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# Scatter Matters


## From the Director's desk

Welcome to 2021! So far it has been a great start for the Australian Centre for Neutron Scattering (ACNS) and we hope 2021 has been the same for you.

We ended 2020 with some fantastic highlights including the ANBUG-AINSE Neutron Scattering Symposium, the ANSTO Powder Diffraction School and the ANSTO Small-angle Scattering Workshop. All of the events moved online with great engagement from the community. Robert Robinson was also announced as recipient of the 2021 AONSA prize.

Australia is an established global leader in world-class research and the Australian Government helps maintain this reputation by ensuring researchers have access to cutting edge National Research Infrastructure. The ACNS receives funding through the National Collaborative Research Infrastructure Strategy (NCRIS) for a portion of our activities.

In 2016 Australia completed the 2016 National Research Infrastructure Roadmap which recognised ACNS as a key capability within Australia's National Research Infrastructure landscape. Subsequent to the 2016 Roadmap, ACNS received an additional $7.0M of funding through the 2018 Research Infrastructure Investment Plan and in November 2020 it was announced that ACNS was allocated an additional $4.2M in the 2020 Research Infrastructure Investment Plan. In 2021 the Australian Government will complete the 2021 National Research Infrastructure Roadmap.

International partnerships are also critical to ACNS and in late December 2020, ANSTO renewed its longstanding partnership with the National Synchrotron Radiation Research Center (NSRRC) in Taiwan to continue its operation of the Sika triple-axis spectrometer at the ACNS and station scientific and technical staff at ANSTO. ANSTO also renewed our agreement with the Japan Proton Accelerator Complex (J-PARC) which facilities collaboration and staff exchanges between two of the leading nuclear research organisations in the Asia Pacific region.

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In February 2021 we celebrated the International Day of Women in Girls in Science recognising the inspirational ACNS women in science.

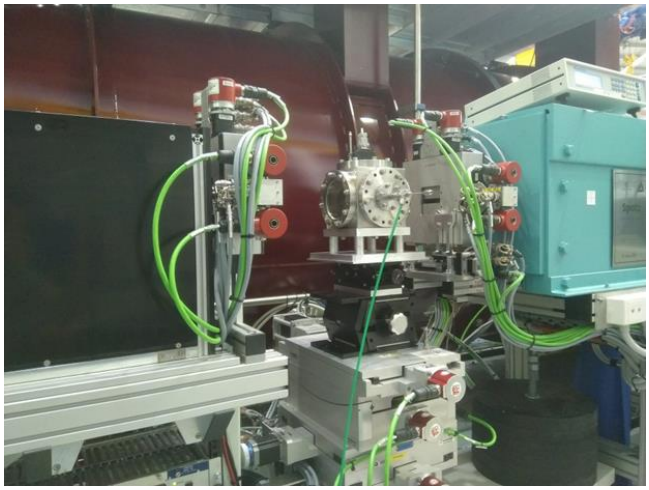

The 2021-2 proposal deadline of 15th March 2021 is fast approaching - so get your proposals submitted soon!

**Dr Jamie Schulz**

## Around the groups

### Reflectivity

**First User Experiment on Spatz**



On 26th October 2020 the Spatz neutron reflectometer had its first scheduled user experiment that was approved by the Programme Advisory Committee. The Spatz neutron reflectometer was originally the BioRef reflectometer at the BER-II reactor at the Helmholtz Zentrum Berlin in Germany. The instrument was transferred to ANSTO from October 2016 to February 2017 with hot commissioning starting in November 2018. The first experiments were originally scheduled for April 2020, but were delayed due to COVID-19 restrictions. As with many experiments on the 14 other instruments at ACNS, the experiment was run as a mail-in with the users sending samples to be measured by the instrument scientists.

The users were from the laboratory of Professor Chain-Shu Hsu at the National Chiao Tung University and the National Synchrotron Radiation Research Centre in Taiwan. The experiment was to investigate the layered structure of new organic solar cell devices. Organic solar cells are photovoltaic devices for converting sunlight to electricity and they are cheaper and easier to manufacture than current inorganic photovoltaic devices such as the ones in solar panels found on most roofs. However the major drawback that currently makes organic solar cells uneconomic is their low efficiency and low stability. This experiment investigated how device manufacturing and processing change the nanoscale structure of the organic solar cells and how this affects device stability and performance. A further five experiments were run on Spatz before the end of the year in mail-in mode, investigating a diverse range of science from biology to energy materials.

Once Australian state border restrictions are eased it is planned that users will come to the instrument in person to carry out experiments.

