

ASET · NSW INC



FOR LABBIES · BY LABBIES

# ASET-NSW NEWSLETTER

December 2019

Volume 2, Number 3

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- <https://www.nickishomemadecrafts.com/dna-crochet-pattern/>
- <https://seta.edu.au/wp-content/uploads/2019/08/Professional-Standards-for-Australian-School-Science-Laboratory-Technicians-July-2019-FINAL.pdf>
- <https://>

## Contact Us

<http://www.asetnsw.org.au>

## Editor

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## Chairperson's Report

Welcome to the 4th edition of the ASET-NSW newsletter.

Considering that this was the first time we held our conference at UTS, things ran fairly smoothly. The on-line registration worked well after a few glitches were overcome.

Keynote speaker Dr Alice Gorman (aka @drspacejunk) spoke about the junk floating around space. Elon Musk had launched a Tesla (Elon Musk's Tesla Roadster is an electric sports car that served as the dummy payload for the February 2018 Falcon Heavy test flight and became an artificial satellite of the Sun. "Starman", a mannequin dressed in a spacesuit, occupies the driver's seat). Dr Alice's presentation was very informative, entertaining and inspirational. She published her first book "Dr Space Junk vs The Universe: Archaeology and the Future" and I'm looking forward to a good read.

Margaret Croucher

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## Secretary's Report

The conference went extremely well despite presenter illness and flight cancellations due to windy weather. We have had lots of positive feedback via email and UTS will be willing to have us back next year.

We are looking forward to welcoming some new committee members on board.

Julie Ryan

## Current Elected Committee Members

Margaret Croucher

*Chairperson, Public Officer*

Loretta Fincato

*Vice-Chairperson, Newsletter Editor*

Julie Ryan

*Secretary*

Laurence Wooding

*Publicity Officer, IT Manager*

Annett Stanley

*Membership Secretary, Treasurer*

Linda Stanford

*Casual Committee Member*

Jonathan Blair

*Casual Committee Member*

Claudine Chayna

*Casual Committee Member*

Jonathan Gray

*Casual Committee Member*

## Publicity Officer's Report

With the year rapidly drawing to a close, I look forward to finally being able to guilt-free put my feet up and relax.

After fixing a range of issues on the website, I have started to slowly re-populate it with photos from events that we have run.

I wish you all a wonderful and merry holiday.

Laurence Wooding

**ASET-NSW Conference**  
**University of Technology, Sydney**  
**9-10 September 2019**  
**By Loretta Fincato**

This year's training conference was a great success with 150 attendees and an excellent venue with access to science labs and lecture hall.

Dr Alice Gorman was the keynote speaker. She was an archeologist with an interest in the history of the space race.



Dale Carroll – Working with Glass



The ASET-NSW Committee with Dr Gorman



## Calendar of Events

11 February	International Day of Women & Girls in Science
03 March	Clean Up Australia Day
30 March	Earth Hour
12 April	International Day of Human Space Flight
07-10 July	CONASTA – Darwin Early bird registration closes 31 <sup>st</sup> May
30 July	Australian National Chemistry Quiz
6 August	Astronomy at The Calyx, Royal Botanical Gardens, Sydney
07 August	Australian Science Olympiads Chemistry
10 August	Super Science Saturday, Hyde Park South, Sydney
11 August	Science in the Wild – Dinosaurs vs Superpowers, ABG, Mt Annan
12 August	Science Talks at Warringah Mall Library
14 August	Science Talks at Manly Library
18 August	Science in the Swamp – Dinosaurs vs Superpowers, Centennial Park The Innovation Games – Sydney Olympic Park
10-18 August	Riverina Science Festival – Wagga Wagga, NSW
11-19 August	National Science Week
<b>19-23 August</b>	<b>#STARweek</b>
09-10 September	ASET-NSW Conference 2019 – UTS Campus, Sydney
08-10 October	ConSTANZ19 – Wellington, NZ (registration open Feb 19) Early bird registration closes 31 <sup>st</sup> July
22-28 October	Aussie Backyard Bird Count
12-18 November	National Recycling Week
05-8 July 2020	CONASTA69 – Canberra, ACT
14-15 September 2020	ASET-NSW Conference T.B.C
October 2021	CONSTANZ20 – Christchurch, NZ

