

# PART 2

# REPORT OF OPERATIONS

“ Connecting, innovating and transforming the lives of our students, staff and communities.”



## HISTORIC COMMERCIAL PARTNERSHIP FOR PRINTED SOLAR CELLS

Professor Paul Dastoor's organic printed solar cells first commercial-scale installation at CHEP's Beresfield pallet repair facility.





# EXPLORING NEW IDEAS – OUR STUDENTS

We encourage our students to be creative, analytical and influential thinkers as they explore new ideas and take their place in the world.

Bachelor of Music student, Jacob Ridgeway, is passionate about music and has a deep connection to his culture and heritage. As a Worimi man from Port Stephens, Jacob's undergraduate career began in Newcastle with the Wollotuka Institute's Yapug enabling program.

Jacob's study plans were shelved when he had to take on full-time work; they resumed when he completed an Advanced Diploma of Performing Arts at the Aboriginal Centre of Performing Arts in Brisbane. Jacob then returned to take up a Bachelor of Music at Newcastle where his talent as a singer-songwriter was recognised with the Norman Bushman Scholarship for Studies in Voice.

Jacob is actively pursuing his passion, performing for national and international audiences and connecting with other talented musicians while he mentors and shares his Indigenous culture with primary school students and with Indigenous communities up and down the country.

**“I have been told that my boldness and commitment to my dream inspired people in our local community to chase their own dreams and goals.”**

## < JACOB RIDGEWAY

Bachelor of Music  
Completed Yapug, 2018



## PAVING THE WAY FOR INDIGENOUS STUDENTS

Following in the footsteps of her Aunty, Professor Gail Garvey, Nicole Whitson is proud to be the third person to graduate from her large Indigenous family of almost 40 immediate relatives.

Commencing her studies at the University as an Open Foundation student, Nicole has graduated with a Bachelor of Medicine with Distinction.

Nicole is particularly interested in medical care for Indigenous people and enjoyed the opportunity to tailor her study to reflect her interests. During her course she took a placement at the Eleanor Duncan Aboriginal Medical centre in Wyong, attended rural obstetrics clinics in Moree - the birthplace of her Nan, and completed an elective subject at the Menzies School of Health Research in Brisbane, where she explored barriers to early diagnosis of gynaecological cancers in Indigenous women.

^ NICOLE WHITSON

Bachelor of Medicine with Distinction

## ROBOT TO THE RESCUE

Bachelor of Engineering (Honours) (Electrical and Electronic) and Master of Professional Engineering (Electrical and Electronic) graduate Eric Johns is developing life-saving technology for rescuers and their victims.

Drawing support from the University's future-focused facilities, Eric designed a search rescue robot that uses Virtual Reality technology to allow rescue personnel to reach victims without placing themselves in danger.

The robot can be used at mine sites, for nuclear or chemical incidents, and in unstable buildings after earthquakes. The operator wears a set of goggles allowing him to 'see through' the eyes of the rescue robot, while handheld controls manipulate the device's arms.

Eric completed the University's intensive course in Advanced Control System Design and developed a surf life-saving drone that pinpointed swimmers or surfers in distress and provided a flotation device and oral support from rescue personnel for his Honours degree project.

## GRADUATE WHO IS BRIDGING THE GAP IN RURAL HEALTH

Graduating with a Doctor of Philosophy (PhD) in Community Medicine and Clinical Epidemiology and currently practising as a paediatric physiotherapist, Luke Wakely is passionate about minimising inequity in health, particularly for children who live in rural areas.

As the only paediatric physiotherapist running a private practice in Tamworth and its surrounding areas, Luke sees many of the challenges rural families face in accessing healthcare as he works to improve health outcomes for younger people in rural areas.

Luke is the clinical mentor for physiotherapy at the University's Department of Rural Health and is eager to see the representation of allied health professionals in rural areas continue to grow.

## A KINDERGARTEN DREAM COME TRUE

With a dream of becoming a lawyer since kindergarten, Sapphire Dawson persevered despite initially failing to meet the required entry score.

With assistance from Yapug, a University pathway program designed to help Aboriginal and Torres Strait Islander people secure skills for undergraduate degrees, Sapphire, who is a Yuin Indigenous woman, earned her place in her dream degree.

Sapphire celebrated another milestone achievement at graduation, being the first in her family to graduate, showing her cousins what can be done and inspiring them to go to university too.

Sapphire's kindergarten dream recently came full circle when she relocated to Canberra to join the legal team at the Department of Prime Minister and Cabinet.