**Dr Anton LeBrun**

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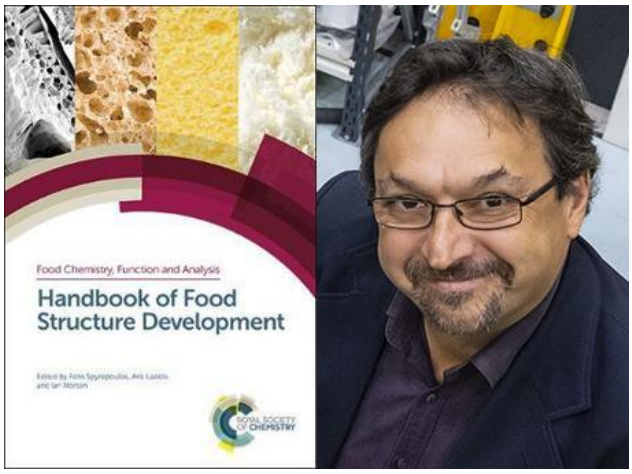
## Small Angle

**Contribution to book on food structure**

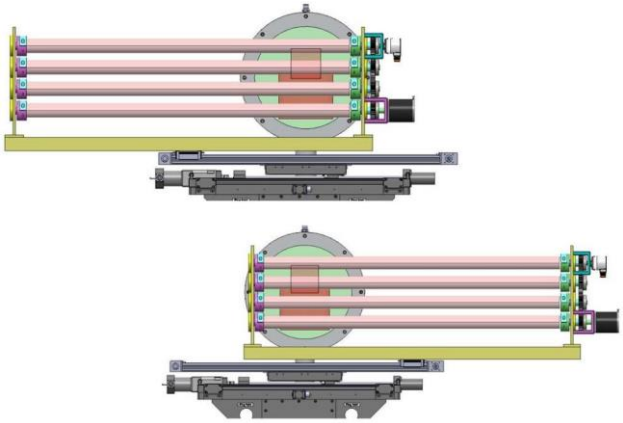



Prof Elliot Gilbert, Lead of Food Materials Science and Quokka Instrument Scientist, has co-authored a chapter in the new Handbook of Food Structure Development published by the Royal Society of Chemistry. His co-authors were Dr Amparo López-Rubio and Dr Marta Martínez-Sanz, both formerly postdoctoral fellows within the Food Materials Science group at ANSTO and now established researchers at the Instituto de Agroquímica y Tecnología de Alimentos in Spain.

Their chapter '[Food Structure Characterisation Using Small-angle Scattering Methods]' highlights the power of small-angle scattering, and particularly neutron scattering, to characterise the structure of food. Edited and written by world class contributors, the book brings the literature up to date by detailing how technology and applications have grown over the past 10 years.

## Imaging and Engineering

**Rapid mining drill core scanning on Dingo**



An ACNS team from across science and operations staff have realised a new capability for rapid drill core scanning for the Dingo neutron imaging/tomography instrument. The new rig comprises a horizontal rotation stage, which can hold samples up to 1.2 m in length. Additionally the stage can accommodate four samples in parallel – allowing the technique to become time and cost competitive with X-ray imaging. Additionally, the team designed sample cartridges for pre-loading, with potential for robotic handling.

The rig was installed and tested in November 2020 and is ready for use by both research and commercial users.

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## Operations

**New sample clearance area**


Recent visitors to ACNS will have noticed our new sample clearance area. The previous area had become overcrowded with clearances for samples, red bin waste, as well as shielding waste. Thanks to the work of Mark New, ACNS now has a new area for users to place samples after submitting them for clearance – as well as an obvious separate location from where they can be picked up from after Health Physics have cleared them.

**Sample environment handbook**


A manual has been compiled to assist users with their choice of sample environment and provide important information for successful experiment. The manual was begun by Dr Andrew Manning, with Dr Norman Booth completing it with the input of the Sample Environment team. You can find the manual on our website.

Watch this space, as there are plans afoot for an app to help with sample environment selection.

## User Office Update

The User Office operates over two sites: Lucas Heights, NSW, and Clayton, VIC. The Lucas Heights team manages all portal proposals and people who come to use ANSTO's Lucas Heights and Camperdown facilities, including the Australian Centre for Neutron Scattering. Given the changing landscape (and border situation) with COVID-19, we understand that last minute changes to the ACNS schedule can occur and that last minute changes for user attendance are inevitable

Some helpful hints:

• All attending users are to submit a visit request via the ACNS Portal or here in plenty of time, at least 72 h prior to arrival where possible. If you have a last minute change to your experimental days, we recommend also contacting user.office.nsw@ansto.gov.au

• Eligible Lead Scientists from AINSE member institutions can request travel and accommodation support and information on this can be found here.

