



The Royal Society of Victoria

Promoting Science.

PATRON: The Hon Linda Dessau AM
Governor of Victoria

PRESIDENT: Dr William Birch AM

Headlines...

11th August: 2016 Young Scientist Research Prizes

25th August: Forensic DNA Profiling: What does the Future Hold? (lunchtime lecture)

September Advance Notice:

8th September: Alzheimer 's Disease: is the Brain Destroyed by the Pulse?

22nd September: Keeping Melbourne Marvellous: People, Place & Environment (Panel)

August 2016 Newsletter

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August Meetings & Events

2016 YOUNG SCIENTIST RESEARCH PRIZES



The first August meeting of the Royal Society of Victoria will be held on
Thursday, 11TH August 2016 at 6.00pm.

To foster and recognise excellence in Victoria's early career scientists, the Royal Society of Victoria has established four prestigious competitive prizes open to Victorian students in their third or fourth year of doctoral candidature, in all areas of the Biomedical & Health Sciences, Biological Sciences (Non-human), Earth Sciences and Physical Sciences.

We are delighted to announce this year's finalists from a fiercely competitive pool of 100 applicants:

- Georgia Roberts - **La Trobe University's** Department of Archaeology & History
- Matthias Eglseder - **Monash University's** School of Earth, Atmosphere & Environment
- Yang Chen - **Monash University's** School of Earth, Atmosphere & Environment
- Rebecca Hull - **The University of Melbourne's** School of Biosciences
- Thanh Kha Phan - **La Trobe University's** Institute for Molecular Science
- Chi Hai Ly - **The University of Melbourne's** School of Biomedical Sciences
- Rebecca Leane - **The University of Melbourne's** School of Physics
- Dene Murphy - **The University of Melbourne's** School of Physics

Of the eight finalists, only four will win the prize of \$1000 for their respective categories. Each of the short-listed candidates will be required to give a 15 minute oral presentation (10 minutes presentation, 5 minutes discussion) before a general audience of scientists and members at the Society. The order of speaking is decided by ballot on the night. In addition to the merits of the methodology and significance of their scientific work, finalists will be judged on their ability to make their work accessible and interesting to an audience uninitiated in their field of endeavour.

Winners will be announced at a special function following the presentations at the Royal Society of Victoria's Hall.

The presentations are open to fellow students, friends and families through invitation, as well as RSV Members and the general public through registration.

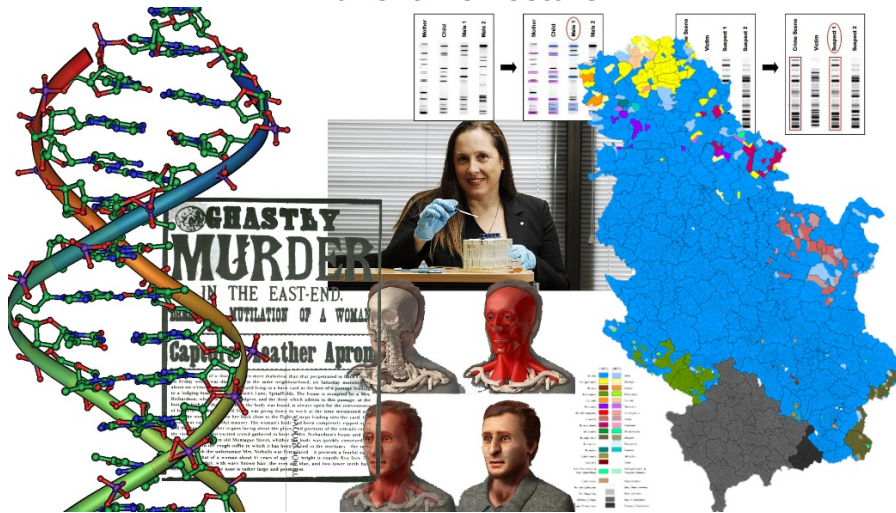
The Biological Sciences (Non-human) prize and Earth Sciences prize are generously supported by donations from the families of previous Royal Society Presidents: Edmund D Gill and Neil Archbold respectively. This year the Prizes are also generously supported through the fundraising efforts of Melbourne writer Lee S Hawke's "Science Fiction for Science" fundraising campaign.



