



## Message from the Chief Executive— September 2018

September 26, 2018

Welcome to the September newsletter. This month the Academy commenced its formal consultations to inform the development of the Decadal Plan for Women in STEM. I am delighted that some 500 individuals have registered to participate in face-to-face consultations being held across Australia and I know many more are preparing written submissions.

The development of this 10-year roadmap to enable participation, retention and success of women and girls in STEM represents a unique opportunity to take a

long term view on how we can all push in the same direction and remove barriers faced by women and girls in STEM. **Find out more if you would like to participate.**<sup>1</sup>

The Academy has welcomed the new Minister for Industry, Science and Technology, the Hon Karen Andrews. The Academy has worked extensively with Minister Andrews over the years in her previous portfolios and as co-convenor of the Parliamentary Friends of Science and we look forward to an active dialogue with her on science matters.

Finally, **keep an eye on the Academy's Facebook page**<sup>2</sup> as we are about to hit one million followers. If you haven't yet liked our Facebook page, be sure to do so—you might be the millionth follower! You can also receive and share engaging and accurate information about science across the Academy's other social media platforms including **Instagram**<sup>3</sup>, **Twitter**<sup>4</sup> and **YouTube**<sup>5</sup>.

Enjoy reading this month's newsletter!

**Anna-Maria**



*Professor Nalini Joshi FAA AO from the University of Sydney*

## Fellows awarded Eureka Prizes

September 04, 2018

Three Fellows have been rewarded for their excellence in research/innovation and leadership at the 2018 Australian Museum Eureka Prizes.

Professor Nalini Joshi FAA AO from the University of Sydney received the **2018 University of Technology Sydney Eureka Prize for Outstanding Mentor of Young Researchers**<sup>6</sup>.

Professor Nalini Joshi 'has been instrumental in training and mentoring dozens of individual researchers and countless others through the broader mechanisms that she has established. A

1 <https://aas.eventsair.com/women-in-stem/>

2 <https://www.facebook.com/AustralianAcademyofScience>

3 <https://www.instagram.com/ausacademyofscience/>

4 [https://twitter.com/Science\\_Academy](https://twitter.com/Science_Academy)

5 <https://www.youtube.com/user/ScienceAcademyAu>

6 <https://www.youtube.com/watch?v=vEybu0Zxf9w>

strong advocate for gender equality, her influential actions have transformed the research landscape and supported young female scientists across Australia' according to the prize citation.

Professor Thomas Maschmeyer FAA from the University of Sydney was awarded the **CSIRO Eureka Prize for Leadership in Innovation and Science**<sup>7</sup>.

Professor Maschmeyer is 'a world leader in the chemistry of catalysis. He aims to generate and translate new knowledge into commercial solutions as part of his vision for a more sustainable world. His discoveries allow widespread use of renewables and recyclables in the chemical, material and energy spaces. His discoveries have resulted in 23 patents and the foundation of four companies.'

Professor Halina Rubinsztein-Dunlop FAA AO was part of the Optical Physics in Neuroscience team from the University of Queensland that won the **UNSW Eureka Prize for Excellence in Interdisciplinary Scientific Research**<sup>8</sup>.

The Optical Physics in Neuroscience team 'has devised cutting-edge methods for studying how our brains work to detect gravity and motion. Using optical trapping and novel microscopes, they successfully imaged the functioning brain circuits that process gravity and motion and combine this information with other senses.'

**Read about all the Eureka Prize winners**<sup>9</sup>.



*Academy Fellow and UNSW Professor, Veena Sahajwalla, is helping to raise the profile of women in STEM.*

## Australian Academy of Science calls for input on Women in STEM 10-year plan

September 10, 2018

The Australian Academy of Science is calling for nationwide views on the barriers and enablers that affect participation, retention and success of women and girls in science, technology, engineering and maths—STEM.

