers of the State Library to ensure they were sufficiently informed of the exhibition and could direct visitors to it. They were supplied with NEXUS postcards to help with this. The continued presence of the tuffline banner in the Mitchell foyer when the exhibition was not open also helped with visitor awareness as it gave opening times.

NEXUS was planned to be open on Mondays 2–5 PM, Thursdays 3–7 PM and Sundays 2–5 PM. These opening times were in part dictated by the State Library's opening hours. When the Library did reopen following its COVID closure in the second half of 2021 its opening hours were restricted. Initially NEXUS hours on Thursdays were 2–5 PM with the other days as planned. In May 2022 an extra day was added (Saturday 2–5 PM) to coincide with the publication of an advertisement in the *Spectrum* section of the *Sydney Morning Herald*.

The Society's archives

NEXUS objects into the Society's Archive

Ms Enevoldsen commissioned Ms Buckingham to create a one-off print of the NEXUS title to commemorate the bicentenary and to add something tangible that was exhibition-related to the Society's archive.

The renovated Presidential Chair, table runner, foyer sign and acrylic labels will also be entered into the archive along with the NEXUS visitors book, postcard, booklet and launch gift pack example.

Promotion of the Society Archive

Within the Society the importance and depth of the Society's archive has been increased due to NEXUS and the Secretary's articles in the *Bulletin* on various items from the archive in each issue have been very well received.

Society members have seen the importance of maintaining a comprehensive archive of the Society's activities through their generous support in several EOFY Fundraising drives highlighting the Archive.



Our Patron, Her Excellency the Governor of NSW (centre left) and Mr Dennis Wilson (far left) with our President Dr Susan Pond (centre right) and some of the NEXUS committee

Benefits to the Society

The following benefits to the Society are attributable to the holding of the NEXUS exhibition:

 Increased awareness among the general public of the existence of the Society and how it benefits the community. The advertisement in Spectrum

- was important in general awareness-raising to the thousands of its readership
- Alerting members to the rich history and impacts of the Society that they are part of
- Alerting key decision-makers in government and the knowledge industry to the richness of the Society and its potential to enhance the well-being of the community into the future
- Discovering the importance of the Society's archive to the understanding of the development of intellectual inquiry and knowledge in NSW
- Gaining a more comprehensive understanding of the composition and extent of the Society's archives
- Creating a deeper, more productive relationship with the State Library of NSW
- Learning from the experience about what is required to hold a professionally curated and designed exhibition — for future reference

 Gaining assets (design files etc.) for use in touring exhibitions promoting the Society in regional NSW and elsewhere, and for our archives.

Conclusion

The NEXUS exhibition achieved its aims of appropriately celebrating the 200 years of the Society and its antecedents, bringing the Society to the attention of the general public in a novel way, generating a greater understanding among members of the richness of their Society and utilising the Society's valuable archives for its practical benefit.

The exhibition also provided a focus for alerting politicians and members of kindred societies to the important work of the Society. In addition, it allowed us to better inform our Patron of the richness of the Society.

List of proposed events for 2023

Kindly note that this is a provisional list and will be updated frequently as the program evolves. Updates will be reflected in future issues of the Bulletin and on <u>our website</u>.

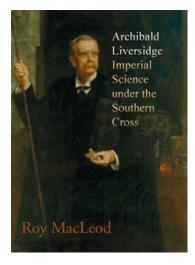
Date	Event
Wednesday, 1 February 6.30 PM AEDT	r310 th OGM and Open Lecture Venue: Gallery Room, State Library of NSW, Shakespeare Place, Sydney Drones, Smart Munitions, and Cyberspace: the 21st Century Defence of Ukraine and its implications for Australia Major General (Retd) Fergus (Gus) McLachlan AO
Thursday, 2 March 6.30 PM AEDT	Ideas@theHouse March 2022 Venue: Government House, Sydney (by formal invitation) and Live Streaming Topic: TBA Speaker: TBA
Wednesday, 15 March 6.30 PM AEDT	RSNSW Open Lecture 2023-1 2022 Jak Kelly Award and RSNSW Scholarship Award Presentations Venue: Zoom Webinar Topic: TBA Speaker: TBA
Wednesday, 5 April 6.30 PM AEST	156 th Annual General Meeting 1311 th OGM and Open Lecture Venue: Gallery Room, State Library of NSW, Shakespeare Place, Sydney Topic: TBA Speaker: TBA
Wednesday, 3 May 6.30 PM AEST	RSNSW Open Lecture 2023-2 Venue: Zoom Webinar Topic: TBA Speaker: TBA
Wednesday, 7 June 6.30 PM AEST	1312 th OGM and Open Lecture Venue: Gallery Room, State Library of NSW, Shakespeare Place, Sydney Topic: TBA Speaker: TBA
Wednesday, 14 June 6.30 PM AEST	Ideas@theHouse: June 2023 Venue: Government House Sydney (by formal invitation) and Live Streaming Topic: TBA Speaker: TBA
Tuesday, 27 June Time: TBA	Bicentennial Oration 2023 Venue: TBA Topic: TBA Speaker: TBA