• The User Office NSW appreciates at least 72 h notice for any induction cancellations.

• If you are a new facility user, security clearance can take up to eight weeks from time of submission of the online on-boarding process. Please factor this into scheduling your experiment.

• The User Office NSW hours are Monday to Friday 0800 - 1600.

**Our Team**

Dr Therese Donlevy - 2 years as Manager, User Office; responsible for process improvements, supporting Program Advisory and Scientific Review Committees and management of both User Office sites, provision of reports and management of the Research Infrastructure metrics collection and analysis.

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Renee Rose – 10 years in the User Office NSW; Responsible for onboarding and access clearances, ACNS portal/proposal management.

Lista Choi – 4 years in the User Office NSW; Responsible for inductions and travel funding and accommodation; ACNS and ANSTO Research Portal/proposal management.

Jonathan Nolan (backfilling for Ashleigh Ambrose during parental leave) – 4.5 months in the User Office NSW; Responsible for ANSTO Research Portal/proposal management, travel funding and accommodation.

The Victorian team manages all portal proposals and people who come to use ANSTO's Australian Synchrotron. Given the complementarity of neutron and X-ray detection techniques some of our Scatter Matters subscribers may have already met our User Office VIC team.

Dr Cathy Harland - 13 years Manager, User Office VIC; responsible for management of the Victorian User Office, management of the merit proposal system (including PACs and proposal reviews), compliance to funding agreements, updates to user office processes, recording of AS publications, provision of reports and statistics on AS user program.

Scott Kendall - 10 years in the User Office VIC; management of AS Guesthouse, updates to user office business systems including project management of portal modularisation project, responsible for day-to-day User Office VIC operations including AS access card system management , user travel funding, user safety processes, international synchrotron access program (ISAP).

Megan Giles-Hill - 2.5 years in the User Office VIC; responsible for user safety processes and processing, AS Guesthouse bookings and group bookings, AS site access cards, user travel funding, contractor induction management.

Susie Harris - 5 years in the User Office VIC; responsible for user safety processes and processing, AS Guesthouse bookings, AS site access cards, user travel funding and funding reimbursements.

User Office staff address your email and telephone queries as promptly as possible. Our goal is to ensure that all ANSTO users have a quality experience while accessing ANSTO facilities. We would love to hear your feedback on our services – compliments and opportunities for improvement.

user.office.nsw@ansto.gov.au or (02) 9717 9111

user.office.vic@ansto.gov.au or (03) 8540 4217

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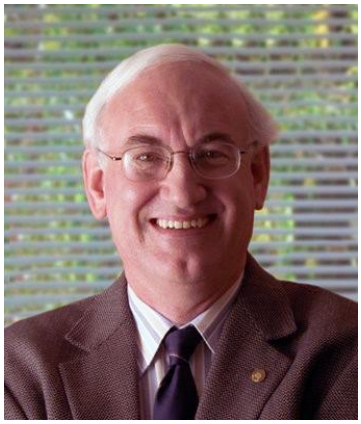
## Achievements

### AONSA fellowships

ACNS would like to congratulate the AONSA fellows for 2021, Dr. Teng Lu, Dr. Indri Badria Adilina and Dr. Rezwanul Haque. Both Dr Lu and Dr Haque are ACNS users and will hosted by J-Parc and CSNS for their research projects. ACNS looks forward to welcoming Dr Adilina who will be hosted with us for her research project. Read more about the successful fellows here.

### AONSA award



The Asia-Oceania Neutron Scattering Association (AONSA) has awarded Prof Robert Robinson, retired head of the former Bragg Institute, the 2021 Prize for a significant contribution to the field of neutron scattering. The award recognised his "outstanding achievements in understanding magnetism of actinide and heavy-fermion materials using neutron scattering; seminal contributions in building the world-leading neutron facility in Australia; and continuous dedication to the promotion of neutron science in the Asia-Oceania region."

Prof Robinson will be presented with a certificate, medal and monetary prize at a prize ceremony to be held during the International Conference on Neutron Scattering, Buenos Aires, Argentina in 2022.