Places are limited, and bookings are essential. Book online now at <http://ow.ly/IIOL302kRFT>, call or email the RSV office to secure your place: 9663 5259, rsv@sciencevictoria.org.au. **All most welcome.**

FORENSIC DNA PROFILING: WHAT DOES THE FUTURE HOLD?

Lunchtime Lecture



The second August meeting of the Royal Society of Victoria will be held on
Thursday, 25th August 2016 at 12.00pm

Speakers: **Dr Linzi Wilson-Wilde**
Director, National Institute of Forensic Science

Deoxyribonucleic acid (DNA) based testing was first introduced into forensic science in the late 1990's for the investigation of criminal offences. Forensic scientists compare the unique code found in each person's DNA, contained in virtually every cell in the body. DNA profiling has been successfully used to link individuals to biological samples found at crime scenes and also exclude individuals from having committed an offence. Large databases of suspects and convicted offenders are also used to identify recidivist offenders.

Current tests are limited in that they require a reference sample from a suspect to compare. But what does the future hold for this powerful investigative tool? **Emerging DNA tests will be able to do much more.** Technological advancements have seen a move to whole genome sequencing, which has the potential to provide significantly more information to police. Join Dr Linzi Wilson-Wilde to explore the future possibilities for DNA profiling, including providing information on the offender's physical appearance and their geographic ancestry.

About the Speaker

Dr Linzi Wilson-Wilde is the Director of the National Institute of Forensic Science with the Australia New Zealand Policing Advisory Agency (ANZPAA), providing advice on all aspects of forensic science including policy, training, quality, and research and development.

After completing her Bachelor of Science at La Trobe University, Linzi started work with the Victoria Police Forensic Services Department in 1996, with whom she completed her La Trobe honours year. Following the Bali bombing in 2002, Dr Wilson-Wilde coordinated the DNA analysis of the samples used for victim identification and criminal investigation. She spent many years on crime scenes as a blood stain pattern interpretation expert.

In 2008 she took on a position as Acting Director of the National Institute of Forensic Science at ANZPAA, where she has been instrumental in the development and publication of forensic science Standards for the Australian and International community, investigating new DNA techniques and national approaches to forensic education and training. Linzi balanced this challenging work with the completion of her PhD in 2011 with the University of Canberra.

Dr Wilson-Wilde is now the most senior female forensic scientist in Australia and New Zealand and was one of 20 women inducted onto the Victorian Honour Roll of Women in March 2014.

Places are strictly limited, **bookings essential!** Book online now at <http://ow.ly/u6ic302kSV7>, call or email the RSV office to secure your place: 9663 5259, rsv@sciencevictoria.org.au. If you plan to join us for lunch, following the lecture from 1.15pm, please register your attendance so we can anticipate catering requirements. **All most welcome.**



AUGUST FIELD TRIP



An RSV member-only tour will be conducted on Tuesday, 9th August from 10.30am to 2.30pm

THE JOHN MONASH SCIENCE SCHOOL PLUS! THE MONASH EARTH SCIENCES GARDEN

We are delighted to advise we will convene our fourth field trip for the year with a visit to the exciting John Monash Science School – the high school you wish you’d attended! John Monash Science School focuses on science, mathematics and associated technologies. It is the result of a unique partnership between the Victorian Government and Monash University, and is located in a purpose-built facility on the university’s Clayton Campus.

The JMSS has been established for 640 students from across the State of Victoria in Years 10, 11 and 12 with a strong interest in science, maths and technology. It is Victoria’s first specialist science school, located on Monash University’s Clayton campus in Melbourne’s south-eastern suburbs. Students can study emerging science electives in fields such as nanotechnology, astrophysics, pharmaceutical science and bioinformatics. Through their partnership with Monash University, all Year 10 students are able to undertake an extended science research project with guidance from expert mentors.