Date	Event	
Wednesday, 5 July	RSNSW Open Lecture 2023-3 Venue: Zoom Webinar Topic: TBA	
6.30 PM AEST	Speaker: TBA	
Wednesday, 2 August 6.30 PM AEST	1313 th OGM and Open Lecture Venue: Gallery Room, State Library of NSW, Shakespeare Place, Sydney Topic: TBA Speaker: TBA	
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Thursday, 10 August	Ideas@theHouse: August 2023 Venue: Government House Sydney (by formal invitation) and Live Streaming Topic: TBA	
6.30 PM AEST	Speaker: TBA	
Wednesday, 6 September 6.30 PM AEST	RSNSW Open Lecture 2023-4 Venue: Zoom Webinar Topic: TBA Speaker: TBA	
Wednesday, 4 October 6.30 PM AEDT	1314 th OGM and Open Lecture Venue: Gallery Room, State Library of NSW, Shakespeare Place, Sydney Topic: TBA Speaker: TBA	
Thursday, 2 November 9.00 PM AEDT	Royal Society of NSW and Learned Societies Annual Forum 2023 Venue: Government House, Sydney (by formal invitation) and Live Streaming Topic: TBA Speaker: TBA	
Wednesday, 6 December 6:30 PM AEDT	1315 th OGM and Open Lecture Venue: Gallery Room, State Library of NSW, Shakespeare Place, Sydney Topic: TBA Speaker: TBA	

Archibald Liversidge: Imperial Science under the Southern Cross

When Archibald Liversidge first arrived at Sydney University in 1872 as reader in geology and assistant in the laboratory, he had about ten students and two rooms in the main building. In 1874, he became professor of geology and mineralogy; by 1879, he had persuaded the senate to open a faculty of science. He became its first dean in 1882. In 1880, he visited Europe as a trustee of the Australian Museum and his report helped to establish the Industrial, Technological and Sanitary Museum which formed the basis of the present Powerhouse Museum's collection. Liversidge also played a major role in the setting up of the Australasian Association for the Advancement of Science which held its first congress in 1888.

One of his greatest contributions was to science education. He worked tirelessly to secure proper recognition of science in both secondary and tertiary education. In the preface of his book, Professor MacLeod comments: 'Liversidge remained confident that Australia's path would follow the route



of the "moving metropolis", strengthened by the bonds that tied Australia to its British heritage. In that heritage lay his life, and through that heritage, flowed the genius of imperial science in New South Wales'. To order your copy, please complete the <u>MacLeod: Liversidge order form</u> and return it to:

The Royal Society of NSW (Liversidge book) PO Box 576 Crows Nest NSW 1585 Australia

or contact the Society: Phone: +61 2 9431 8691 Email: info@royalsoc.org.au

The Society and social media

The Society's presence on social media platforms is slowly but surely growing. Our <u>Facebook page</u>, <u>LinkedIn channel</u>, <u>Twitter feed</u> and <u>YouTube channel</u> continue to attract and engage followers and viewers, and we continue to build a repository of online events conducted recently on YouTube. It is pleasing to report that as 2022 draws to a close, our YouTube channel now has in excess of 230 subscribers, and more than 100 videos online which have been viewed nearly 22,000 times.



The icons on the right will take the reader to the platforms' respective pages, from where they can follow and subscribe to the Society, and be notified of new content.







Current Council and Office-Bearers

The current Council and office-bearers of the Society are:

Patron	Her Excellency The Honourable Margaret Beazley AC KC, Governor of New South Wales
President	<u>Dr Susan Pond AM FRSN</u>
Vice-President	Ms Judith Wheeldon AM FRSN
Secretary	Mr Bruce Ramage MRSN
Treasurer	Mr John Cameron MRSN
Librarian	Mr John Hardie AM FRSN
Webmaster	Emeritus Professor Lindsay Botten FRSN
Councillors	Professor Katherine Belov AO FRSN
	<u>Professor Sean Brawley FRSN</u>
	<u>Dr Jessica Milner Davis FRSN</u>
	Professor Philip Gale FRSN
	Ms Pamela Griffith FRSN
	<u>Dr Davina Jackson FRSN</u>
	Emeritus Professor Robert Marks FRSN
	Emerita Professor Christina Slade FRSN
Hunter Branch Representative	Professor George Willis FRSN
Southern Highlands Branch Representative	Mr Mike Jonas MRSN
Western NSW Branch Representative	<u>Professor Mark Evans FRSN</u>

Editor: Jason Antony MRSN

THE VIEWS EXPRESSED IN THIS PUBLICATION DO NOT NECESSARILY REFLECT THOSE OF THE SOCIETY.