### Grant successes

ACNS scientists, partnering with our user community, have been successful on a number of grants this season. These include:

**ARC Linkage -** Developing an approach to estimate damage tolerance in the design and maintenance of trailer trucks


Project led by Monash University along with industry partner MaxiTRANS Industries to develop a damage tolerance approach for the design and maintenance of truck trailers. ACNS Instrument Scientist Dr Mark Reid is a Partner Investigator on the project mainly to supervise neutron diffraction experiments on the Kowari Strain Scanner to investigate residual stress in trailer welds. The Wombat High Intensity Diffractometer may be used for texture investigation. The Dingo neutron radiography and imaging instrument may be be used to assess defects in trailer welds

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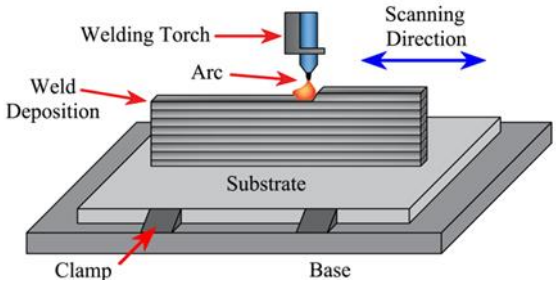
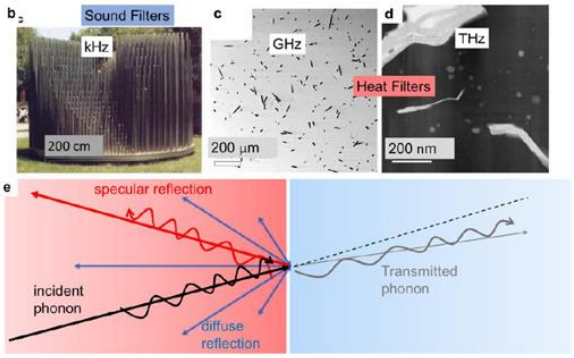
**ARC Discovery Grant** - Improving the reliability and design of 3D printed metal structures



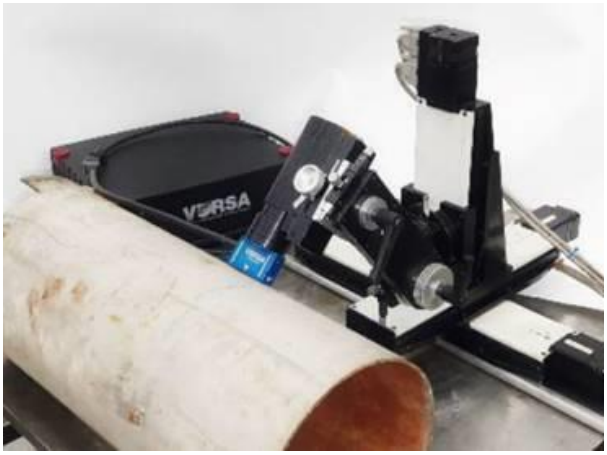

The University of Sydney and ANSTO are leading research that will provide a design framework for additively manufactured metal structures. ACNS's Prof Anna Paradowska, who is also a Conjoint Professor of Practice in Advanced Structural Materials in the School of Civil Engineering at the University of Sydney, is a Chief Investigator on the project and Dr Ondrej Muransky, a Partner Investigator, is leading the development of numerical simulations

**ARC Discovery Grant** - Developing advanced heat filters using phonons



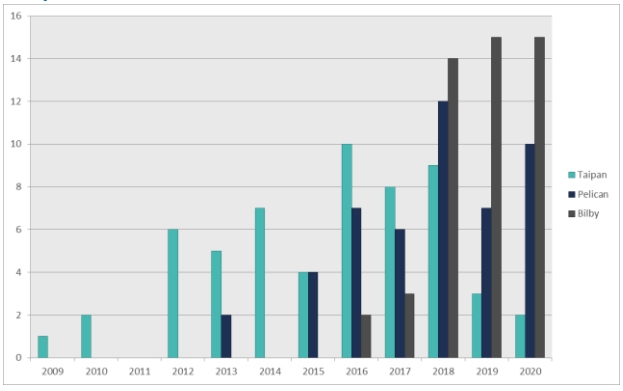

ACNS is part of a team led by the University of Wollongong that uses quantum phenomena in the design of phonon heat filters. Their research project is funded by a Discovery Grant to acquire knowledge to develop novel composite materials that can limit the flow of heat using a combination of bulk solids embedded within nanoparticles. Instrument scientists, Dr Dehong Yu and Dr Kirrily Rule, are Partner Investigators on the project. Dr Yu will supervise measurements of phonon spectra on the Pelican time-of-flight spectrometer. Dr Rule will undertake measurements on the Taipan triple axis spectrometer to resolve high energy features.

**ARC LIEF grant** - Australian Stress Engineering Facility




Ania Paradowska is the lead Chief Investigator on an ARC LIEF application to establish the first comprehensive Australian Stress Engineering Facility available to Australian and international academia and industry. This project requires a range of diverse instruments to create a fully equipped correlative stress engineering facility. Most items will be based at the Core Research Facility at the University of Sydney but are portable. These capabilities will greatly complement the existing capabilities including a scanning system that will be positioned on the Kowari instrument at ACNS.