## WIND TURBINE INNOVATOR WINS STANFORD SCHOLARSHIP

An innovator, who developed a wind turbine that can produce greater power output than existing ones, won the inaugural Stanford Australia Foundation – CSIRO Scholarship.

Joss Kesby, team leader and co-founder of Diffuse Energy, along with colleagues James Bradley and Sam Evans, have developed a small wind turbine enclosed in a diffuser that can produce nearly twice the power output of existing wind turbines of the same size.

The inaugural Stanford Australia Foundation – CSIRO Scholarship provides a \$30,000 contribution towards course fees and travel for Mr Kesby to attend a program at Stanford's Graduate School of Business (GSB) in California, USA.

## ARCHITECTURE GRADUATE NAMED BEST IN THE STATE

For the second year running, a Master of Architecture alumnus received the New South Wales (NSW) Graduate Medal, which is the most prestigious state award for architecture graduates.

This year's title went to Andrew Hannah-Davies for his final-year project, Beneath the Surface, which proposed redevelopment of the existing facilities and surrounding landscape of the famous healing waters at Moree Artesian Aquatic Centre.

As a site of cultural and historical significance, Andrew's project focused on the social, physical and ethereal journey of healing and tackled issues of segregation, Indigenous exclusion and the need for quality public infrastructure for Moree residents.

## MATTHEW WINS AUSTRALIA'S FIRST SILVER MEDAL AT WINTER OLYMPICS

Elite student-athlete Matthew Graham is no stranger to competing on a global stage and this year won Australia's first Winter Olympic medal.

Ranked third in the world, Matt was awarded 82.57 points in the final freestyle moguls at PyeongChang in South Korea to take the Silver medal. Navigating the bumps and jumps of the mogul slope in just 25 seconds, Matt saved his most impressive run for last.

As he skied his way to success, elite student-athlete Matt was also juggling a double degree with a Bachelor of Engineering (Civil) and Bachelor of Business. With support from the university's Elite Athlete Friendly University Program, Matt, who is originally from the Central Coast, is a perfect example of how determination, motivation, focus and sheer drive produces stellar outcomes across both sport and academia.

Through its Elite Athlete program, the University supports high-level sports people to balance the demands of International competition with tertiary study, with approximately 130 student-athletes participating in the program during the year.



