



The Bulletin 399

The Royal Society of New South Wales

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25 May 2016

For Your Diary:

Thursday, 16 June 2016
Southern Highlands Branch Lecture

Dr. Ken McCracken

“The Sun, Sunspots, and Space Weather”

6:30 pm start

The Performing Arts Centre
Chevalier College, Bowral

Wednesday, 6 July 2016
1244th OGM

Prof. Itai Ianev

“From Sand and Rice Bubbles to
Earthquakes and Volcanoes”

6:00 pm for 6:30 pm

Union, University & Schools Club
25 Bent St, Sydney

Fellows & Members \$5; Guests, \$20
Dress code: coat and tie

See last page for a summary of
Events scheduled so far for 2016



Patron of The Royal Society of NSW

His Excellency General The Honourable
David Hurley AC DSC (Ret'd)
Governor of New South Wales

Public Lecture & 1243rd OGM

Wednesday, 1 June 2016

Professor Peter Hiscock

“Archaeologists in Film”



One area of Professor Peter Hiscock's research is interpreting representations of archaeologists and archaeology in movies. In this context, his research interests touch on other disciplinary areas including film studies, philosophy, and science education. Consequently, his publications in this area have often been in non-archaeological journals (such as *Numen*) and in preparation of museum displays and public lectures. Peter's research interests include the role of technology in cultural evolution, the global dispersal of humans, the human occupation of Australia, scientific and pseudo-scientific research into the past. He currently directs projects in desert, temperate and tropical Australia. This work reconstructs sequences of technological change and the articulation of technology to occupational strategies and environment.

Union, Universities, & Schools Club, 25 Bent St, Sydney

6:00 for 6:30 pm, Welcome drink at 6:00 pm

Fellows & Members \$10; Guests, \$20

Please note dress code: jacket and tie

All are welcome

To register for the event and dinner afterward (two courses plus wine, \$80 per Fellows/Members, \$90 Guests), please go to <https://nswroyalsoc.currinda.com/register/event/16> or email the Society at royalsoc@royalsoc.org.au, by Friday, 27 May

Annual Black-Tie Dinner, Distinguished Fellow's Lecture, and Presentation of the Society's 2015 Awards

Wednesday, 4 May 2016



Left to Right: Judith Wheeldon AM (Vice President), Stephen Ho, Warwick Anderson, His Excellency General Hurley, Christopher Dickman, Brynn Hibbert (President, and Peter Baume AC

In the presence of the Guest of Honour: The Society's Vice-Regal Patron, His Excellency General The Honourable David Hurley AC DSC (Ret'd), Governor of New South Wales.

Welcome from the President of the Society, Em. Prof. Brynn Hibbert.

“His Excellency, General The Honourable David Hurley, Governor of New South Wales and Mrs Hurley, Distinguished Fellows, Fellows and Members of the Royal Society of New South Wales, and our guests.

Welcome to our annual awards dinner, at which we will acknowledge outstanding work in the fields of evolutionary biology, medical history and philosophy, and mammalian ecology, and

of course to induct as Distinguished Fellow an Australian who has given such great service to his state and country.

The 2015 awards were determined by Council on advice from the Awards Committee. It, in turn, had the weight of opinion of Deans of Science and of Engineering, wonderfully corralled and lunched by our Chief Scientist and Engineer, Mary O’Kane. Despite intense scrutiny by all universities, The University of Sydney has made a clean sweep of the offerings of the Royal Society given out today. The Dean of Science, Trevor Hambley, deserves credit for assembling at least some of the talent and bringing them to the notice of the Royal Society.

Hearing of Vice President Wheeldon’s journey back from Marrakesh a few days ago, reminded me of the discovery of an efficient
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way to determine longitude in the 18th Century, as an interesting example of the interplay between science and technology. Here the science was pretty well known for a century but the ability to make accurate measurements was not. We waited for the technological breakthrough. These musings caused me to dwell on the recent discoveries of our Fellow Thomas Maschmeyer in making a zinc bromine battery that has breakthrough design and efficiencies. Again there has been a long wait between our scientific understanding of electrochemistry and a sufficiently effective realisation. The Royal Society cannot take any credit for Professor Maschmeyer's inventions, but we can say we were here when it happened.