Feedback on the Academy's discussion paper will inform a 10-year roadmap for sustained increases in engagement and participation of girls and women in STEM. The roadmap is being developed by the Australian Academy of Science in partnership with the Australian Academy of Technology and Engineering on behalf of the Federal Government.

Australian Academy of Science Chief Executive, Anna-Maria Arabia, said women are lost at every stage as they seek to advance

their career in STEM fields, due to a range of factors including stereotypes, discrimination and workplace culture and structure, some of which manifest from the early school years.

"We have seen the social and economic benefits of gender equity; however, Australia still has a long way to go as a nation to achieve equity in opportunities for girls and women to pursue STEM education and careers.

"This 10-year roadmap will give the nation a pathway to achieving success in this area. Input from individuals and organisations across Australia is critical to ensure its success, and we encourage governments, research, industry, the not for profit sector and the media to participate," Ms Arabia said.

The expected outcomes of the Women in STEM 10-year roadmap are:

7 [https://www.youtube.com/watch?v=eJJvD\\_ip\\_c](https://www.youtube.com/watch?v=eJJvD_ip_c)

8 <https://www.youtube.com/watch?v=UunSOM7K8-I>

9 <https://australianmuseum.net.au/2018-eureka-prizes-winners>

- sustained improvements in gender equity in STEM
- increased opportunity for women and girls to gain STEM skills and participate in STEM careers
- increased benefits to business and society from increased access to STEM skills and a diverse workforce.

**The Women in STEM 10-year roadmap**<sup>10</sup> was announced in the 2018 Federal Budget and its recommendations will inform the Australian Government's Women in STEM National Strategy. Written submissions from individuals and organisations are invited and can be made until 8 October 2018.

Consultation workshops will be held in each state and territory through September and October 2018. **Find dates and venues for consultation workshops here**<sup>11</sup>. The Women in STEM Decadal Plan is being overseen by an Expert Working Group that provides independent advice. **Read the discussion paper**<sup>12</sup>.



*Dr Manchester has been awarded the 2019 Matthew Flinders Medal and Lecture*

## 'Tour de force' of Australian astronomy given high honour

September 14, 2018

Australian and New Zealand astronomer Dr Richard (Dick) Manchester FAA has been awarded one of Australia's highest honours for work in the physical sciences, the Australian Academy of Science's Matthew Flinders Medal and Lecture.

Dr Manchester, an Honorary Fellow with CSIRO Astronomy and Space Science, is a world-leading authority on pulsars: small spinning neutron stars that send out regular pulses of radio emission, left behind after a normal star has died in an explosion. During his career Dick Manchester has led teams that have discovered more than 1700 pulsars, about sixty per cent of all pulsars now known.

Among the pulsars they discovered is the only known double pulsar, listed by Science magazine as one of the ten top scientific breakthroughs in 2004. The discoveries have been used to test Einstein's Theory of General Relativity, to search for gravitational waves from super-massive black holes in the early universe, to probe magnetic fields in our galaxy and to explore supernova explosions.

Professor Ron Ekers FAA NAS FRS, who nominated Dick Manchester for the award, said he is a 'tour de force' of Australian astronomy.

"His contributions to both international radio astronomy and Australian science have been substantial," Professor Ekers said.

"In 1985, Dr Manchester published a seminal research paper on the Galactic pulsar population and its evolution, which for the first time gave a clear indication of how many pulsars exist in the galaxy, how long they lived and how they evolved."

Dr Manchester co-authored the definitive book on the topic, 'Pulsars', published in 1977 with 1993 Nobel Prize winner Joseph Taylor and is still being cited. In 2008 he was invited to Cambridge to give the inaugural Hewish lecture, named in honour of Antony Hewish, the Nobel Prize winning discoverer of pulsars.

In addition to his research on pulsars, Dr Manchester has also played an important role in the development of radio astronomy instrumentation at CSIRO's Parkes radio telescope. He programmed the first computer delivered to Parkes in April 1969, an 18-bit minicomputer known as the PDP-9, which was used for the first computer analyses of observational data from the telescope.