# 130

student-athletes  
participate in our  
Elite Athlete program

**MATTHEW GRAHAM >**

Bachelor of Engineering (Civil)/  
Bachelor of Business



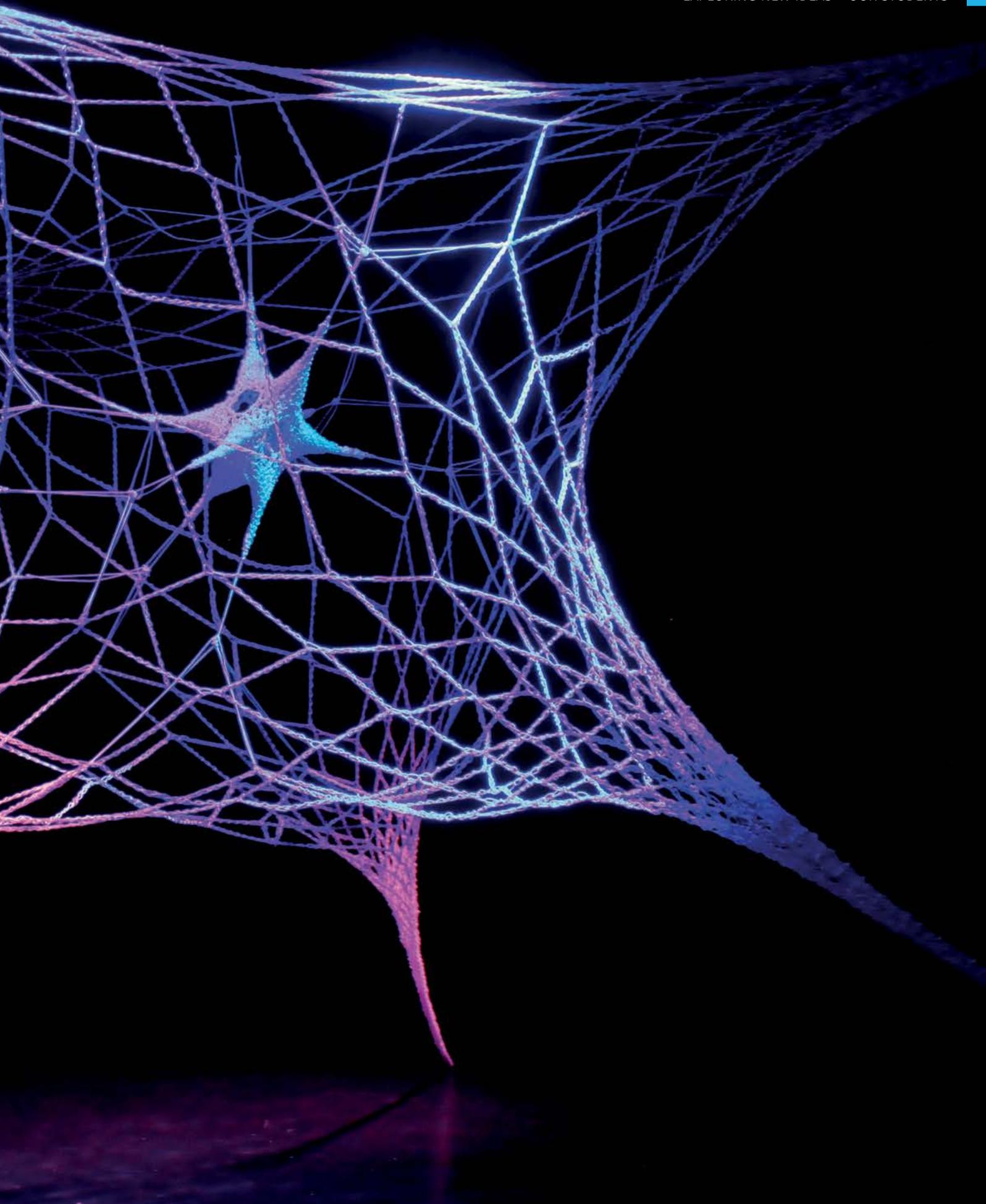
## COMBINING MATHS AND MUSIC IN FIBRE ART

Fine Art student Louisa Magrics' crochet-based installation, Hyperweb, featured in the Royal Botanical Gardens in Sydney as part of this year's Vivid festival of light and music.

Suspended six metres in the air and using more than three kilometres of rope, the web-like, hand-crocheted structure was designed to illustrate the interconnected relationship between mathematical patterns, shapes and musical concepts. The web component used the number sequences that underlie rhythm. The sequences were then embedded in crochet to create geometric patterns and transformed into a three dimensional netted tensile structure.

Assembled in collaboration with Sydney lighting designer Calum Young, International multimedia artist Stephen Haynes and Sydney-based sound collective, bitzPink, the installation included site-responsive sound and lighting.

Photo caption: Hyperweb. Lighting design by Jenna Blayden and photography by Louisa Magrics.





## BUILDING A DIVERSE SKILLSET THAT GETS YOU NOTICED

Bachelor of Visual Communication Design student Reid McManus attracted global attention with his animations screening at five festivals during the year.

A broad range of core and elective courses at the University brought Reid to Newcastle where a typical day sees him working in The Plasmatic Research Laboratory learning a wide range of graphic design techniques and building his personal portfolio. Reid's internship has led to job offers with one of his projects, Food for Fraught, attracting global attention and screening at five animation festivals from Melbourne to Croatia and the Czech Republic.

[See Food for Fraught at vimeo.com/246917979](https://vimeo.com/246917979)

### COLLABORATING ON NEW

The University's latest brand film 'The Power of New' celebrates and demonstrates the power of collaboration in both its content and production.

Shot using a single take, the film introduced life-changing (NEW) ideas from some of our researchers, students and alumni with the video offering valuable opportunities for Work Integrated Learning (WIL). In all thirty students, researchers, alumni, and members of the Marketing and Communications team took part in the film.

[See The Power of New at newcastle.edu.au/new](https://newcastle.edu.au/new)

### ^ REID MCMANUS

Bachelor of Visual Communication Design (Honours)



## NUCLEAR MEDICINE STUDENT RECEIVES SCHOLARSHIP TO PURSUE HIS DREAM

Our world-class \$1.5 million on-campus radiopharmacy laboratory is the largest of its kind in the southern hemisphere with facilities that help students like Jack Berry to succeed.

Nuclear medicine student, Jack Berry, headed to New York to chase his dream of becoming an oncology researcher.

The third year Nuclear Medicine student was selected as the only Australian to receive a scholarship from Telix Pharmaceuticals Limited to attend its Molecular Imaging Summer Program at the Memorial Sloan Kettering Cancer Centre.

The 10-week research program provided undergraduate interns like Jack with practical, laboratory-based experience to develop their skills and address biomedically focused research questions.

Jack participated in independent research projects in a pharmaceutical lab working under the mentorship of Dr Jason Lewis – a world-renowned radiochemist. The opportunity also provided an insight into what a future research career might look like in one of the top research facilities for nuclear medicine in the world.