We are greatly encouraged by His Excellency's interest and participation in the Royal Society, and together look forward to further contributing to the intellectual and material life of NSW."

Following the Welcome, a three-course dinner was interspersed with the following awards:

The presentation of certificates to new Members and new Fellows. The Hon Emeritus Professor Peter Baume AC was presented inducted as a Distinguished Fellow, and his certificate was presented by the Patron.

The **Clarke Medal** 2015 in the field of Zoology was presented to Professor Christopher Dickman, School of Biological Sciences, University of Sydney.

The **Royal Society of NSW History and Philosophy of Science Medal** 2015 was

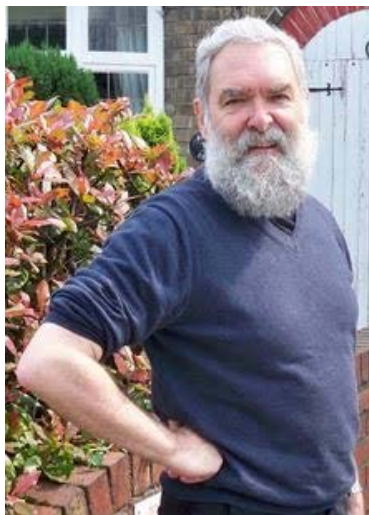
presented to Professor Warwick Anderson, ARC Laureate Fellow and Professor in the Department of History and the Centre for Values, Ethics and the Law in Medicine, University of Sydney.



Left to Right: Eugenie Lumbers AM DistFRSN, Michael Burton FRSN, and Brynn Hibbert FRSN



From the President



Robert Marks is an Emeritus Professor of Economics who has edited niche journals before and is bringing his skills to our Journal. At the Annual Dinner, Judith Wheeldon, introducing our former editor Michael Burton, gave a well-deserved tribute to his excellent work for the Journal and Society. Michael leaves for Armagh to run the oldest astronomical observatory in Ireland (<http://star.arm.ac.uk/index.html>) dating back to 1790. The Society wishes him very well, and trusts he will remain a corresponding Fellow, perhaps occasionally contributing to the Journal he has helped to nurture!

I am now back in Australia, have survived the Annual Dinner, and I am looking forward to chairing my first Council meeting and first OGM. The furious pace set by Past President Hector has not abated. We are fortunate that Don continues to offer good advice to his successor, while actively engaging with the management of the Royal Society, through Chairing the Nominations Committee, and membership of the Editorial Board and Council. So, I am pleased to announce appointment of a Web Master – Honorary Associate Professor Christopher Bertram, and the Editor of the Journal and Proceedings – Emeritus Professor Robert Marks.

Chris is working with Jeremy Webster (<http://ezerus.com.au/>), who has crafted the new site, and members of Council to deliver the new web experience, which will be optimised for computer, tablet and smart phone, with many new features. Watch this space for an announcement of the launch.

The Annual Dinner was a great success. Guest of honour was the Society's Vice-Regal Patron, His Excellency General The Hon David Hurley AC DSC (Ret'd), Governor of New South Wales. Judith Wheeldon was the Mistress of Ceremonies, presiding over a welcome from myself, presentation of new Fellowships including our newest Distinguished Fellow, Peter Baume AC, presentation of Awards, impromptu words from His Excellency, and Distinguished Fellows address delivered from the heart by Professor Eugenie Lumbers AM DistFRSN. There was a buzz in the room, and all felt that the Royal Society was taking its place as 'the Society of Ideas' in NSW.

I thank the Council for its sterling stewardship of the Society, and you, the members, for your support.

I am easily contacted by email at president@royalsoc.all.au and would like to hear from you,

Brynn Hibbert

Report of 19 May 2016 Meeting Royal Society

Southern Highlands Branch

Speaker: Dr. Kathleen Riley

Topic: **The Science of Spontaneity:
Fred Astaire as Consummate Craftsman**



Despite the cold, wet and windy weather conditions of the Southern Highlands on the evening of the lecture, Dr. Kathleen Riley attracted an enthusiastic audience of 48 hardy souls for this most unusual lecture. Many in the audience were listeners of ABC Illawarra local radio where they had been introduced to Dr. Kathleen Riley in a pre-lecture interview broadcast over a wide-ranging area in locations mainly south of Sydney.

