



# The Royal Society of New South Wales

ABN 76 470 896 415

*"for the encouragement of studies and investigations in Science Art Literature and Philosophy"*

## Annual Report of Council for the year ending 31 March 2013



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### ABOUT THE SOCIETY

The Society is the oldest learned society in the Southern Hemisphere, tracing its origin to the *Philosophical Society of Australasia*, founded in Sydney in 1821. It became *the Royal Society of New South Wales* by Royal Assent in 1866 and was incorporated by an Act of the NSW Parliament in 1881. The Society exists for ...*the encouragement of studies and investigations in Science Art Literature and Philosophy...*, in particular: publishing results of scientific investigations in its *Journal and Proceedings*; conducting monthly meetings; awarding prizes and medals; and by liaison with other learned societies within Australia and internationally.

Membership is open to any person whose application is acceptable to the Society. The Society welcomes both members and non-members to its activities.

### OFFICE BEARERS

The members of the Council of the Society for 2012/2013 were elected at the annual general meeting held on Wednesday 4 April 2012. They hold office from that date until the next annual general meeting. They are:

Patrons	Her Excellency Ms Quentin Bryce AC CVO Governor-General of the Commonwealth of Australia. Her Excellency Professor Marie Bashir AC CVO Governor of New South Wales.
President	Dr Donald Hector BE(Chem) PhD (Syd) FICHEM FIEAust FAICD
Vice Presidents	Mr John Hardie BSc (Syd) FGS MACE MRSN Em. Prof. Heinrich Hora DipPhys Dr.rer.nat DSc FAIP FInstP CPhys Em. Prof. David Brynn Hibbert BSc PhD(Lond) CChem FRSC RACI
Hon. Secretary (Ed.)	Prof. Michael Burton BA MA (Cantab) PhD (Edinb) FASA FAIP
Hon. Secretary (Gen.)	Mr Colin Bradley BBus MA (Bus Res) MHA GAICD
Hon. Treasurer	Mr David Beale BSc(Tech) (NSW) FIEAust
Hon. Librarian	Mr Anthony Nolan OAM JP MAIPIO FIAPA
Councillors	Prof. Richard Banatti MD PhD Mr Brendon Hyde BE(Syd) MEngSc(NSW) MICE (Lon) FIEPak FIEAust CPEng

Councillors (cont'd...)	Dr Willam Kneprath BSc(Hons) Grad MS (Hons) PhD(MIT) MSc Hons PhD (Macq) Dip Ed (Oxon) MAIP MACE MRSN Em. Prof Roy MacLeod AB (Harvard) PhD, Litt D (Cantab) FAHA FASSA Dr Frederick Osman BSc(Hons) PhD(UWS) Grad Dip Ed FACE MAIP MRSN SSAI JP Mr Clive Wilmot (Southern Highlands Branch representative)
Southern Highlands Branch Chair	Mr Hubert Regtop BSc (NSW)
Central West Branch Chair	Assoc. Prof. Maree Simpson BPharm (UQ) BSc(Hons) (Griffith) PhD (UQ)

The Council met eleven times during the reporting period at the Society's Rooms, and in addition several meetings of Council sub-committees were held. Sub-committees for Awards, Activities, Publications and Publicity were active during the term of the Council.

#### **OFFICE**

The Society occupies premises at 121 Darlington Road, University of Sydney. The Society is grateful to the University of Sydney for providing this accommodation to the Society.

#### **LIBRARY**

The Society continues to operate a journal exchange program with about a large number of overseas organisations. The exchanged journals are housed in the Dixson Library at the University of New England, which maintains and provides full access to this material. The Society wishes to thank the University for its support of the Society's collection. Further library holdings of the Society continue to be housed in secure warehouse accommodation. The Society thanks Mr Clive Wilmot for this contribution.

#### **EVENTS AND LECTURES**

The Society's Events Committee comprised:

Chairman	Mr John Hardie Dr Jim Franklin Em. Prof. Heinrich Hora Dr Fred Osman
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The Society held the second of its Forums on 4 April 2012 at the Powerhouse Museum. Robyn Williams AM moderated a lively discussion between Mark Scott AO, Managing Director of the ABC, and Prof. Jill Trewhella FRSN, Deputy Vice-Chancellor (Research) at the University of Sydney. Their topic was *The media and scientific research: impact and influences*.