Our visit to Monash also provides us with a great opportunity to tour the **Monash Earth Sciences Garden** with outreach staff from the School of Earth, Atmosphere and Environment, led by RSV member Dr Julie Boyce. The first of its kind in Australia and the most comprehensive worldwide, the Garden is inspired by the geology and geomorphology of our State, providing a “living geological map of Victoria.” Join us!

Itinerary:

- 10.30am – Arrival at Monash Earth Sciences Garden
- 10.45 – Begin guided tour of Garden
- 11.30 – Conclude tour of Garden, quick break and walk to JMSS
- 12.00pm – Convene at JMSS
- 12.10 – Welcome and school introduction - JMSS Principal Peter Corkill
- 12.20 – Begin tour of school - this will include viewing of a live Emerging Sciences Victoria lesson and several different classes
- 12.50 – Tour groups return to seminar rooms
- 1.00 – Curriculum and Science at JMSS - Head of Science JMSS
- 1.25 – Questions for Head of Science
- 1.30 – Introduction of teachers and students ahead of lunch at JMSS. This also provides an opportunity for RSV members to interact directly with staff and students
- 2-2.30pm – Event concludes



Places are strictly limited, **bookings essential!** Book online now at <http://ow.ly/PbRa302l8e7>, call or email the RSV office to secure your place: 9663 5259, rsv@sciencevictoria.org.au. **RSV members only.**

Partner Events

THE INVISIBLE WAR: A TALE ON TWO SCALES



In a celebration of art, science and history, Melbourne micro-publishers [Scale Free Network](#) will be launching their new book [The Invisible War](#) with the Royal Society of Victoria on Saturday August 20th, 2016 from 3 to 6pm.

A collaboration between local and international writers, microbiologists, historians, artists and educators – this ground-breaking graphic novel combines stunning artwork and cutting-edge science to take readers on a unique journey into the secret symbiotic societies within the human microbiome. Written for students and adults alike, the story is set in 1916, partly around the muddy trenches of World War One, and partly in the mucus-lined trenches of a nurse's large intestine. It describes a vast, unseen world populated by bacteria and viruses, where microscopic battles between ancient enemies are waged on a daily basis...

Here's what people have been saying about The Invisible War:

"A candidate for the first truly modern, 21st century graphic novel", Dorion Sagan

"What a great way to learn some pretty extensive science", David Suzuki

"A touching, harrowing story...rivetingly interesting", The Canberra Times.

The afternoon will feature a launch by the Chair of the Victorian ANZAC Centenary Committee, the Hon **Ted Baillieu**, an exhibition of original artwork by **Ben Hutchings** (illustrator of *The Invisible War*), an interdisciplinary panel discussion led by *The Science Show's* **Dr Robyn Williams**, a science & history themed dress-up photo-booth, author book-signings, and excellent company over light refreshments and beverages.



A 2016 National Science Week event.



Places are strictly limited, **bookings essential!** Book online now at <http://ow.ly/v4lo302kUU7>, call or email the RSV office to secure your place: 9663 5259, rsv@sciencevictoria.org.au. All most welcome.

NATIONAL SYMPOSIUM: CONNECTING WOMEN IN STEMM

[Women in Science AUSTRALIA](#) (WISA) invites you to join their first National Symposium: **Connecting Women in STEMM** to be held **SEPTEMBER 13-14, 2016** in Storey Hall at RMIT University in Melbourne!



In less than two years Women in Science AUSTRALIA has grown into a nationally recognised association for women in STEMM. The Royal Society of Victoria is a proud network partner and will host the symposium dinner at St Kilda Town Hall on the evening of 13th September.