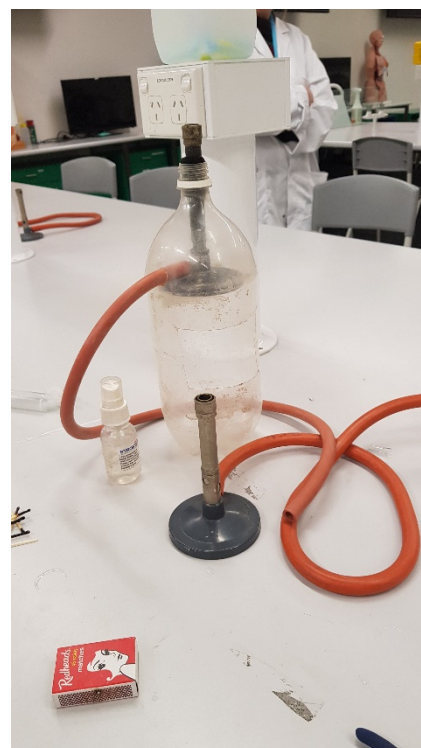
If you have any interesting science stories, photos, hints, tips or freebie suggestions, and they haven't been published on other forums, please send me an email so I can publish in the next edition of the newsletter. Please put NEWSLETTER in the subject time.

[fincatol@stmarks.nsw.edu.au](mailto:fincatol@stmarks.nsw.edu.au)

## SUPPLIER SUGGESTION

Be aware that ordering certain chemicals from Queensland suppliers can add another layer of paperwork to your purchase order. If the chemical is considered an ingredient that can be used in the manufacture of illicit drugs, then an End User Declaration (EUD) will have to be completed with the purchase order.

One of the chemical types is alcohol.



DNA Crochet Pattern  
<https://www.nickishomemadecrafts.com/dna-crochet-pattern/>

### YOU WILL NEED:

- any type of yarn,
- a corresponding hook (I used a 5.0mm)
- scissors
- tapestry or yarn needle

## Freebies

Need to make a solution? Calculators are found here.

<https://www.sigmaaldrich.com/chemistry/stockroom-reagents/learning-center/technical-library/molarity-calculator.html>

<https://www.flinnsci.com/flinn-freebies/molarity-and-solution-calculators/acid--base-molarity--normality-calculator/>

**CONSTANZ19**  
**St Patrick's College,**  
**Evans Bay, New Zealand**  
**8-10 October 2019**

**Windy Wellington by Loretta Fincato**

The Science Technician's Association of New Zealand held their bi-annual conference, and there were about 100 people there including seven delegates from Australia. Membership of STANZ gets you access to their newsletter which is called Techtonics. The presenters came from wide range of specialists in their fields.

Keynote speaker Dr Hamish Campbell is a geologist who talked about Zealandia tectonic plate which is considered the 7<sup>th</sup> continent. Zealandia is mostly underwater because the crust is thin at an average of 7km. Made up mostly of basalt and granite, it can be dated by the age of the zircon.

Dr Richard O'Driscoll is a biologist who specialises in setting quotas for deepwater fisheries. He spent the last trip on the Research Vessel Tangaroa studying the environment of the Ross Sea near Antarctica. They used hydrophones to listen for large whales and found 50 new blue whales. A multi-beam echo sounder was used to map the seafloor, and they used towed underwater cameras and trawling to establish which fish species were living where. He wanted to see how many silverfish were spawning under the ice as they are common prey species for other Antarctic animals. He wants to ensure that krill is not over-harvested.

