ROYAL SOCIETY
NEW SOUTH WALES

1318th ORDINARY GENERAL MEETING
Wednesday 29 November 2023 at 6:30pm

GALLERY ROOM, STATE LIBRARY OF NSW
(enter from Shakespeare Place)

The 1318th Ordinary General Meeting of the Royal Society of NSW will take place at 6:30 pm on Wednesday 29 November 2023 in the Gallery Room, State Library of NSW, followed by an open lecture. Registration and refreshments will be available in the Friends Room (adjacent to the Gallery Room) from 6:00 pm.

AGENDA

1. **WELCOME** – President, Dr Susan Pond AM FRSN

2. **MINUTES**

   Minutes of the 1317th Ordinary General Meeting will be reviewed.

3. **CONFIRMATION OF NAMES OF CANDIDATES FOR FELLOWSHIP AND MEMBERSHIP**

   At its meeting 15 November 2023 the Council, upon recommendation of the Fellows and Members Assessment Committee, resolved to propose the following candidates for admission as Fellows and Members.

   FELLOWSHIP

   Professor Aduli Enoch Othniel Malau-Aduli
   Laudation – Aduli Malau-Aduli has made a significant contribution to the field of Veterinary Science through his leadership in the study of animal genetics and nutrition.

   Professor Nicholas Charles H Reid
   Laudation – Charles Reid has made a significant contribution to the field of ecosystem management, applied ecology and natural resource management.

   Professor Craig Trevor Simmons
   Laudation – Craig Simmons has made a significant contribution to the field of groundwater science working across the public and private sectors.

   Professor Nicholas Joseph Talley
   Laudation – Nicholas Talley has made a substantial international contribution to the field of gastroenterology.

   Professor Christopher Morice Ward
   Laudation – Christopher Ward is an international leader in coagulation medicine.

   Professor Sally Ann Cripps
   Laudation – Sally Cripps is a recognized leader and researcher in methods and applications of Bayesian machine learning.

   Professor Yingjie Jay Guo
   Laudation – Jay Guo has made a significant contribution to the field of wireless communications and telecommunications and through technology commercialisation.

Professor Stephanie Louise Watson
Laudation – Stephanie Watson is a clinician scientist known for her ground-breaking stem cell research in corneal therapies and for leadership in the academic, not-for-profit and business sectors.

Professor Deo Karan Prasad
Laudation – Deo Prasad is a globally recognized leader and researcher in sustainability of buildings and the built environment.

Professor Richard Holden
Laudation – Richard Holden has made a substantial contribution to the field of economics with a focus on contract theory, political economy, law and economics, and organizational economics.

Dr Jiao Jiao Li
Laudation – Jiao Li has made a substantial contribution to the field of tissue engineering and regenerative medicine that focuses on new therapies for chronic diseases.

Professor Amir Karton
Laudation – Amir Katon has made a significant contribution to chemistry in the area of high-level quantum chemical theories.

Professor David Philip Miller
Laudation – David Miller is a social historian of science who has made significant contribution to the understanding of the history and philosophy of science since the industrial revolution.

Professor Robert Eric Wood
Laudation – Robert Woods is an internationally recognized leader and researcher in organizational psychology.

MEMBERSHIP

Professor Alister Derek Baker
Associate Professor Temitope Egbelakin
Garry Owen Crockett
Julia (Ting Ting) Gong
Dr Lamia Nakhal
Sandra Woodward

ASSOCIATE MEMBERSHIP

Dr Daniel Josef Lindegger
Felicity Nelson
Sue Loucks

4. **REPORT FROM COUNCIL AND COMMITTEES OF COUNCIL**
The President will announce the names of the winners of the Society's 2023 Awards, recommended to and endorsed by Council at its 15 November 2023 meeting.

5. **PROPOSED DONATION OF THE RSNSW COLLECTION TO THE STATE LIBRARY OF NSW**
At the 1317th OGM held on Wednesday 8 November, the President advised the membership that the Council had resolved unanimously to recommend to members that the Society donate its collection of books and archives (the RSNSW Collection), currently stored in the State Library of South Wales (SLNSW) and 121 Darlington Road, Darlington, to the SLNSW. Dr Pond said that the following day she would write to all members of the Society eligible to vote, seeking approval to authorise the Council of the Society to enter into an agreement with the SLNSW to donate the RSNSW Collection to the SLNSW.

Dr Pond's email summarised the reasons for this recommendation and included a link to an Explanatory Memorandum outlining the background to the proposal, the substance of the

recommendation to be put before members and the proposed terms for the agreement between RSNSW and SLNSW.

The ballot will close at 5:00pm AEST, Thursday 30 November 2023 (the day after this meeting) to allow members the opportunity to ask any questions at this meeting regarding the proposal prior to the close of the ballot.

6. QUESTIONS

7. OPEN LECTURE

"What do we really know about 20th- and 21st-century sea-level change?"

Emeritus Professor John Church AO FAA FTSE FAMS FAGU

Climate Change Research Centre, University of New South Wales

Accelerating sea-level rise in much of the world will result in growing impacts through the 21st century and beyond. Despite the clear identification of an accelerating rise, many uncertainties remain. Understanding historical sea-level change is a prerequisite for building confidence in useful and accurate predictions of future changes.

For many decades, our limited knowledge of the contributions to sea-level change could not explain the rise measured by coastal tide gauges – the sea level enigma. New and improved in situ and satellite observations of the ocean, improved understanding of the "solid Earth", and better understanding and improved modelling of the climate system have helped resolve this enigma. Several recent studies have argued that the sum of contributions from both observations and model estimates to sea-level change over the satellite era, the last half century, and since 1900 adequately explains the observed sea-level rise, which means the sea-level budget is closed. The major contributions are from ocean thermal expansion and contributions from glaciers, with an accelerating ice sheet contribution over the recent decades.

Our recent work has explored the sensitivity of global and regional sea-level reconstructions to poorly known land motions and the factors causing temporal and regional variations in the rate of rise. With this knowledge, existing reconstructions of global mean sea level are mostly not significantly different from each other from 1900 to the present, both in the time-averaged rate and the temporal variability. However, while the average rate from 1900 to the present is similar to that from the sum of contributions, the rate of reconstructed GMSL rise is significantly smaller/larger than the sum of contributions prior to 1940/after 1970. Why is this? What do we really know? What are potential explanations for this continuing enigma?

And what can we project about future sea levels, both for the 21st century and beyond? And can we constrain projections for the 21st century and beyond?

Dr John Church is an Emeritus Professor in the Climate Change Research Centre, University of New South Wales. He has published across a broad range of topics in oceanography. His area of expertise is the role of the ocean in climate, particularly anthropogenic climate change, and the oceanic storage of increased heat in the World's oceans. He is recognised as a world leader in understanding historical and projected global and regional sea-level rise, having provided historical estimates of sea-level change since the late 19th century, robust explanations for the rise, its attribution to greenhouse gas emissions and improved projections of global and regional sea-level rise.

9. VOTE OF THANKS

9. CLOSE – President

Dr Donald Hector AM FRSN

Secretary