The Society held a full program of eight monthly lectures, as well as additional special named lectures and events during the reporting period from May 2012 to March 2013. The monthly lecture series, for the most part held at the Union Universities and Schools Club, 25 Bent Street, Sydney, were as follows:

2 May 2012	Assoc. Prof. Mary Bebawy	<i>Understanding multidrug-resistant cancer and how to treat it</i>
6 June 2012	Dr Andrew Jacob	<i>Transit of Venus 2012 – what we and others saw</i>
4 July 2012	Prof. Ian Caterson AM	<i>Autoimmune diseases: obesity, nutrition, exercise and eating disorders</i>
1 August 2012	Prof. Ben Eggleton	<i>Photonic circuits for the new information age: faster, smaller, smarter and greener</i>
5 September 2012	Prof. Derek Eamus	<i>Climate change, regional drought and forest mortality: are we seeing a new global phenomenon</i>
3 October 2012	Prof. Liz Harry	<i>Outsmarting superbugs</i>
7 November 2012	Dr Adi Patterson	<i>The unexpected nuclear renaissance: nuclear techniques benefitting mankind</i>
6 March 2013	Dr Ray Norris	<i>The evolution of galaxies</i>

The Society is grateful to the Union Universities and Schools Club for providing an excellent venue for our meetings.

The annual Four Societies Lecture was held on 27 February 2013 in conjunction with the Nuclear Engineering Panel of the Sydney Branch of Engineers Australia, the Australian Nuclear Association and the Australian Institute of Energy. This year's lecture was delivered by Prof. Stefaan Simons. His topic was *Going low carbon – the approach of the International Energy Policy Institute*.

The Society was pleased to hold the Dirac Lecture in conjunction with the University of New South Wales and the Australian Institute of Physics. This year Prof. Brian Schmidt AC FAA FRSN, 2011 Nobel Laureate for Physics and newly-appointed Fellow of the Society, delivered the lecture entitled *The accelerating universe*, to a packed auditorium.

The 2012 Liversidge Lecture was delivered by Prof. Thomas Maschmeyer from the University of Sydney. His topic was *Low carbon technologies: from brown coal and biomass to solar hydrogen*. The Society is grateful to the Faculty of Science, the University of Sydney in supporting this lecture.

The Society held its Christmas Party at St Paul's College, University of Sydney, on Wednesday 5 December 2012. The event was preceded by the presentation of the 2012 Jak Kelly Award, by Prof. Kelly's widow, Mrs Irene Kelly.

## FELLOWS

At the general meeting held on Wednesday, 5 September 2012, the Society elected two Fellows. They were:

**Professor the Hon Barry Jones** AO FAA FAHA FTSE FASSA FRSN

**Professor Brian Schmidt** AC FAA FRS FRSN

The patron of the Society, the Governor of NSW, Professor Marie Bashir AC CVO, presented Prof. Jones and Prof. Schmidt with their fellowships at a ceremony at Government House, Sydney on Wednesday, 13 March 2013.

## **AWARDS**

The awards committee of Council was constituted as follows:

Chairman	Em. Prof Brynn Hibbert Mr John Hardie Em. Prof. Heinrich Hora Assoc. Prof Bill Sewell
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As a departure from previous years, an Advisory Panel of the Chief Scientist and Engineer of NSW, Prof Mary O’Kane, and the Deans of the Science faculties of NSW universities was invited to participate in the process. When nominations for the awards of the Society were all received, a meeting of the Advisory panel with Prof Hibbert in attendance ranked the candidates and gave advice on their merits. This was communicated to the Awards Committee who made final recommendations to the Council. The process was most effective and allowed high-quality, confidential advice to be given to the Society with several exceptional scientists being recommended for consideration. Prof O’Kane generously provided both a venue for the meeting and excellent leadership of the Advisory Panel.

At the meeting held on Tuesday, 30 November 2012, the Council made three awards. They were:

Clarke Medal (zoology)	<b>Professor Marilyn Renfree</b> FAA
Edgeworth David Medal	<b>Dr Joanne Whittaker</b>
Royal Society of NSW Medal	<b>Mr John Hardie</b> MRSN

Of particular note is the award of the Royal Society of New South Wales Medal to John Hardie, by special resolution of Council, for his contribution to the Society for over thirty years, six of which were as its President.

The awards will be presented at the Annual Dinner to be held on Friday 19 April.

The winner of the inaugural Jak Kelly award made by the Royal Society of NSW in conjunction with the Australian Institute of Physics was Mr Andrew Ong. Mr Ong gave a presentation on his work and was presented with the award by Mrs Irene Kelly at the general meeting held on Wednesday, 5 December 2012

The Society’s Scholarships for 2012 were awarded to Ms Jendi Kepple, Ms Anwen Krause-Heuer and Ms Helen Margherita Smith. Each of the scholarship winners made presentations on their research work at the general meeting held on Wednesday, 6 February 2013.