Dr Cather Simpson was the founder of the Photon Factory at the University of Auckland. She specialises in using laser pulses, and this is a relatively new science of photonics started back in 1960 with the invention of the laser. The mobile phone alone uses photonics in 100 different ways. She is using physics to feed the world. Two of her contributions were NGender which uses a laser to sort female sperm for use in the dairy industry and Orbis which is milk on a disk diagnostic tool. Solar farming and vertical farming are two ways to convert light into more useful forms of energy.

I attended workshops on how to harvest flax lily leaves for weaving and what the role of the laboratory manager entails. There were field trips to Wellington Zoo, WETA Cave and Matiu Island. WETA workshops have made many displays for the Te Papa Museum. Their displays included models and armour from Lord of the Rings and Thunderbirds. The Zoo is a combination of tourism and a workout as it is built on the side of a hill. Zealandia and Somes Island had strict quarantine in place with shoe baths and luggage checks for vermin.

**CONSTANZ 2019**

**By Margaret Croucher**

There were 6 Australians visiting, part of 102 delegates who attended this conference.

There were terrific workshops on Chemistry, Biology and Physics.

Dr Hamish Campbell- geologist and research scientist with the Institute of Geological and Nuclear Sciences in Wellington – spoke about continental and oceanic crusts and Zealandia

Dr Richard O'Driscoll, who was part of an international team of 21 scientists and 19 crew that spent six weeks on RV Tangaroa studying the environment and ecosystem of the Ross Sea, Antarctica. The eight voyage objectives covered everything from oceanography to bacteria to whales. The primary focus of the 2019 voyage was to provide baseline information about the recently established Ross Sea Marine Protected Area,

to allow scientific evaluation of its ecological status, spatial adequacy, and effectiveness. This talk will cover the voyage highlights, describing the challenges of living and working in the Antarctic environment, and the various sampling tools used to measure and monitor the ecosystem.

Dr Cather Simpson - uses exotic laser pulses to study how matter converts light into more useful forms of energy. When she started the Photon Factory at the University of Auckland, she took her fundamental science know-how in exciting new directions, all the way from molecular motions on the millionths of a billionth of a second-time scale to sorting sperm by sex for the dairy industry.

We had a guided tour through the famous Weta Workshop and saw practical effects crafted for The Lord of the Rings, King Kong, The Chronicles of Narnia, Avatar and much more! Included a private screening of Weta's exclusive behind-the-scenes documentary, and it was followed by creating our own fake blood!

Space Place's dazzling full-dome planetarium took us on an unforgettable journey from Wellington to the outer regions of our solar system. It featured a live exploration through the southern skies over New Zealand and explored how space technology is influencing life here on Earth.

### WETA Workshop



View from Wellington Zoo



# Science Shows & Workshops

*across NSW & ACT!*

- ✓ Curriculum-linked
- ✓ Full risk assessments
- ✓ Easy to arrange
- ✓ Small groups or whole school

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## Resources – Working with Laboratory Glass

Sheryl Hoffmann ran a workshop at CONASTA68 about lab glass and here is the link to her Powerpoint presentation. One tip is to use graphite pencil on the white ceramic squares on glassware, as texta will never completely erase.

<https://sherylhoffmann.weebly.com/other-resources.html> working\_safely\_with\_glassware\_v3.pptx

Another good article about glass types was written in Westlab's Lab Answers Magazine.

## Resources – Professional Standards

<https://seta.edu.au/wp-content/uploads/2019/08/Professional-Standards-for-Australian-School-Science-Laboratory-Technicians-July-2019-FINAL.pdf>

### **BOB'S INSTRUMENT SERVICE**

Bob's Instrument Service specialises in the service and repair of school science lab equipment including microscopes, balances, power supplies, panel meters and other equipment throughout NSW and ACT.

Please feel free to contact Bob Death on 0416 721 011 or [bobsinstruments@gmail.com](mailto:bobsinstruments@gmail.com) to discuss your school's needs.