

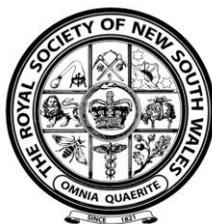


# The Royal Society of New South Wales

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 December 2016



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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 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 under guidelines that may be modified from time-to-time. The Society welcomes both members and non-members to its activities.

### OFFICE-BEARERS

The members of the Council of the Society for 2016 were elected at the Annual General Meeting held on Wednesday 6 April 2016. They hold office from that date until the next Annual General Meeting. They are:

Patron	His Excellency the Hon General David Hurley AC DSC (Ret'd) Governor of New South Wales
President	Em. Prof David Brynn Hibbert
Vice Presidents	Dr Donald Hector AM Mr John Hardie Ms Judith Wheeldon AM
Hon. Secretary (Gen.)	Dr Herma Buttner
Hon. Secretary (Ed.)	Em Prof Robert Marks
Hon. Treasurer	Mr Richard Wilmott
Hon. Librarian	Dr Ragbir Bhathal
Councillors	Dr Erik W. Aslaksen Dr Mohammad Choucair Prof Maxwell Crossley Dr Desmond Griffin AM Em. Prof Stephen Hill AM Em. Prof Heinrich Hora Prof James Kehoe Prof Bruce Milthorpe Em. Prof Ian Sloan AO

Southern Highland  
Branch Chair  
Executive Office

Hon. Prof Ian Wilkinson  
Mr Hubert Regtop  
The Association Specialists

The Council met seven times during the reporting period hosted by the Dean's office at the University of Technology Sydney and meetings of Council committees were held at various locations. The Council is most grateful for the use of the UTS facilities for its meetings. Committees for Awards, Events, Fellows, Finance and Risk and Publications were active during the reporting period. Under the guidance of the current committee, the branch in the Southern Highlands continues to thrive.

#### **OFFICE LOCATION AND SERVICES**

The Society has premises at 121 Darlington Road, University of Sydney. The Society is grateful to the University of Sydney for making this accommodation available to the Society.

Back-office services are provided under an outsourcing contract by The Association Specialists, 33-35 Atchison Street, Crows Nest NSW.

#### **PRESIDENT'S REPORT**

In my first year of Presidency following the revolutionary term of Donald Hector we have continued to progress the reforms of the White Paper by increasing the membership of the Society and engaging with our constituents. I count 90 members and fellows who have membership of 1 year or less. At this rate of increase we see our membership reaching a thousand within the foreseeable future (it is presently about 300). When anyone with an interest in the world of knowledge joins the Royal Society of New South Wales as a matter of course, the vision of President Hector will have been fulfilled. My own pledges to engage more with 'Art, Literature and Philosophy', and to address the gender/ethnic balance, are progressing. We have now some high profile Fellows from the Arts, and I am pleased that we have identified a number of leading women who have joined as members and fellows. I thank the Council, and its committees, always active and bringing a diverse and keen intelligence to the work of the Society, for providing intensive support of our plans.

The Events Committee, chaired by Professor Ian Wilkinson, put together an excellent programme of events for the year. The OGMs are well attended and an increasing number of other events show the activity of this group.

The awards programme continues to attract very high-calibre nominations and we were particularly pleased with the entries this year. The Awards Committee, chaired by Professor Jim Kehoe, seeks advice from an advisory panel, chaired by Professor Mary O'Kane, Chief Scientist and Engineer of NSW, and consisting of the Deans of Science and Engineering of the NSW-based universities. The 2016 awards will be presented by His Excellency the Governor of NSW at the annual dinner in May 2017.

The Fellows Committee, chaired by Professor Ian Sloan AO, has done an excellent job in improving the process for considering nominations for fellowship. The Fellows Committee has deepened its understanding of the criteria and with increasing numbers of examples from outside academia, we are confident that leaders of NSW society do value the title of Fellow.

The Honorary Librarian, Dr Ragbir Bhathal, supported by past President Hardie, and now a team of volunteers have been tackling the job of cataloguing and curating our holdings at Darlington Road and elsewhere. Our collection has been valued at considerably more than was thought, and we are making plans for a permanent home for some of the collection.

Professor Bob Marks started his tenure as Hon. Sec. (Editor) by finding on line and linking all journal issues from 1867 and several before that – over 3000 items. Thanks to him for that considerable task and for producing the 2016 volume of the Journal and Proceedings. I enjoy writing my monthly column for the Bulletin and thank Professor Jim Kehoe and his team (Edward Hibbert) for their beautiful production of our magazine.