Dr Manchester said he was greatly honoured to receive the award.

"It has been a huge privilege to be able to follow my instincts in astrophysical research in a relatively unhindered way for the past 50 years and I thank all those that have made this possible," Dr Manchester said.

<sup>10</sup> <https://www.minister.industry.gov.au/ministers/cash/media-releases/long-term-action-support-girls-and-women-stem>

<sup>11</sup> <https://aas.eventsair.com/women-in-stem/consultation-events>

<sup>12</sup> <https://aas.eventsair.com/women-in-stem/make-a-submission>

“Pulsars are fascinating astrophysical objects that tell us a lot about the way the universe works; my research has been a wonderful vehicle for exploring topics as diverse as the theories of gravitation and the structure of the interstellar medium in our galaxy.”

Academy President Professor John Shine AC FAA congratulated Dr Manchester on the award.

“Dr Manchester is among only a handful of senior scientists acknowledged by the Academy each year through awards, for their life-time achievements and outstanding contributions to science,” Professor Shine said.

Dr Manchester will be presented with the medal at Science at the Shine Dome in 2019, where he will deliver the Matthew Flinders Lecture to leaders in the Australian scientific community.

**Read more about Dr Manchester’s achievements**<sup>13</sup>.

## Academy Fellow Wins Pitman Medal

September 06, 2018

Academy Fellow Professor Louise Ryan has been awarded the Statistical Society of Australia’s Pitman Medal, for outstanding achievement in and contribution to the discipline of statistics.

The Pitman Medal, a gold medal, is the society’s most prestigious award. Award recipients are recognised for a



*Academy Fellow Professor Louise Ryan has been awarded the Pitman Medal.*

body of work that has enhanced the international standing of Australia in the discipline.

Professor Ryan, from the University of Technology Sydney, is internationally known for the development and application of statistical methods for cancer and environmental health research.

Professor Ryan’s career has been characterised by broad-based engagement across a wide range of application and methodological areas, and she is recognised for her ability to identify good technical problems motivated by real world applications.

She is also highly regarded for her mentoring of young researchers, and for her considerable efforts to increase the participation of women and minorities in statistics.

Professor Ryan, who becomes the 15th Fellow to receive the award, said she was honoured and touched to receive the Pitman medal.

“It’s a great boost for biostatistics in Australia as well,” Professor Ryan said.



*Chief Scientist, Dr Alan Finkel AO FAA FTSE, Ambassador of the Federal Republic of Germany Dr Anna Prinz, PhD student Samantha Wade and Chief Executive of the Academy, Anna-Maria Arabia.*

## Two young researchers to represent Australia at Falling Walls Lab Berlin

September 12, 2018

PhD student Ms Samantha Wade from the University of Wollongong is the winner of the third Australian Falling Walls lab, hosted by the Australian Academy of Science.

Second placed competitor University of Canberra PhD student, Ms Hayley Teasdale, will join Ms Wade to represent Australia at the Falling Walls Lab finale in Berlin on 8 November.

Dr Jason Whitfield from the CSIRO/University of Queensland placed third in the competition.

They joined 17 other researchers and innovators at the Shine Dome in Canberra to present their work in three minutes on subjects including nanoscopic neuroscience, data storage, preterm births and water recycling.

Ms Wade is working on pancreatic cancer, which has a poor survival rate in part due to difficulties in delivering adequate levels

13 <https://csiropedia.csiro.au/manchester-richard-norman/>

of chemotherapeutics to tumours. The required dose is often intolerable to patients.

“I’m developing chemotherapy implants aimed at delivering high doses of multiple chemotherapy drugs directly to the tumour, with minimal side effects to the patient,” Ms Wade said.

Ms Teasdale has designed a technology that can be used to rapidly improve balance and reduce the high risk of falls in the elderly and those with neurological conditions.

Dr Whitfield is developing a point-of-care test to screen for doping biomarkers to improve the targeted testing of athletes and to reduce doping in sport.