Kathleen Riley is a former British Academy Postdoctoral Fellow in Classics at Corpus Christi College, Oxford. She is now a freelance writer, theatre historian and critic. She is the author of *Nigel Hawthorn on Stage* (University of Hertfordshire press, 2004), as well as, among others, *The Astaires: Fred and Adele* (Oxford University Press, 2012), the latter having been optioned recently for a British film feature. She was also Script Consultant on the critically acclaimed stage production *My Perfect Mind* which had its London premiere at the Young Vic in 2013 and then toured to Barcelona and New York.

Dr. Riley's current projects include a monograph exploring the ancient Greek concept of Nostos (homecoming), She is also editing a volume of essays on Oscar Wilde and Classical Antiquity.

It is a wonderful feature of Royal Society lectures held at the Southern Highlands Branch that the audience members do not form a predictable group from one lecture to the next. Different subject areas presented for discussion definitely attract attendances especially interested in the particular topic to be presented. The wide Southern Highlands drawing area therefore provides fertile ground for the realization of the aims and objectives of the Royal Society, where the discussion fields of the sciences, the arts, philosophy and literature can readily provide intellectual enrichment and entertainment to the community. Such was clearly the case for Kathleen Riley's enriching and much welcomed and appreciated lecture.

This fascinating lecture focused in detail on the science behind Fred Astaire's apparent effortless and his ability to make something that was technically complex and endlessly rehearsed seem easy and spontaneous. The sheer joyfulness of his dancing was one of the products of a combination of dogged perfectionism, talented musicianship and an almost indescribable imagination. He created extraordinary visual images that will live in the minds of his admirers for years to come. What an innovative piece of research by Dr Kathleen Riley who dared to analyse in the cold light of day the scientific aspects of Fred Astaire's magic.

Anne Wood

Professor Michael Burton Passes Journal Editorship to Em. Professor Robert Marks

After serving as the editor of the *Journal and Proceedings of the Royal Society Of New South Wales* for five years, Professor Michael Burton FRSN has handed over to Professor Emeritus Robert Marks FRSN. Both men are now members of a long line of distinguished scholars who have edited the journal since its inception in 1862, making it one of the oldest peer-reviewed publications in the Southern Hemisphere.



Prof. Michael Burton FRSN and a tool of his trade

Prof. Burton earned a BA, MA, and MMaths from the University of Cambridge, after which he obtained a PhD from the University of Edinburgh in 1986. His research in astronomy has centred on the star formation and the characterisation of interstellar gas and dust cloud, in which stars are conceived.

Prof. Burton has been a leader in the development of radio, infrared, and optical telescopes. His large-scale surveys of our galaxy have required the use of radio telescopes in both Australia and Chile. His research has also led him to Antarctica, where the extremely cold and dry air provides the best infrared and sub-millimetre observing conditions on the Earth.

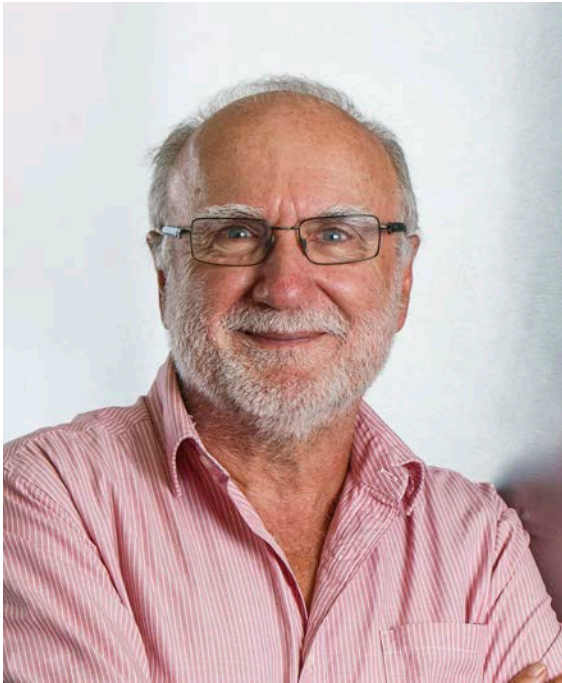
These efforts have included the installation of an automated telescope at Dome A, one of the

highest points in Antarctica located 950 km from the South Pole. This project was a collaboration of Australian, Chinese, and American universities. Prof. Burton organised the first-ever International Astronomical Union Symposium on Antarctic Astronomy in Beijing in 2012. Finally, Prof. Burton's research has not been tied to earth. He has used the Stratospheric Terahertz Observatory (a balloon-borne telescope in Antarctica) and has been among those privileged to use the Hubble Space Telescope.