In November the 2016 Forum was held at Government House on the subject of “Society as a Complex System”, hearing about diverse topics from obesity to the Murray Darling and Climate Change. His Excellency the Governor was our host, and stayed all day taking many notes. The evening before the Forum a Reception, again hosted by His Excellency, celebrated the 150<sup>th</sup> anniversary of the Society gaining its Royal appellation in 1866. Highlight of the evening was the singing of ‘Happy Birthday’ by Mrs Hurley. Considering His Excellency’s interest in bee keeping, in June we were able to show our appreciation of his patronage of the Society by organising a visit to the University of Sydney’s Behaviour and Genetics of Social Insects Laboratory.

Being President of such a Society is a great privilege and honour, and I look forward to continuing my term in 2017/2018.

#### **TREASURER’S REPORT**

The Society continued its engagement of The Association Specialists to handle its accounting and back-office administration. The outsourcing arrangements have been successful overall and there has been a gradual, but significant improvement in the Society’s financial management. The accounting system that we have been using for some years is under review and following discussions, including our auditor, it is anticipated to migrate to a more flexible system in 2017.

The increase in membership continues to improve our financial position and the losses of the last decade or more have been stemmed. At 13 February 2017, the Society has 308 financial members (as of this date, a further 46 members remain unfinancial in respect of 2017 membership). Our 2017 budget is based on membership increasing to 408 by 31 December 2017. If we can achieve this increase we should move to an operating surplus of approx. \$5000 for the year.

#### **EVENTS AND LECTURES**

The Society’s Events Committee comprised:

Chair	Professor Ian Wilkinson
	Dr Mohammad Choucair
	Mr John Hardie
	President ( <i>ex officio</i> )
	Honorary Secretary ( <i>ex officio</i> )

The Society held a full program of ten monthly open lectures in Sydney held at the Union University and Schools Club. In addition, a number of other events were held: a series of four

lunchtime science talks as part of Science Week; the Annual Dinner in May, The Four Societies Annual Meeting, a joint meeting with the Australian Institute of Physics. Details of the events are published on the Society's website as well as in the monthly Bulletin and in the Journal and Proceedings.

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

The annual Four Societies Lecture was held on the 25th February 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 Professor Robert Clark AO FAA FRSN, Chair of Energy Strategy and Policy at UNSW, on the topic of Energy Sources in Australia's Future.

A joint meeting of the Society and the Australian Institute of Physics was held on March 16<sup>th</sup>. Professor Ron Grunstein, Professor of Sleep Medicine at the University of Sydney gave a lecture on the topic of *From Snoring to Somnambulism: the mystery of the sleeping brain*. The Annual Dinner was held at the Union University and Schools Club May 4<sup>th</sup> with the guest of honour His Excellency General The Honourable David Hurley AC DSC (Ret'd), Governor of New South Wales and Patron of the Royal Society of New South Wales and Mrs Hurley. The Distinguished Fellows Lecture was given by Professor Eugenie Lumbers AM DistFRSN FAA on the topic of *Science Policy and University Research*. The Dirac Lecture and award of the Dirac Medal was held on the 13th of October in conjunction with the University of New South Wales and the Australian Institute of Physics. The lecture was delivered by Duffield Professor Kenneth Freeman FRS, Australian National University on the topic of *Dark Matter in the Universe*.

A series of four lunchtime science talks were held by the Society in August as part of Sydney Science Week. The talks were given by: Professor Mikhail Prokopenko FRSN University of Sydney on the topic of Complex Systems and Swarm Intelligence (August 12<sup>th</sup>); Dr Brett Summerell, Royal Botanic Gardens on the topic of The Royal Botanic Gardens 200<sup>th</sup> Birthday (August 16<sup>th</sup>); Emeritus Professor Brynn Hibbert FRSN UNSW and President of the RSNSW on the topic of *Courts, Criminals and Chemistry: Forensic Science in NSW* (August 17<sup>th</sup>); and Professor Pascal Perez, University of Wollongong on the topic of *Community-driven Internet of Things: the new revolution?* (August 18<sup>th</sup>).

