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University**FACULTY OF SCIENCE
AND ENGINEERING****August 2018****Suggest a story >**

From the Dean

SPECIAL EDITION | NATIONAL SCIENCE WEEK 2018

Dear Suzannah

National Science Week is an opportunity to reflect on why we're scientists, engineers or mathematicians. What fascinates, challenges and sometimes frustrates us about our work? Who are we researching for? And what would we like the broader public to know about what we do?

I'd like to take this opportunity to thank the many members of staff for all the hard work and planning they've put into another great selection of National Science Week events that really showcase the strengths of our science.

I'm particularly pleased this year that as well as being involved in many Sydney events, we're also taking science to regional New South Wales. Wagga Wagga is again hosting a National Indigenous Science Education Program (NISEP) Community Science Day, modelled on our very successful Indigenous Science Experience @ Redfern run by Joanne Jamie and her team. Matthew Bulbert will be talking about the bizarre sensory world of animals as part of a special Night of Illusions in Armidale. And Adam Joyce is visiting Wee Waa, Werris Creek, Barraba and Dorrigo over four days for Pocket Astronomy in Pocket-Sized Towns.

If you want to know more about what's happening across the Faculty, follow our Faculty Twitter account [@MQSciEng](#) and my personal account [@BarbaraMesserle](#). If you've got news to share, please tweet about it and include our Faculty handle so we can see it and retweet. If you're not on Twitter, then email me at fse.execdean@mq.edu.au and we'll share the news.

Regards,

Barbara

In this bulletin

- [Ceri Brenner: laser power in science, medicine and aerospace](#)
 - [Learning from 60,000+ years of Indigenous culture](#)
 - [Pocket astronomy in pocket-sized towns](#)
 - [A night of illusions](#)
 - [Star tales of winter nights](#)
 - [Ockham's Razor live on stage](#)
 - [And don't miss...](#)
-

Ceri Brenner: laser power in science, medicine and aerospace



UK plasma physicist Ceri Brenner is pressing ‘fire’ on the most powerful laser, delivering a packet of light a thousand billion billion times more intense than sunlight on a hot summer’s day. And she’s putting it to good use.

Ceri’s work aims to improve the speed and performance of important imaging technology in healthcare, aerospace, nuclear and engineering—from figuring out how we can ignite a star on Earth for clean electricity generation, to using lasers to scan nuclear waste containers and map any hazardous materials inside.

She’s exploring how to use laser-driven beams of antimatter to detect defects below the surface of materials used on airplanes. She has also worked on laser-driven particle beams for cancer therapy.

Ceri is appearing in Australia for the Australian Institute of Physics’ Women in Physics Lecture Tour, and will be speaking at Macquarie on **Wednesday 8 August**.

[More about the event](#)

Learning from 60,000+ years of Indigenous culture



What can Aboriginal astronomy tell us about the night sky? How is our native flora used in bush medicine? What can we learn about sustainable living from 60,000+ years of Indigenous culture?

The Indigenous Science Experience @ Redfern is a celebration of Indigenous and Western science, and Indigenous youth and Elder achievements.

Part of the Sydney Science Festival and National Science Week, the four-day event at the Redfern Community Centre will demonstrate the value of traditional and contemporary Indigenous knowledge in science and technology, and the relevance of science to our everyday lives.

The Indigenous Science Experience Family Fun Day is on **Sunday 19 August**.

[More about the event](#)

And a [NISEP Community Science Day](#) is taking place in Wagga Wagga on **Monday 13 August**.

Pocket astronomy in pocket-sized towns



Why do we need a national park in the night sky? And can light be a type of pollution?

Ask Macquarie University expert Adam Joyce as he takes astronomy on tour in New South Wales from **Monday 13 August to Thursday 16 August**.

A planetarium, a solar telescope, and a bunch of students and staff from the Department of Physics and Astronomy will hit the road in NSW, bringing astronomy and broader science to four towns in four days—Wee Waa, Werris Creek, Barraba and Dorrigo.

Locals will have the opportunity to visit the planetarium, try the solar telescope, and hear a talk about Australian astronomy and the value of dark skies. Each town will also receive the gift of a telescope to keep, and training for the locals on how to use it.

People will also be invited to get involved in Macquarie University's citizen science project exploring light pollution, run in collaboration with the Warrumbungle National Park, Australia's first 'Dark Sky Park'. This will contribute to ongoing research into light pollution levels and impacts in urban and rural NSW.

[More about the event](#)

A night of illusions



Baffle your senses with an evening of tactile and visual illusions built to deceive your brain, on **Saturday 11 August**.

Step into a realm that will challenge your assumptions and mess with your perceived reality. Feel your body change size and shape. Immerse yourself in the bizarre sensory world of animals, in which your ability to perceive determines your fate.

Experience illusions firsthand and find out what's going on in your head with leading scientists including Biology's Matthew Bulbert, a behavioural ecologist who examines how animals exploit the perception of others to increase their survival, aka deception.