## **JOURNAL AND PROCEEDINGS**

Two editions of the *Journal and Proceedings* were published in 2012. Vol 145, Nos 443 & 444 contained five peer-reviewed papers and six thesis abstracts. The refereed papers concerned an optical-infrared telescope proposal for the Antarctic, the treatment of cancer using alpha radiotherapy, the etymology of dragonfly names, a newly discovered photograph of Rev WB Clarke, one of the founding fathers of the Society and reported work done at the University of Western Sydney on high-energy lasers. This edition also reintroduced publication of the Society’s proceedings.

Prof. Michael Burton from the School of Physics, UNSW, was appointed to the position of Editor of the *Journal and Proceedings* in mid-2012, succeeding Dr Hector. One edition (Vol 145, Nos 445 & 446) has been published since. Five refereed papers and three thesis abstracts were published in this Edition. Three of the refereed papers concerned the history of Parramatta Observatory and Governor Brisbane in the early days of the Colony of NSW. It followed from a Symposium co-sponsored by the RSNSW in 2011 on this subject. One paper provided a review of the first decade of research at the National Maritime Research Centre in Coffs Harbour. The final refereed paper concerned monitoring of the Murray Cod.

The first edition of 2013, Vol 146, Nos 447 & 448, is planned for mid-year. To date, two papers are with referees, and correspondence is underway with the authors of three further prospective refereed papers. Abstracts for two PhD theses have also been received.

The Society expects to include in the second edition of 2013 (Vol 146, Nos 449 & 450) several articles for a special edition in memory of Prof. Jak Kelly, a former President of the Society as well as a former Head of School of Physics at UNSW. Four authors have promised articles to date.

For 2013 a marketing program for the *Journal and Proceedings* is being planned. Publicity material on the *Journal and Proceedings* is being prepared for distribution through the Faculties of Science at NSW universities.

Consideration is also being given to the archiving and indexing of the Journal by science citation services, and how this might best be accomplished.

The Journal will continue to be published both in print and online forms. However to control escalating costs, in future the print edition will only be produced for direct subscribers to the *Journal and Proceedings*, and not automatically sent to all members. The online edition will be freely available to all members of the Society.

Members are encouraged to consider publication of their own research investigations in the Society's *Journal and Proceedings*!

The Council wishes to thank the referees of papers offered for publication, as well as all members of the Editorial Board. Members of the Editorial Board were:

Honorary Editor Prof. Michael Burton BA MA (Cantab) PhD (Edinb) FASA, FAIP  
Dr David Branagan MSc PhD(Syd) DSc (Hon) (Syd) FGS  
Dr Donald Hector BE(Chem) PhD (Syd) FICHEM FIEAust FAICD  
Em. Prof. David Brynn Hibbert BSc PhD (Lond) CChem FRSC  
RACI  
Dr Michael Lake BSc (Syd) PhD (Syd)  
Dr Nick Lomb BSc (Syd) PhD (Syd)  
Prof. Bruce Warren MB BS (Syd) MA DPhil DSc Oxon  
FRCPATH FRSN

Several meetings of the Editorial Board were held at the Society's office during the year.

## **BULLETIN**

The Bulletin and Proceedings of the Society was published monthly during the year, except for December. The Council thanks the authors of short articles and for information submitted to the Bulletin and to members who assisted in its preparation and distribution, particularly the executive officer Ms Emma Dallas.

## **SOUTHERN HIGHLANDS BRANCH**

The Southern Highlands Branch held 10 meetings during the reporting period that were well attended by members and visitors.

The Southern Highlands Branch Committee for 2012/2013 was:

Chairman	Mr Hubert Regtop
Vice chairman	Dr John Wright
Hon. Secretary	Ms Anne Wood
Committee members	Dr Mike Jonas
	Ms Andrea Talbot
	Mr Ted Smith
	Mr Clive Wilmot

## **CENTRAL WEST BRANCH**

The Central West Branch held three meetings during 2012 that were well attended by members and visitors.

The Central West Branch Committee for 2011/2012 was:

Chair	Assoc. Prof. Maree Simpson
Vice chairman	Dr Yann Guisard
Hon. Secretary	Dr Murray Fletcher
Committee members	Dr Scott Andrew

## **OFFICE**

The Society is particularly grateful for the commitment and hard work of Ms Emma Dallas, Executive Officer of the Society.

## **FINANCIAL REPORT**

At the time of the annual general meeting, the Council is not able to present final accounts for the year ending 31 December 2012. The Council expects that the accounts will be available for consideration by members by 30 June 2012 and that by that date they will have been audited.



Donald Hector  
PRESIDENT