The Falling Walls Lab, which began in 2011, provides ‘emerging talents, entrepreneurs and innovators a stage to pitch their research work, initiatives or business models to their peers and a distinguished jury from academia and business.’ Labs have taken place in 50 countries.

The Falling Walls Lab Australia is organised by the Australian Academy of Science in association with the Embassy of the Federal Republic of Germany in Australia.

**More information on the international Falling Walls event<sup>14</sup>**

## Academy Fellow recognised by the Royal Society of Canada

September 13, 2018

Academy Fellow Professor Terry Hughes from James Cook University has been awarded the 2018 A.G. Huntsman Medal in recognition of his innovative science for sustainable management of coral reef biodiversity.

The award, established by the Bedford Institute of Oceanography in 1980, is presented by the Royal Society of Canada to marine scientists of any nationality who ‘have had and continue to have a significant influence on the course of marine science thought.’ It is named in honour of Archibald Gowanlock Huntsman (1883 – 1973), a pioneer Canadian oceanographer and fishery biologist.

The award citation reads: ‘Terry Hughes is Distinguished Professor, Director, driving force, and intellectual leader of the Australian Research Council (ARC) Centre of Excellence for Coral Reef Studies.

Comprising over 300 researchers and students, this team of ecologists, social scientists, economists, lawyers and modelers is leading a worldwide shift in coral reef science, away from earlier qualitative and solely descriptive studies towards research that is quantitative, predictive, and specifically designed to inform regional-scale management of coral reefs and other marine ecosystems.

Dr. Hughes undertakes research that delivers environmental, economic, and social benefits to countries and communities that rely on coral reef biodiversity as a resource for fisheries and tourism.’

The award ceremony and public lecture will take place on 20 November 2018 at the Bedford Institute of Oceanography in Dartmouth, Nova Scotia, Canada.

**Read more about the award<sup>15</sup>.**



*Academy Fellow Professor Terry Hughes from James Cook University has been awarded the 2018 A.G. Huntsman Medal by the Canadian Royal Society*

## Communique—Australia’s agriscience future

September 13, 2018

Leaders from Australia’s science and innovation sector met in Canberra today to discuss an ambitious vision for Australia’s rural research and innovation system over the coming decade.

The forum was convened by the Australian Academy of Science and its National Committee for Agriculture, Fisheries and Food.

<sup>14</sup> <http://www.falling-walls.com/>

<sup>15</sup> <http://www.huntsmanaward.org/>



*The deployment of technologies such as robotics, autonomous systems and remote sensing is part of a new wave of innovation in agriculture.*

*Photo: Australian Centre for Field Robotics, University of Sydney*

It involved participants from Australia's global and local agricultural biotechnology and agrochemical companies, the Rural Research and Development Corporations, the Commonwealth and state governments, CSIRO and Australian universities.

There was clear consensus that Australia is leading from a position of strength in agriscience. We have long-term mechanisms for research and commercialisation and a strong global reputation for safe, high-quality food production and manufacturing.

We have world-leading expertise in Australia's challenging agricultural environment—dry-land broad-acre crops, meat and livestock production, horticulture, wine, fisheries and forestry to name just a few.

There was also recognition of the opportunities and the challenges inherent in new and disruptive technologies—remote monitoring and automated or autonomous planting, harvesting and processing systems for example—as well as the increasing globalisation of food value chains.

## Priorities

Moving forward, participants agreed on a number of priorities:

- The critical nexus between food and agriculture with nutrition, health and sustainability
- Building a culture of trust and cooperation within and between agricultural research and innovations companies, research organisations and the community
- Increasing and enhancing the scope and value of Australia's participation in global value chains
- Sustained, long-term investment in agricultural and related infrastructure to enable current and emerging technologies
- Better support for commercialisation of research into new products and services, including improved arrangements for management of IP and enhanced incentives for investors
- Sensible reform and coordination of Australia's regulatory environment for both existing and emerging agricultural products and technologies
- Enhanced mechanisms to coordinate, share and benefit from big agricultural data collected by both private companies and governments.