[More about the event](#)

And [A Night of Illusions](#) is going on the road in 2018, bringing their bizarre array of mind-bending exhibits to Armidale on **Saturday 25 August**.

Star tales of winter nights



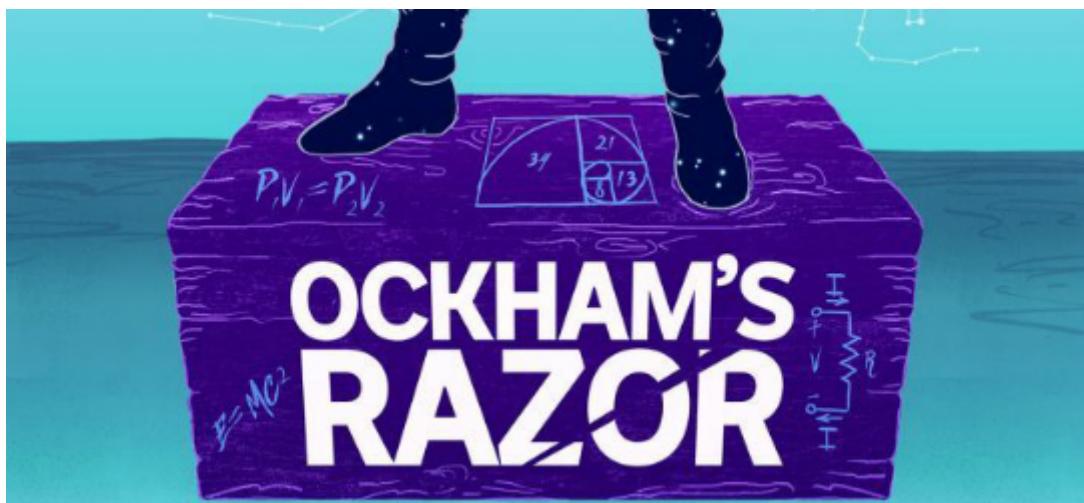
Join professional astrophysicists, including Macquarie's Kyler Kuehn, Simon O'Toole and Richard De Grijs, as they share their stories about how they use extremely sensitive telescopes and instruments to separate light from darkness on **Sunday 12 August**.

Although the vast majority of the space is dark, the analysis of the light emitted by stars and gas allows us to unveil the secrets of the cosmos.

This entertaining panel will discuss the most exciting challenges we have to face to detect planets around other stars, how galaxies form and evolve, what dark matter and dark energy are, how we search for extraterrestrial life, how Aboriginal Australians looked at the sky, and more!

[More about the event](#)

Ockham's Razor live on stage



Seven amazing scientists hit the stage to talk about their research, their thoughts and

their opinions—in a live version of the ABC Science program Ockham's Razor on **Wednesday 15 August**.

The speakers include our own Sophie Calabretto, a mathematician, fluid mechanist and lecturer in the Department of Mathematics and Statistics.

Ockham's Razor is an audio program produced by ABC RN's science unit. It features short talks about research, industry and policy from people with something thoughtful to say about science.

[More about the event](#)

And don't miss...



Some of the other events that Faculty staff are also taking part in include:

- Dinosaur trees, symbiosis and Indigenous food preparation are some of the activities being presented by advanced science students from the Department of Biological Sciences at [Science Safari](#).
- A sold-out [Tour of the Universe](#) is being hosted at the Macquarie University Astronomical Observatory.
- Animal lovers unite to improve the lives of our furry, feathered and scaled friends—and enrich the lives of people at [The Science of Pets & Wildlife: How Humans and Animals Live Together](#).
- The Faculty is presenting hands-on science at the Australian Museum's [Science Festival Expo](#) and [Super Science Saturday](#).
- School students can see the magic of the mathematics of mixing, and explore some of the amazing properties of very viscous fluids at [Will it Blend?](#)
- Students can explore the Earth under a microscope and discover the story told by minerals and rocks when interrogated up close at [Microscopic Earth](#).
- See how we can embrace science and technology to make a difference to how we live now and in the future at the [Ryde Science and Tech Expo day](#).
- Angel Lopez-Sanchez will tell audiences about night sky wonders and discoveries at [Astronomy at The Calyx](#).
- Meet nine leading researchers and science communicators, including Biology's Vanessa Pirotta, at [Science Express: The Art of STEAM Storytelling](#).

- Find out what it's like to study science and engineering and tackling the global challenges of today and tomorrow at the [Macquarie University Open Day](#).

And you can see a full list of Macquarie's registered Science Week events [here](#).

Connect with us

If you have comments, questions or research news you think might be of interest to the rest of Faculty, I'd love to hear from you. Drop me a line at fse.execdean@mq.edu.au.

Connect with your Faculty online:

- Website: science.mq.edu.au
- Faculty on Twitter: [@MQSciEng](https://twitter.com/MQSciEng)
- Barbara on Twitter: [@BarbaraMesserle](https://twitter.com/BarbaraMesserle)

Got a story?

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