The 2016 Four Academies and Royal Society of New South Wales Forum was held at Government House on Tuesday 29<sup>th</sup> November 2016 with the theme "*Society as a Complex System: Implications for Science, Practice and Policy*". Hosted by His Excellency, the Governor of NSW and preceded by a Reception on the previous evening to celebrate the 150<sup>th</sup> Anniversary of the Royal Assent to the Society (in 1866), the day-long forum covered many aspects of the topic. Eight learned presentations were given, with introductions by His Excellency and the Chief Scientist and Engineer, Mary O'Kane. Panel discussions led by Robyn Williams and Keith Suter allowed contributions from the audience, and the day was wrapped up by Ig-nobel Laureate Len Fisher. Papers from the Forum will be published in the Journal and Proceedings in 2017.

The Society held its Christmas Party at the Union Universities and Schools Club on 7 December. The event was preceded by the presentation of the 2016 Jak Kelly Award to

Matthew Barr, University of Newcastle who gave a talk on his research entitled *Imaging with a deft touch: The scanning helium microscope – a modern pinhole camera!*

## FELLOWS

In the year ending April 2016, the Society's Fellows Committee comprised:

Chair	Em Prof Ian Sloan AO FRSN
Secretary	Ms Judith Wheeldon AM FRSN
	Prof Michael Archer AM Dist FRSN
	Prof Max Crossley FRSN
	Mr John Hardie FRSN
	Em Prof Brynn Hibbert FRSN
	Em Prof Heinrich Hora FRSN
	President ( <i>ex officio</i> )
	Honorary Secretary ( <i>ex officio</i> )

The Fellows Committee met on seven occasions in 2016. One of those meetings was an email meeting, an experiment that the Committee does not intend to repeat. The Fellows Committee worked diligently on the assessment of candidates nominated for Fellowship and also gave much attention to the streamlining of procedures, so as to avoid unnecessary delays and mitigate the risk of errors. The Committee recommended to Council the election of 63 new Fellows, with the Committee's recommendation being accepted in all cases. The Fellows Committee expressed pleasure at the generally high quality of the candidates for Fellowship.

As at 31 December 2016, the total number of Fellows was 186 and the total number of Distinguished Fellows was 16.

## AWARDS

The Awards Committee of Council was constituted as follows:

Chair	Prof E. James Kehoe FRSN
	Em Prof Stephen Hill AM FRSN
	Em Prof Heinrich Hora FRSN
	Em. Prof. Robert Marks
	President ( <i>ex officio</i> )
	Honorary Secretary ( <i>ex officio</i> )

As in previous years, the Chief Scientist and Engineer of NSW, Professor Mary O'Kane and the Deans of the Science faculties of NSW universities were invited to form an Advisory Panel to assist the Committee. This year, Deans of Engineering were also invited. The Awards Committee received thirteen nominations for six awards and seven nominations for the three Scholarships to be awarded. When nominations for the awards of the Society were all received, a meeting of the Advisory Panel, with Em Prof Brynn Hibbert and Prof Jim Kehoe 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.

At its November meeting the Council made six awards. They were:

Clarke Medal (Geology)	Professor Simon P. Turner
Edgeworth David Medal	Dr Muireann Irish
History and Philosophy of Science Medal	Em Professor Roy MacLeod

James Cook Medal

Walter Burfitt Prize

Archibald Liversidge Research Lecture

Professor David Cooper

Professor Justin Gooding

Professor Justin Gooding

At its January 2017 meeting the Council approved a recommendation of the Awards Committee to present the Poggendorff Lecture Award to A/Prof. Andrew Robson.

The awards will be presented at the Annual Dinner in 2017.

The winner of the Jak Kelly award made by the Royal Society of NSW in conjunction with the Australian Institute of Physics was Dr Matthew Barr who gave a presentation on his work at the ordinary general meeting held in December.

The Society's Scholarships for 2016 were awarded to Andrew Ritchie, Isobel Ronai, and Jeremy Chan. Each of the scholarship winners made presentations on their research work at the ordinary general meeting held in February 2017.

## **NOMINATIONS**

The Nominations Committee of Council was constituted as follows:

Chair	Dr Donald Hector AM
	Prof Graham Bell
	Dr Desmond Griffin AM
	Prof Bruce Milthorpe
	Dr Frederick Osman
	Ms Judith Wheeldon AM
	President ( <i>ex officio</i> )
	Honorary Secretary ( <i>ex officio</i> )

The purpose of the committee is to oversee the nominations process and increase awareness of the Society by encouraging nominations for Fellowship and Membership. The committee met on four occasions in 2016 (March, May, July and September). The committee was keen to extend and broaden the diversity of the pool of nominations for Fellows. This has been partially successful with the election of a number of prominent Fellows from non-academic arenas but gender diversity and age distribution continue to be challenging. The committee also proposed various matters for consideration by the Fellows Committee regarding interpretation of the rules for Fellowship and prepared information package to assist nominators, seconders and candidates.