Participants acknowledged the strong commitment to Australia's rural science and innovation sector from the Commonwealth and state and territory governments,

and welcomed the opportunity to engage with the several reviews currently in progress.

## Participating organisations

- AgriFutures Australia
- Agri-Science Queensland
- ARC Centre of Excellence for Plant Energy Biology
- AusBiotech
- Australian Academy of Science
- Australian Academy of Technology and Engineering
- Australian Centre for Robotic Vision
- Australian Farm Institute
- Australian Meat Processor Corporation
- Australian Pork Ltd
- Bayer Australia Ltd
- Cotton Research and Development Corporation
- Council of Rural Research and Development Corporations
- CroPLife Australia
- CSIRO
- Department of Agriculture and Water Resources
- Corteva AgriSciences
- EY
- Farm Animal Research Australia
- Fisheries Research and Development Corporation
- Food Agility CRC
- Grains Research and Development Corporation
- Horticulture Innovation Australia Ltd
- Howard Partners
- NSW Department of Primary Industries
- Sugar Research Australia Ltd
- The Crawford Fund
- The University of Sydney
- The University of Melbourne
- University of Western Australia
- Wine Australia



*reSolve Champions at the day of celebration for the reSolve: Maths by Inquiry program.*

## Maths Champions recognised for important contributions to education program

September 26, 2018

The Academy recently held a day of celebration for its reSolve: Maths by Inquiry program. Twenty-nine reSolve Champions—teachers and leaders across the country—gathered at the Shine Dome in Canberra to showcase their work and to receive recognition for their achievements.

Over the past 12 months each Champion has provided feedback on resources for teachers, presented workshops to their colleagues and participated in three days of professional learning in their own time. The program now has over 300 committed Champions

from schools across Australia who will take the reSolve spirit of inquiry into the future.

### Re-igniting engagement

Ten Champions at the event gave inspiring and challenging talks about their journeys on topics including growing a community via problem solving and reasoning, re-igniting engagement with reSolve, using inquiry pedagogy as a vehicle for student and staff growth, and using the challenge of inquiry in social and emotional wellbeing programs.

Other presentations covered wonder in the maths classroom, linking reSolve activities and curriculum requirements, tracking student growth with reSolve resources, using inquiry as a vehicle for whole school change, working with other teachers to develop classroom resources, and using reSolve resources to provoke pre-service teachers about inquiry.

The day concluded with a formal presentation of certificates by Senator the Hon Zed Seselja representing the then Minister for Education and Training, Senator the Hon Simon Birmingham; former Chief Scientist, and Australian Academy of Science Fellow and Chair of the Academy Education

Committee, Professor Ian Chubb, and President of the Australian Association of Mathematics Teachers, Jurek Paradowski.

### What teachers are saying

‘The reSolve materials are an absolute revelation! Mathematics has always been a stressful subject for me in my own schooling and now as a teacher. I have relied on teaching processes to get by rather than focusing on the conceptual understandings that absolutely need to be in place to feel safe, explore and have fun with Maths. reSolve has levelled the playing field for my students and I. They’re teaching me as much as I’m teaching them. Engagement levels are the highest I’ve ever experienced in math sessions and best of all the learning is transferrable and relevant. Knowing what I know now, I wish I could have my past students back and re-teach them using the reSolve method and materials. This has been life changing for me.’

‘In the day to day struggle to cover all of the curriculum as well as one can, it is easy to forget the learning of basic skills needs to be fun and captivating for all students. And some need all the encouragement they can ... whilst not realising they



*Senator the Hon Zed Seselja spoke at the event.*

are learning ... this is where reSolve has helped, [reSolve Champion] Steph coming to the classroom and seeing all the students responding to her and the 'games' refuelled my passion to be a better numeracy teacher. Also there is never enough teachers time already in the primary schools to research, relate to the curriculum, create and make resources so this is a huge help.'