With almost 10,000 members and followers, WISA aims to connect women in Science, Technology, Engineering, Mathematics and Medicine (STEMM) regardless of their discipline or profession. This two-day meeting will share best practices and policies in academia and industry, as well as ground-breaking initiatives to foster an environment where more women in STEMM can lead and excel. They will introduce a wide range of programs for girls interested in STEMM and science teachers are encouraged to attend this session (discount applies). Delegates will have the opportunity to enhance their skills, learn about different career pathways and importantly, extend their professional network.

Women in STEMM in industry, education, research, management, academia, government, administration, publishing and communication are invited to participate. Men who champion change and those who want to see equity and equality in the workplace are also invited and encouraged to attend. This is an inclusive event and all are welcome – registration is essential.

Connect with STEMM leaders and professionals from across the sector – WISA looks forward to welcoming you.

Featuring: Professor Sharon Bell, Professor Caroline McMillen, Dr Wafa El-Adhami, Professor Marilys Guillemin, Associate Professor Kay Latham, Professor Glenn Wightwick, Professor Lee Astheimer, Associate Professor Heidi Drummer, Associate Professor Madhu Bhaskaran, Professor Julie Bernhardt, Associate Professor Birgit Loch, Associate Professor Marnie Blewitt, Professor John Carroll, Yasmin Shafi, Natasha Mitchell, Bronwyn Lee, Dr Eroia Barone-Nugent, Dr Jenine Beekhuyzen, Nicole Brown, Louise Johansson, Dr Marguerite Evans-Galea, Michelle Gallaher, Norah Breekveldt, Professor Madelein McManus, Dr Saraid Billiards, Jacinta Duncan, Dr Julie Wheway, Dr Nikola Bowden, Heather Catchpole, Gavin Fox-Smith, Dr Krystal Evans, Professor Veena Sahajwalla, Dr Melina Georgousakis, Topaz Peacock, Fiona Hayes, Julia Page, Marnie Carroll.

Full program: <https://womeninscienceaust.org/national-symposium-save-the-dates/program/>



Register online now at <http://ow.ly/Uvfv302ncfv>, prices are scaled according to professional seniority. **All most welcome.**

RSV Outreach Program

The Field Trip: Journeys in Science



The Field Trip: Journeys in Science is kicking off at the Society's hall on Sunday 7th August, participants aged 10-17 an opportunity to engage with the scientific method, identify an evidence base, then act upon it as a tool for decision making and deliver a group project, all with mentoring from young scientists engaged in the "next step" of tertiary education and industry participation.



YSA (Melbourne) Executive Committee members Timothy Newport, Jessica Soares, Monique McLennan and Ricardo Cannizzaro



*Paul Kooperman,
Field Trip Director*

We're delighted to have strong interest from our 2015 Science Talent Search winners, but we are still seeking new participants. This is a great opportunity for **grand-parents** and **parents** with budding young science enthusiasts on their hands to offer an extension activity and a fun cohort experience – check out our website, under "Science Outreach," for more information, or follow the link if you're reading this [online](http://www.royalsocietyvictoria.org.au/lecture-program/).

2016 RSV Lecture Program

Ellery Theatre, The Royal Society of Victoria, 8 La Trobe St, Melbourne

All lecture details and bookings are available online from:

<http://www.royalsocietyvictoria.org.au/lecture-program/>

Lectures from August to December:

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|------------------------------------|---|
| 11th August – | 2016 Young Scientist Research Prizes |
| 25th August – | Dr Linzi Wilson-Wilde, "Forensic DNA Profiling – what does the future hold?" (lunchtime lecture) |
| 8th September – | Professor Jonathan Stone, "Alzheimer's Disease: Is the Brain Destroyed by the Pulse?" |
| 22nd September – | Panel & Discussion, "Keeping Melbourne Marvellous: People, Place & Environment." Chaired by Toby Kent (Chief Resilience Officer, City of Melbourne), and featuring Michel Mason (CEO, Infrastructure Victoria), Dr Rachel Carey (Research Fellow, Victorian Eco Innovation Lab), Dylan Brady (Conductor, Decibel Architects) and Dr Jerril Rechter (CEO, VicHealth). |
| 13th October – | Professor Elisabetta Barberio, "The Hunt for Dark Matter: Stawell's Underground Physics Lab" |
| 27th October – | Phillip Law Postdoctoral Award for the Physical Sciences & Lecture |
| 10th November – | Undergraduate Science Communication Prize & Lecture with Dr Andi Horvath |
| 24th November – | Very Young Scientists (Science Talent Search Bursary Recipients) |
| 8th December – | RSV Research Medal Lecture & President's Soiree |