In 2017, there will be a focus on building the general membership body so that Membership and Fellowship grow in parallel with a continued emphasis on broadening the diversity of membership.

## **JOURNAL AND PROCEEDINGS**

After a late handover from the previous editor, there was only a single issue of the JProcRSNSW in 2016, the December issue, now on-line and soon in hard cover. This issue contains an editorial, the president's address, three refereed papers (the W. B. Clarke Memorial lecture, the Liversidge Lecture, and a paper by a 2015 Royal Society Scholarship winner), an address from 2004 by the late Ian Castles, and a discourse by the editor, these last two on the forgotten Society polymath, William Stanley Jevons. In addition, the issue

contains sixteen abstracts of recent doctoral dissertations from graduates at N.S.W. universities. (The eight universities were invited to choose their best recent Ph.D. graduates, although not all responded.)

Another reason for the appearance of only a single issue was the effort of the new editor to develop an on-line index of all 3,110 papers published in the Journal since 1867, as well as 116 earlier papers presented since 1822. The indexing took ten weeks of full-time work, and can be seen at the Journal Archive page of the Society's web site. Each of the titles of 3,110 papers contains a link to the Biodiversity Heritage Library's on-line repository of the scanned issues of the Journal since 1867. Each of the 116 earlier papers contains a link to one of several other on-line repositories. The editor looks forward to submissions of papers analysing the changes in the papers and their authors over the past 160 years.

The second Four Academies and Royal Society Forum was held at Government House in December 2016. The first issue of volume 150 of the Journal will publish the proceedings of the forum. A second issue for 2017 will follow. The Editorial Board has been refreshed and continues to offer the editor valuable advice and assistance.

The Journal continues its association with RMIT University's Informit service, and is establishing a new relationship with EBSCO in the U.S., that will publicise its contents further, and might generate royalty payments.

## **LIBRARY**

The Library has a valuable, diverse and rich collection of books, journals, pictorial material and other memorabilia which go back to the 18th century or earlier. The Library's holdings are securely housed at the Society's Darlington Road Office in Darlington, the State Library of NSW and a warehouse in Minto courtesy of Clive Wilmot. The Society thanks Clive Wilmot, the State Library of NSW and the University of Sydney for their generous contribution of space to house the collection.

In 2016, the Council decided to undertake a valuation of the Library collection at its office at 121 Darlington Road, Darlington. Louella Kerr and Adrienne Carlson both valuers under the Commonwealth Cultural Gifts Program were employed to carry out the valuation. The valuation was carried out on Saturdays between 12.11.2016 and 17.12.2016 under the supervision of the Honorary Librarian. As agreed the valuation report was submitted to the Society on 30 December 2016.

Arising from the valuation report the Council appointed a Committee to submit a report which states what material is to be kept, what is to be sold and what can be discarded along guidelines to be worked out by the Committee. The members of the Committee are: John Hardie (Vice-President and Chairman of Committee), Dr Ragbir Bhathal (Hon Librarian), Dr Herma Buttner (Hon Secretary), Em Professor Robert Marks (Honorary Secretary Editorial), Em Professor David Brynn Hibbert (President – ex-officio), Professor Roy McLeod (Member of the Society) and Richard Wilmott (Hon Treasurer). Prof Robert Clancy and Hannah Hibbert were invited by the Council to be members of the Committee as independent members and for their expertise. Robert Clancy for his extensive experience as a collector and a person knowledgeable about auctions and Hannah Hibbert as a knowledgeable archivist. The Committee is to submit their report to the Council at its July 2017 meeting.

The Society continues to operate a journal exchange program with a 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. This programme is currently being re-evaluated in light of the technological change that has taken place over the last few decades, with peer-reviewed journals now largely being available on-line.

The Council thanks the following members (Hannah Hibbert, Brynn Hibbert, Herma Buttner, Erik Aslaksen, Em Professor Robert Marks, Ragbir Bhathal, Robert Wilmot and Prof Robert Clancy) for taking the time to assist with reviewing, providing advice and sorting the Darlington Road collection and other material held at the Darlington Road Office on Saturdays.