## China–Australia Symposium shines light on optics research and applications

September 26, 2018

A symposium in China has brought Chinese and Australian researchers together to focus on light, a major area of research that impacts all our lives.

The 14th China–Australia Symposium, **Light changes our lives**<sup>16</sup>, was held at the Changchun Institute of Optics and Fine Mechanics of the Chinese Academy of Science, Changchun, in late August.

The symposium concentrated on space optics and applications, large-aperture optical fabrication and measurement, advanced laser science and applications, quantum optics and applications, and micro-nano optics and optical devices.

A delegation of 15 Australian researchers participated in this event, including five early and mid-career researchers. It was led by Professor Hugh Bardlow, President of the Australian Academy of Technology and



*The Australian delegation attended the symposium and saw examples of related manufacturing facilities.*

Engineering (ATSE), and Professor Hans Bachor, Secretary Education and Public Awareness at the Australian Academy of Science.

Optics is one of the focus areas of research for the Chinese Academy of Sciences, ranging from fundamental research to the manufacture of optics and photonics components. While in Changchun, the delegation saw examples of manufacturing of large scale precision mirrors for the latest generation of telescopes for space and earth observation, and low noise photo detectors that play a major role in scientific and commercial instruments, including medical imaging. Potential collaborations between researchers at the institute and the Australian delegates are currently being discussed.

This symposium is an annual event organised since 2004 by the Australian Academy of Science, ATSE, and the Chinese Academy of Sciences (CAS). The symposia series is funded by the Australian Government through the Australia China Science and Research Fund and CAS.

## Call for papers for science heritage symposium

September 26, 2018

Those interested in the physical heritage of Australia's long history of science and innovation, and the identification and conservation of this science heritage, are invited to participate in the Australia International Council on Monuments and Sites (ICOMOS) **Under the Microscope— Exploring Science Heritage Symposium**<sup>17</sup> being held in Hobart in November 2018.

The symposium has been organised by Australia ICOMOS with the support of Cultural Heritage Practitioners Tasmania and the Royal Society of Tasmania, and with assistance from CSIRO Oceans and Atmosphere. The Academy is also supporting the promotion of the event.

The symposium will run over two days, with a one-day field excursion on Sunday 11 November and a day of presentations and discussion on Monday 12 November.

The aim of the symposium is to have a multidisciplinary dialogue that explores the heritage of

<sup>16</sup> <http://chinaaustralia2018.csp.escience.cn/dct/page/1>

<sup>17</sup> <https://australia.icomos.org/events/tas-2018-symposia/science-heritage-symposium/>

Australian science, including what science heritage is, what significant science heritage we have in Australia, and whether there are particular management needs for the conservation of this heritage.

### Call for papers

The organisers are now seeking papers from a broad range of disciplines for presentation at the symposium and are keen to hear from Academy Fellows and other scientists. The closing date for submissions is Monday 8 October.

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## Coming events— October to December

September 26, 2018

### Canberra



### When we Age

*Date: 5.30 pm, 16 October*

*Venue: The Shine Dome,  
Gordon St, Acton*

In our fifth event in the popular Science of Us series, When we Age will explore the ageing of our brains and our bodies, with Professor Bronwyn Kingwell from Baker Heart and Diabetes Institute and Professor Kaarin Anstey from UNSW Sydney and NeuRA.

**Booking is recommended<sup>18</sup>.**

### *The International System of Units:*

*A public lecture by Dr Barry Inglis*

*Date: 5.30 pm, 18 October*

*Venue: The Shine Dome,  
Gordon St, Acton*

Dr Inglis is the pre-eminent global authority in overseeing the significant international research that has resulted in the history-making proposed revision of the International System of Units (SI) in May 2019. Dr Inglis will discuss the changing nature of measurement standards in addressing the needs of industry, the community, science and emerging technologies; the role of national metrology institutes such as the National Measurement Institute (NMI) in Australia; and the proposed redefinitions in detail and their expected impact.