The 2017 Program is now under construction! Have an idea for a great science talk, or know of a terrific presenter? Please forward your thoughts to ed@sciencevictoria.org.au for consideration by the Science Program Committee.

An Evening with Ben Goldacre



We've been awaiting Ben's Australian visit for years now, and are delighted to finally have a chance to see him live in action. A dynamic, uncompromising and controversial critic of "Bad Science," come delight in his infamous evisceration of the "factoid" in real time!

We are partnering with [Think Inc.](http://www.thinkinc.org.au) to promote this exciting Australian event, coming to Melbourne on **23 September**.

More information and tickets are available [online](http://www.thinkinc.org.au) (link text below). The Royal Society of Victoria's **Members are eligible for a 10% discount** – please check your email for instructions, or contact us in the office for the discount code if your email address isn't registered with us.

<https://www.thinkinc.org.au/events/ben-goldacre/>

RSV Medal for Excellence in Scientific Research



2015 RSV Research Medal winner Professor David Karoly (right) with RSV President Dr William Birch AM and Her Excellency the Hon Linda Dessau AM, Governor of Victoria

A final reminder submissions are now open for the **2016 RSV Medal for Research Excellence**. This year, nominations are invited for **Category IV: Physical Sciences**, which includes research in the disciplines of Astronomy, Astrophysics, Chemistry, Engineering, Mathematics, Physics and related sciences.

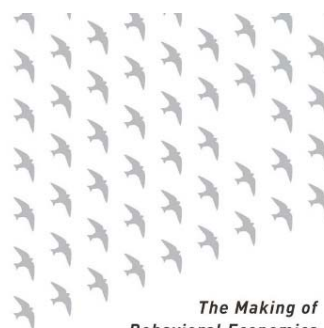
Award criteria are based on demonstration of the candidate's excellence and leadership in scientific research. The work shall have been carried out in Australia, or about Australia, with preference for work conducted in Victoria, or about Victoria.

Members and friends are strongly encouraged to consider the high achievers in their networks and submit nominations. **Submissions close at 5pm on 31 August, 2016**. Full details are available [online](http://www.royalsocietyvictoria.org.au/awards-and-prizes/research-medal/):

<http://www.royalsocietyvictoria.org.au/awards-and-prizes/research-medal/>.

The Big Ideas Book Club

"Misbehaving: The Making of Behavioral Economics" by Richard H Thaler



The Blurb: "Get ready to change the way you think about economics."

Richard H. Thaler has spent his career studying the radical notion that the central agents in the economy are humans — predictable, error-prone individuals. Misbehaving is his

arresting, frequently hilarious account of the struggle to bring an academic discipline back down to earth—and change the way we think about economics, ourselves, and our world.

The Big Ideas Book Club **alternates science non-fiction and fiction titles every month**, so there's something for everyone. Purchasing each month's book from [Embiggen Books](http://www.embiggenbooks.com) entitles participants to a 10% voucher for any other paperback in store when attending the Book Club. This is a free club – just read the book and come along!

Where: *Embiggen Books*, 197-203 Lt Lonsdale Street (may upgrade to the larger Royal Society of Victoria venue, depending on numbers)

When: *Wednesday, 31 August 2016 @ 6:30pm*

Bookings: Embiggen Books, 9662 2062 or events@embiggenbooks.com. You can also register to attend online at <http://www.meetup.com/en-AU/Big-Ideas-Book-Club/events/232340126/>