## Paper Milestones



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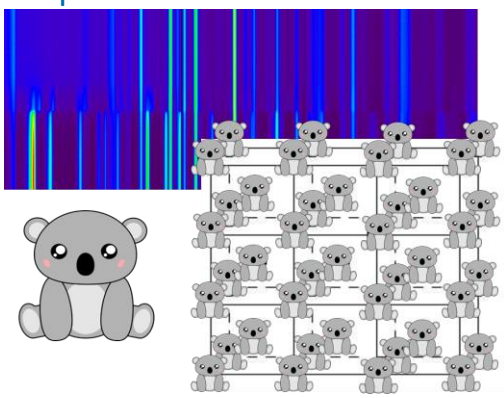
Since the last newsletter a number of instruments have passed the 50 paper milestone - Bilby, Taipan and Pelican are all now well rolling out contributions to the scientific literature. Though each instrument came from a different instrument construction programme, NBI1, MCW and NBI2, respectively, they have all hit 50 publications at about the same time, a reflection of their different techniques.

## Event Reports

### ANSTO powder diffraction school



Working with colleagues at the Australian Synchrotron Powder Diffraction beamline, staff from Wombat and Echidna have run a school on powder diffraction analysis every year since 2011. The two sites have taken it in turns to host it, and usually the school lasts three days. But then 2020 struck, and we had to see how the format would work virtually, a first from ANSTO as a whole!

Rather than limiting the attendees (the school usually caters for about 30 people) we decided to allow anyone who signed up to attend the lectures via a Zoom webinar, but kept the analysis practicals to 30 participants. A Discord server was also set up for added support and networking during the school. We also produced a resource book (pdf) with details of programs and practical exercises for all.

After a lot of preparation, it all went very well! Held 6th-8th October 2020, over the three days there were 255 different participants online at any one time from 24 countries. In the wrap up we received a lot of good constructive feedback for future virtual events. The Echidna, Wombat and Powder Diffraction teams would like to extend their thanks to all who participated, and to Kelly Cubbin from the NISE team for her fantastic technical and administrative support over the three days.

**Dr Helen Maynard-Casely**

### AANSS Virtual conference


A highlight of the year was the virtual online conference, the ANBUG-AINSE Neutron Scattering Symposium, 11th – 13th Nov 2020. The meeting was co-chaired by Dr Livia Salvati Manni and Dr Leonie van 't Hag. The virtual AANSS meeting was well attended, with many sessions attracting 160 registrations, from 10 countries with ~70 participants at all times and a lively and stimulating discussion.

The event was streamed using Zoom and included live music by Escape the Rabbit and a trivia evening. Out of 42 oral presentations (selected from 70 abstracts), five were given by early career scientists and 13 by PhD students. Additionally, more than 60 posters were presented in 14 breakout rooms. There was a great representation of Australian universities, including keynote speaker Dr Hsin-Hui Shen (Monash University), as well as the opportunity to network with international speakers such as of plenary speaker Prof. Andrey Zheludev (ETH Zurich). We acknowledge ANSTO, FLEET and John Morris for supporting the meeting.

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Prizes during the meeting were given during the meeting to the following people:

- Lirong Cheng (Massey Uni) - 1st Talk
- Maja Dunstan (Melbourne Uni) -2nd Talk
- Olivia Kendall (Monash) - 1st Poster
- Junwei Li (Sydney Uni) - 2nd Poster
- Katherine Chea (RMIT) - Poster Slam
- Garry McIntyre (ANSTO) - Trivia

**Dr Leonie van 't Hag**

## ANBUG awards and AGM

The Australian Neutron Beam Users Group (ANBUG) http://anbug.net/ awarded the following awards at the at the AANSS meeting:

- Prof John White (Career Award)
- Prof Anna Paradowska (Neutron Award)
- Dr David Cortie (Young Scientist Award)
- Dr Damian Goonetilleke (Outstanding PhD Award)

AGM: The annual general meeting of ANBUG was held on 11th November. Current 2020 President Prof Tracy Rushmer thanked the 2019-2020 ANBUG executive: Yun Liu (VP), Andrew Clulow, David Cortie, Tilo Sohnel, Anna Paradowska, Ian Gentle and Katy Wood for all their work over this unusual year.