This free event is delivered in partnership with the NMI.

**Booking is recommended<sup>19</sup>.**

### *2018 Negative Emissions Conference*

*Date: 30–31 October*

*Venue: The Shine Dome,  
Gordon St, Acton*

This conference aims to explore negative emissions technologies holistically from practicality, feasibility, and environmental and societal impact perspectives.

**Registrations close 19 October<sup>20</sup>**

### Melbourne

*The Science of Sport: Women on and off the field*

*Date: 5.30–7.15 pm, 28 November*

*Venue: AAIM Park, Melbourne*

This event is free, but **bookings is essential<sup>21</sup>.**

### Sydney

*Cooling Sydney Hack (a Theo Murphy Initiative)*

*Date: 12 December*

*Venue: Western Sydney  
University, Parramatta*

Cooling Sydney Hack is a fast-paced and engaging full-day event that seeks to inspire and showcase solutions to address urban heat, and present strategies and actions to keep Sydney cool. Anyone interested in contributing to solutions to urban heat in the Sydney Basin is welcome.

**More about this event<sup>22</sup>**

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## Opportunities for scientists—September– October 2018

September 26, 2018

### External opportunities

*Balliet Latour Health Prize*

*Applications close 30*

*September 2018*

The prize recognises outstanding scientific achievements in biomedical research for the benefit of human health. Theme for 2019: Cardiovascular Diseases—€250 000

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18 <http://www.science.org.au/news-and-events/events/public-speaker-series/science-us/when-we-age>

19 <https://www.eventbrite.com.au/e/the-international-system-of-units-a-public-lecture-by-dr-barry-inglis-tickets-49800975057>

20 <https://www.science.org.au/news-and-events/events/2018-negative-emissions-conference-big-picture-negative-emissions>

21 <https://www.science.org.au/news-and-events/events/science-sport-women-and-field>

22 <https://www.science.org.au/news-and-events/events/theo-murphy-initiative-australia/cooling-sydney-hack>

## More information on the Balliet Latour Health Prize<sup>23</sup>

### *Mahathir Science Award*

*Applications close 31 October 2018*

Awarded to an individual or group in recognition of contributions and innovations towards solving problems in the tropics through Science, Technology and Innovation in 1) tropical agriculture; 2) tropical architecture and engineering; and 4) tropical natural resources—US\$100 000

## More information on the Mahathir Science Award<sup>24</sup>

### *CSIRO Indigenous STEM Awards*

*Applications close 31 October 2018*

The CSIRO Indigenous STEM Awards recognise, reward and celebrate the achievements of Aboriginal and Torres Strait Islander students and scientists who are studying and working in the science, technology, engineering and mathematics (STEM) field, as well as the integral role schools, teachers and mentors have in supporting Aboriginal and Torres Strait Islander students in pursuing STEM education and careers. The awards also recognise the immense value of connecting Aboriginal and Torres Strait Islander students with inspirational STEM role models, both Indigenous and non-Indigenous.

## More information on the CSIRO Indigenous STEM Awards<sup>25</sup>

## Fellows update— September 2018

September 26, 2018



*Eureka prize winners (from left) Nalini Joshi, Thomas Maschmeyer and Halina Rubinsztein-Dunlop*

### Honours and awards to Fellows

#### **Professor Nalini Joshi AO FAA—**

2018 University of Technology Sydney Eureka Prize for Outstanding Mentor of Young Researchers

#### **Professor Thomas Maschmeyer**

**FAA FTSE—**2018 CSIRO

Eureka Prize for Leadership in Innovation and Science

#### **Professor Halina Rubinsztein-**

**Dunlop AO FAA—**2018 UNSW

Eureka Prize for Excellence in Interdisciplinary Scientific Research

#### **Professor Terry Hughes FAA—**

Royal Society of Canada 2018 A.G.