### **THE BULLETIN**

*The Bulletin* 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 editor of the Bulletin, Professor Jim Kehoe and Managing Editor, Mr. Edward Hibbert.

### **CONTRACT MANAGEMENT**

The only contract currently under management is the contract with The Association Specialists (TAS) for administrative services. The current version of the contract, dated 3 March 2016, is for a contract period of two years, commencing on 1 January 2016, and is subject to review at the end of each 12 month period. It can be rolled over for further two year periods, and can be terminated by either party on three months' notice.

Leading up to the review at the end of 2016, a number of issues were raised by RSNSW. They were discussed with TAS in a meeting on 4 November 2016, and a set of actions (for both parties) listed for completion by the end of 2016. Some of these are still outstanding, but are currently in the process of being completed.

No complaints regarding unsatisfactory performance by TAS were received from committee chairs during 2016.

### **SOUTHERN HIGHLANDS BRANCH**

The Southern Highlands Branch Committee for 2016/2017 was:

Chairman	Mr Hubert Regtop
Vice chairman	Dr John Wright
Honorary Secretary	Ms Anne Wood FRSN
Honorary Treasurer	Dr Mike Jonas
Committee members	Mr Ted Smith Ms Andrea Talbot

A new committee member Mr. Peter Eustace joined us at the later part of the year, Peter was care taker manager for Chevalier College for a number of years, and his background expertise will be of great value to the committee.

### *2016 Lectures series*

The Southern Highlands Branch had another successful year. The attendances were consistent during the year, independent of topic attracting different audiences.

We experimented with a change of date, changing from Thursday night to Saturday afternoon 1pm. It was a Musical play/Drama "An afternoon with Chopin and George Sand", the music of Chopin and his life with George Sand. The grand piano in the hall was played by Dr Christian Heim and George Sand was acted out by his wife Dr Caroline Heim. It was one of

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the most successful sessions of the year, the music and story brought out an emotional response from the audience with some tears and tissue usage. Shows a change of date and time of day does not matter, it is the subject matter that is most important.

- February 18 Dr Charley Lineweaver, School of Astronomy, ANU. Death and Nothingness.  
March 12 Dr Christian Heim and Dr Caroline Heim. An Afternoon with Chopin and George Sand.  
April 21 Prof Gordon Parker, Executive director of the Black Dog Institute. Winston Churchill, bipolar disorder and the Dardanelles campaign.  
May 18 Dr Kathleen Riley, freelance writer. The Science of Spontaneity, Fred Astaire as the consummate craftsman.  
June 16 Dr Ken McCracken, Solar Physicist. The Sun, sunspots and space weather.  
July 21 Dr David Suhy, Benitc Biopharma. Silencing Genes for Life.  
August 18 Dr Ian Skinner, Neuroscience Research Australia. Chronic pain.  
September 15 Prof Tony Masters, Chair of Academic Board Sydney University. Sustainability, Chemical solutions for a tricky problem.  
October 20 Prof Gordian Fulde, Director of Emergency at St. Vincent Hospital, Senior Australia of the year 2016. Do we have a problem? Alcohol and drugs.  
November 17 Prof Gordon Wallace, ARC Centre of Excellence for Material Sciences, Wollongong University. 3D printing for Body Parts

*Promotion and PR*

Promotion of all events is helped by The Southern Highland News, 2ST Radio, ABC Radio Illawarra and the use of the Performing Arts Centre Chevalier College. The Branch maintains an extensive data base of contacts and at each meeting request new attendees to provide contact details.

*Scholarships*

The goal this year is to investigate scholarships for year 10 and 12 for either academic achievements or needy, starting with possible scholarships with Chevalier College, we have had discussions and will continue this year.

*Finances*

We have had a very good year financially, with our income (other than from member subscriptions) exceeding costs by \$2905.

*Continuing Philosophy*

We want to continue to give high level information to the community on the various topics which are important for society to make informed and appreciated decisions, in Art, Science, Literature and Philosophy, which are the ideals of the Society.

**ANNUAL GENERAL MEETING**

The annual general meeting of the Society will be held on Wednesday 5 April 2017 at 6pm at the Union University and Schools Club, 25 Bent Street, Sydney.



D. Brynn Hibbert  
PRESIDENT

On behalf of the Council of the Royal Society of NSW