2020-2021 ANBUG Executive: In 2021, the current Vice-President Yun Liu will become ANBUG president and Tracy Rushmer will stay on the ANBUG executive as Past President. The 2021-2022 committee members are Prof. Yun Liu (ANU, President), Assoc. Prof. Chris Wensrich (Uni of Newcastle, Vice-President), Prof. Tracy Rushmer (Macquarie Uni, Past-President), Dr Leonie van't Hag (Monash Uni, Secretary), Dr David Cortie (Uni of Wollongong, Treasurer), Dr Karyn Jarvis (Swinburne Unit Tech, Website/Comms), Dr Teng Lu (ANU, ECR member), Dr Ben Mallett (Uni Auckland, NZ member).

## Materials Australia NSW branch undergraduate event

On 16 November, the NSW Branch of Materials Australia held their annual Undergraduate Student Awards Presentation event, via Zoom video conference for the first time. ACNS sponsored one student prize for this event. The students were from The University of New South Wales (UNSW), University of Wollongong (UOW), University of Sydney (USYD) and University of Newcastle (UON). They presented their recent work on a wide range of topics comprising corrosion resistant coatings on Al-Zn coated steel, nuclear waste storage, wire-arc additively manufactured nickel alloys, SLM titanium components, MAB phase synthesis, white/ brown etching layer formation in head hardened and carbon steel rails, bismuth ferrite thin films, and platinum electrode dissolution. Their presentation skills and research understanding were judged by a panel consisting of a past winner Sophie Armstrong (UNSW), Dr Mark Reid (ACNS, ANSTO), Associate Professor Gwenaelle Proust (USYD), Professor Huijun Li (UOW) and Dr Hong Lu (National Ceramic Industries Australia). After careful deliberation, the following award winners were announced: Bernadette Pudadera – UNSW (1st place), Coco Kennedy – UNSW (2nd place), Aurpa Bhuiyan – UNSW (3rd place) and Lisa Morgan – UOW (4th place). All students received a 1-year student membership of Materials Australia and a certificate for taking part in the event.

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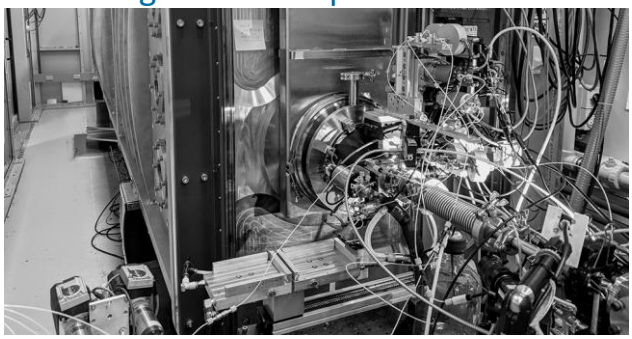
## Small-Angle Workshop



In early December 2020, ACNS hosted the inaugural ANSTO Small-angle Scattering Workshop. Much like the Powder Diffraction Workshop that has been running successfully for many years, the ANSTO Small-angle Scattering Workshop is jointly organised by the respective teams at the Australian Synchrotron and ACNS, and aims to give attendees a thorough understanding of X-ray and neutron small-angle scattering, and importantly the complementarity of the two techniques.

In keeping with the challenges experienced by all during 2020, the organisation of the meeting hardly went to script. Initially planned for 20 on site participants from Australia and New Zealand in early May, the meeting was eventually presented in early December entirely via Zoom to over 270 registrants from all over the world. Of these, approximately 30 registrants from AINSE member institutions were selected for the practical/tutorial sessions.

The organising committee was absolutely amazed at the level of interest. This underlined the benefits of running the workshop virtually. Not only did it extend the reach of the workshop, but it presented an opportunity to invite two international speakers – Dr. Cy Jeffries (EMBL, Hamburg) and Dr. Eduardo Solano (ALBA, Barcelona). This would not have been practical for a face to face meeting due to the costs involved. The quality of the presentations from all speakers was excellent, as was the feedback from the participants. Not all went to plan, with the virtual practical sessions being somewhat challenging. However, this was a new experience for many of us, and the lessons learnt can be applied to future meetings.

I would like to take this opportunity to thank the speakers for preparing and presenting excellent talks, the attendees for the interesting questions and discussions, Kelly Cubbin and Bettina Richen for their valuable assistance, and the organising committee – Christina Kamma-Lorger, Nigel Kirby and Jitendra Mata. It will be interesting to see what 2021 holds for us, and what shape the 2021 workshop will take.

**Dr Andrew Whitten**

## ACNS Clip Day

At ACNS we are fortunate to have a great crowd of students and early career researchers work with us, through a variety of schemes that fund their research. To allow them to network with each other and to showcase their research 2019 saw the inaugural ACNS Clip Day, which ran just after AINSE's Orientation Week that many of the Clip Day participants also attended. Not to be deterred by COVID-19, the 2nd ACNS Clip Day took place 25th and 26th February, albeit this time on an online platform. The event saw 30 Early Career Researchers, most of whom use ACNS instruments in their work, give a series of short talks, along with workshop presentations on proposal writing, sample environment, and what to do when your neutron experiment goes a bit wrong!