Huntsman Medal in recognition of his innovative science for sustainable management of coral reef biodiversity

#### **Professor Ross McPhedran**

**FAA—**Rolf Landauer Medal for research excellence in the field of composite science (shared with Professor Ping Sheng, Hong Kong)

#### **Professor Louise Ryan FAA—**

Statistical Society of Australia Pitman Medal, for outstanding achievement in and contribution to the discipline of statistics

#### **Professor Marcello**

**Costa FAA—**Federation of Neurogastroenterology and Motility (FNM) Lifetime Achievement Award



*Dr Angus McEwan.*

### Obituary

#### **Dr Angus McEwan FAA FTSE**

20 July 1937 to 5 September 2018

Dr Angus McEwan was an engineer and aerodynamicist, elected to the Academy in 1982 for his pioneering studies in electrohydrodynamics and in viscous free surface phenomena. His work was characterised by an interactive blend of mathematical and physical insights which gave his investigations a totality and scientific unity very rarely achieved by one individual.

Dr McEwan was Chief of CSIRO's new Division of Oceanography (in Hobart) from 1981 until 1995 and was then appointed Senior Science

23 [http://www.fnrs.be/docs/Prix/FRS-FNRS\\_Call\\_for\\_nomination\\_Health\\_Prize.pdf](http://www.fnrs.be/docs/Prix/FRS-FNRS_Call_for_nomination_Health_Prize.pdf)

24 <http://www.msa-foundation.org/>

25 <https://www.csiro.au/en/Education/Programs/Indigenous-STEM/AWARDS>

Advisor to the Commonwealth Bureau of Meteorology from 1995 to 2005. In addition to his research, and several roles in the advancement of Australian marine science, Angus was active in the UNESCO Intergovernmental Oceanographic Commission (IOC). He served in a number of capacities including Australian delegate to the; member and then chairman of the IOC Committee on Climatic Changes and the Ocean; representative of the Global Ocean Observing System (GOOS) steering committee; chairman of the Intergovernmental GOOS committee; and chair of the Oceanographic Data Exchange Policy group.

Angus was also actively involved in the Academy. He served on several of the Academy's National Committees responsible for oceanic sciences, atmospheric sciences and climate and sectional committees, award committees, the International Geosphere-biosphere Program and the Academy's International Relations committee. Angus also served on the Academy's Council from 1997 to 2000. Angus was interviewed by Dr Trevor McDougall FAA in 2011 and a transcript is available on the **Academy's website**<sup>26</sup>.

'A Celebration of Life' memorial for Angus will be held on 27 October 2018, from 12.30pm at Turnbull Funerals, 71 Letitia Street, North Hobart, Tasmania. Relatives, friends and former colleagues are warmly invited to attend. Please email **fellowship@science.org.au** if you wish to contact Angus' family.

### **Honorary Editor sought for the newsletter**

The Academy is seeking a Fellow with an interest in communicating our achievements and activities to take up the role of Honorary Editor of the Academy Newsletter.

The newsletter's current Honorary Editor, Professor Hans Bachor, became the Academy's Secretary Education and Public Awareness earlier this year, which brings with it significant responsibilities and time commitments.

The monthly email newsletter (11 per year) links to news items and media releases published on the Academy's website in the previous four weeks or so. It also contains additional items of interest for Fellows and the nearly 3000 subscribers, including notifications of upcoming opportunities such as events, grants and awards.

The Honorary Editor checks the pre-publication draft for errors (minimal!) and suggests possible additional inclusions, if something has been missed. It's not onerous, but a quick turnaround within a few days is appreciated.

If you are interested in finding out more, or would like to express your interest, please contact Robyn Diamond, Digital and Publishing Manager, on **robyn.diamond@science.org.au** or phone **02 6201 9415**.

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26 <https://www.science.org.au/learning/general-audience/history/interviews-australian-scientists/dr-angus-mcewan-oceanographer>