After his years at UNSW, Prof. Burton will be leaving in August to take up the Directorship of the Armagh Observatory and Planetarium, Northern Ireland. Founded in 1790, it is one of the oldest continuously-operating observatories in the world. His many friends in the Society wish him farewell "Go dtí go gcasfaimid le chéile arís" ("Until we meet again").
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New Journal Editor Em Prof. Bob Marks



Em. Prof. Marks obtained his first degrees in civil and structural engineering at the University of Melbourne. He did further postgraduate training at the University of Cambridge and later Stanford University, from which he received a PhD in engineering-economic systems in 1978. As can be seen in the title of his PhD thesis – “Non-renewable resources and disequilibrium macrodynamics” – Prof. Marks has had a career-long interest in the economics of energy policy.

Since arriving at UNSW in 1977 as a foundation lecturer in the Australian Graduate School of Management (AGSM), Prof. Marks has pursued research and teaching in a wide range of areas. He has consistently published works concerning the application of economic theory to the environmental impact of energy

use, but also the use of illicit drugs and costs of industrial accidents. He has disseminated his findings and thought widely through the public media and reports for government and industry.

He has also pioneered the understanding of oligopolies (markets with a limited number of sellers) through the use of game theory and machine learning. He has developed artificially- intelligent adaptive economic agents for studying learning behaviour, oligopolistic strategies, and the evolution of economic institution.

Prof. Marks’s scholarly achievements have been progressively earned him promotion to senior lecturer (1985), associate professor (1991), and professor (2001) at UNSW. He has also had numerous visiting appointments at leading institutions in the United States, China, and France. He was awarded Professor Emeritus by UNSW in 2010, and he is also a Professorial Fellow at the University of Melbourne.

New Webmaster Assoc Professor Chris Bertram

The President, Brynn Hibbert, is pleased to announce that Associate Professor Chris Bertram, School of Mathematics and Statistics at the University of Sydney, will be the webmaster for the Society’s new website.

For many years, Chris conducted experiments on self-excited oscillations of collapsed-tube flows, and these investigations still form the most comprehensive investigation of this dynamical system. His current research is on cerebrospinal fluid mechanics, and pumping in the lymphatic system.

More complete coverage of Chris and the new website will appear in the next issue of the *Bulletin*.

Schedule of RSNSW Events 2016

Date	Event/Location	Speaker	Topic
01-Jun-16	1243rd OGM Union, University & Schools Club	Prof. Peter Hiscock	Archaeologists in Film
06-Jul-16	1244th OGM Union, University & Schools Club	Prof. Itai Ianev	From Sand and Rice Bubbles to Earthquakes and Volcanoes
03-Aug-16	1245th OGM Union, University & Schools Club	Mr Jimmy Turner, Royal Botanic Garden	TBA
07-Sep-16	1246th OGM Union, University & Schools Club	Mr Richard Neville, State Library of NSW	History of the Society
05-Oct-16	1247th OGM Union, University & Schools Club	Mr Rob Young	WB Clarke Biography
02-Nov-16	1248th OGM: Jak Kelly Award Union, University & Schools Club	Prof. E. James Kehoe	Courses for Horses: Advances in Instructional Design
17-Nov-16	AIP Postgraduate Awards Day Slade Theatre, University of Sydney	TBA	TBA
07-Dec-16	1249th OGM: Jak Kelly Award Union, University & Schools Club	TBA	TBA

Southern Highlands Branch - 2016

Date	Event/Location	Speaker	Topic
16-Jun-16	Lecture Chevalier College, Bowral	Dr. Ken McCracken	The Sun, Sunspots, and Space Weather
TBA	Lecture Chevalier College, Bowral	TBA	TBA

Future lectures and other events will be scheduled, usually for the third Thursday in each month

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