Prizes were awarded across a range of categories, according to stage of career. These went to:

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*Category 1 - Honours & 1st year PhD*

- Jackson Allen – 1st
- Olivia Kendall – runner up

*Category 2 – 2nd year PhD*

- Hayden Robertson – 1st
- Michaela Dobson – runner up

*Category 3 – 3rd year PhD*

- Giulia Novelli – 1st
- Maja Dunstan – runner up

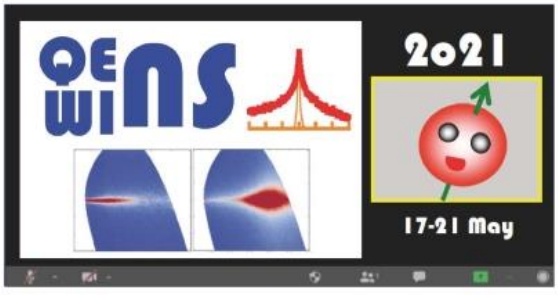
*Category 4 – ECR*

- Emily Cheung – 1st
- Joshua Marlow – runner up

The meeting was a great success and showcased the stellar ECR's and the diversity of science we support. Thanks go to the Clip Day organisers, Katy Wood, Samuel Yick, Oliver Paull, Garry McIntyre, Kelly Cubbin and Heidi Welton.

## Upcoming Events

### QENS/WINS 2021




The next joint celebration QENS/WINS will constitute the 14th Edition of the QENS series and the 9th of the WINS workshops. Due to COVID-19, we will celebrate an online version of QENS/WINS during 17-21 May 2021 (QENS/WINS2021). A face-to-face Conference (QENS/WINS2022) will take place in San Sebastian, Spain, 23-27 May 2022.

QENS/WINS 2021 will span five days, 17-21 May 2021. From 14:00h to 16:30h Central European Summer Time, Keynote and Invited talks will be offered, as well as a 30-minute 'coffee break', that will allow communication among all the participants. The talks will be recorded and will be available the day after to all interested attendees. All information about the Conference will be available. Forums will be open where participants can pose / answer questions and exchange ideas throughout the meeting. In addition to the invited talks, poster-like presentations (including the possibility of videos and other complementary information) will be accessible for all attendees during the 5 days.

Registration is open until 7th May, 2021, on the website http://qens-wins2020.dipc.org/

### Neutrons for life sciences


The MLZ Conference 2021 intends to bring together experts in the field of Life Sciences regardless whether they have used neutron scattering techniques or not. The conference will cover all relevant fields of life sciences and will discuss how to improve neutron instrumentation, access to neutron beam time, sample environments and support laboratories for future life sciences users.

The organisers warmly welcome contributions on the following topics:

- Protein structure, function and dynamics
- Biological membranes, surface and interfaces
- Drug design and delivery
- Biological processes
- Neutron and complementary methods in biology
- Life Sciences with neutrons in Russia

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- Neutrons in the fight against virus diseases

Initially this Conference was intended to be held in June 2020; due to the COVID-19 pandemic it has been postponed to 2021. In the light of the current development of the COVID-19 disease the organizers have decided to opt for a purely virtual format in 2021.

Register at the website
https://indico.frm2.tum.de/event/230/

## The Invisible Revealed

Exhibition, Powerhouse Museum, from the 12th November 2021 until the 6th March 2022. For more information see https://maas.museum/event/the-invisible-revealed/

Mark this date to catch the results of a fabulous collaboration. Images from the Dingo instrument are to be included in a new exhibition at Sydney's Powerhouse museum. This exhibition will illustrate the discoveries of these age-old artefacts made using ANSTO's scientific instruments by presenting a selection of the original artefacts alongside computer-generated 3D (tomographic) visualisations and other imagery that reveal their structural secrets. Scale models and details of the sophisticated ANSTO facilities will be exhibited to give an appreciation of the achievements of Australia's diverse scientific and technical talent.

## ICNS 2022

The ICNS meeting has now been postponed to 2022 and is planned to be held in Buenos Aires, Argentina. Organised by Asociación de Técnicas Neutrónicas de Argentina (ATENA) / Argentine Neutron Techniques Association, it will be the largest international platform for sharing and exchanging the latest exciting advances in neutron scattering science, including a broad range of topics. Keep an eye out for future announcements once the website is up.

# Beamtime Applications

For submission advice see the website or contact the ANSTO NSW User Office team on:
T: +612 9717 9111
E: user.office.nsw@ansto.gov.au

## Powder Diffraction & Small-Angle Neutron Scattering Mail-in Rounds

Applications for mail-in powder diffraction measurements on Echidna and small-angle neutron scattering measurements on Quokka are continuously open.

## 2021-2 Proposal Round

Applications for beam time for the second half of 2021 are now open. The call for proposals will close on Monday 15th March 2021 at 11:59pm (AEST).

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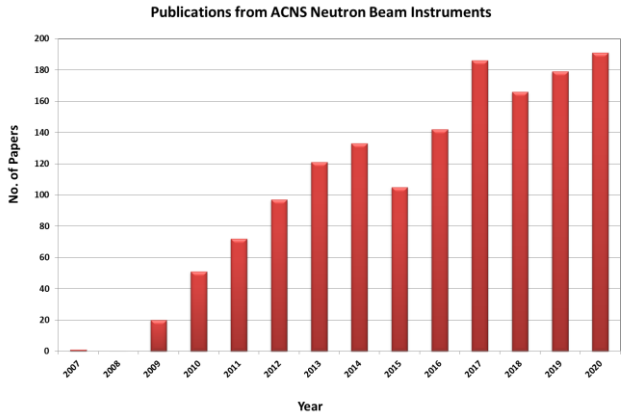
## Publications Update

Thanks to our users and ANSTO scientists for a record year – 191 papers were published with data our instruments during 2020.




You can access a full list of ACNS publications from 2007 online here. Please remember to add your publications via the user portal.

## Meet the team

With all of the projects going on at ACNS there are always new faces joining the team and others heading off on new adventures. Here we will try to keep you to up to date with those joining our group.

### James Totman

*Mechanical Technician.*

James has been at ANSTO 5 years before starting at ACNS, working as a Manipulator Technician in Active Maintenance for AME (ANSTO Maintenance & Engineering). Before joining ANSTO he worked as a Fitter & Machinist, providing CNC machining and heavy engineering support for the Wollongong Steelmaking and Mining industries. After completing his trade, James studied a Cert.4 in Mechanical Engineering, and most recently a Diploma in Mechanical Engineering through the ANSTO Operational Scholarship program.

### Quentin Yang

*Electronics and Software Engineer*

Quentin is working on detector data acquisition and storage in computing electronic DAE group. Prior to join ANSTO, he worked on various

electronic devices across different industries from low level driver to high level user applications, namely power quality meter, line fault tracker, 3G cellular phone, DSRC module for vehicle to vehicle(v2v) comms. His most recent work was with Denon&Maranze innovation centre on their network streaming platform used inside smart speaker and AVR.

Quentin enjoys working for a science and research oriented industry, like ANSTO, solving challenging issues away from the city high rise.

### David Cortie

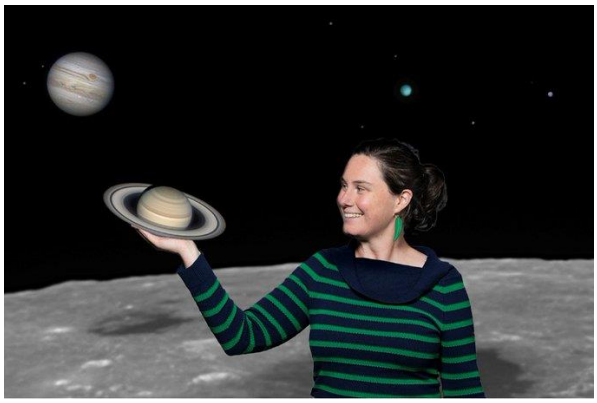
*Platypus Instrument Scientist*

Hi! My name is Dave Cortie, and I'm a new instrument scientist on the PLATYPUS

reflectometer. My scientific interests are in polarised neutron techniques, magnetism, condensed matter physics and quantum materials. Before joining ANSTO, I was an Australian Research Council DECRA fellow at the University of Wollongong, with post-doctoral stints at the Australian National University and the University of British Columbia. I have two small children, Owen and Hazel, who daily prove to me that the second

law of thermodynamics is valid: all things, including bedrooms, move from a state of order to disorder. Outside of work my hobbies are: soccer ("football" if you are from the UK), electron microscopy, guitar and kayaking.

## Contact us



Scatter Matters is edited by Dr Helen Maynard-Casely, who chairs the ACNS Outreach & Promotion Committee. If you have a story or event you would like to share with the ACNS user community, get in touch via E: helen.maynard-casely@ansto.gov.au