### ^ JACK BERRY

Bachelor of Medical Radiation Science  
(Honours) (Nuclear Medicine)



# TRANSFORMATIVE TEACHING AND LEARNING

We provide flexible and inclusive teaching for a positive student experience with teachers, researchers and students collaborating to support employability outcomes.

## ORAL HEALTH STUDENTS TEST THEIR NERVE IN A VIRTUAL WORLD

A ground-breaking simulation is providing Oral Health students with a unique opportunity to practice administering dental injections in a virtual environment before they enter the patient clinic.

A first-of-its-kind for the field, the initiative is the brainchild of Mrs Denise Higgins, Lecturer in Oral Health and Simulation Coordinator.

The program, a collaboration between the University's IT Services Innovation Team and School of Health Sciences, aims to bridge the gap between the classroom and clinic to ensure students are confident and capable when administering delicate anaesthetic needles.

Students can access a range of real-life scenarios, including procedures requiring palatal injections to the roof of the mouth and interdental injections between the teeth. A target point gives students the ideal mark to place the needle while a virtual gauge displays the milliliters being administered once the user engages the needle.

Similar to the successful **Road to Birth** program launched earlier in 2018, the patient's skin can be scaled back to expose the working nerves and capillaries in order to familiarise students with key anatomical features.

Road to Birth is another game-changer for students providing Virtual Reality (VR) insight into the internal stages of childbearing and its effect on the human body.

Through the use of a digital headset, Road to Birth takes users on a journey through pregnancy, depicting a life-size female figure in front of them, whose gestation can be explored and observed.

Key features of the technology include crucial birth considerations like the baby's orientation and placental positioning.

 For further information please visit: <https://youtu.be/PkmW9CB1b3c>  
<https://twitter.com/i/status/969329332865810432>

## MAKING MEDICAL TREATMENT MORE EFFECTIVE, SAFER AND AFFORDABLE

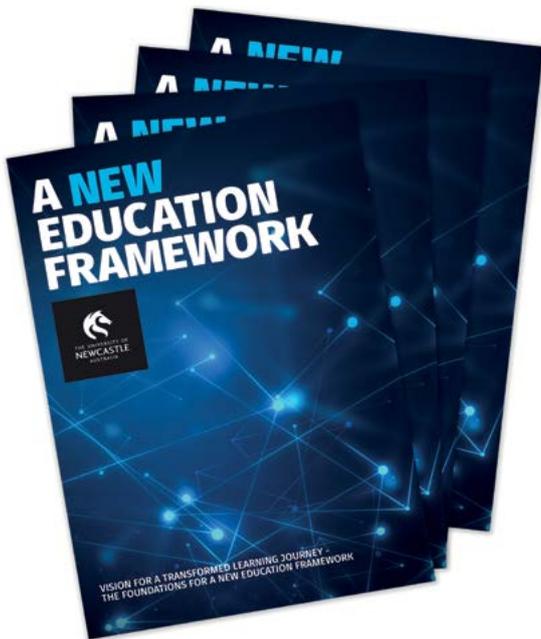
**Our Bachelor of Medical Engineering students are working to break new ground every day by combining their love of health and medicine with cutting-edge science and technology.**

The broad range of majors and elective pathways on offer are also attracting a significant female cohort with a 42 percent representation compared to 15 per cent across all engineering disciplines.

# LAUNCH OF THE NEW EDUCATION FRAMEWORK AND THE EDUCATOR NETWORK (tEN)

The University launched its NeW Education Framework to support collaborative next generation learning, education and curriculum design.

The Framework also provides students with opportunities for discovery and engagement and for the development of a skills portfolio to support their future career and civic success. The framework is learner centred, offering practical solutions and resources. The Educator Network (tEN) supports teaching, research and professional excellence through sharing good practice, promoting collaboration, innovation, autonomy and professional development.



## TOP 200

10 subjects ranked in the top 200 globally<sup>1</sup>



## 5-STAR

maximum rating for overall experience and social equity<sup>2</sup>



## #1

in New South Wales for Social Equity<sup>2</sup>

<sup>1</sup> QS World University Rankings by Subject 2018

<sup>2</sup> Good Universities Guide 2019



## NEWCASTLE'S PIONEERING MEDICAL PROGRAM CELEBRATES MILESTONE

Four decades ago, the University's Foundation Dean of Medicine, Professor David Maddison and his team created an innovative medical program.

This year the University's pioneering program, the first degree in medicine to be established in a non-metropolitan Australian university, and the first to adopt a problem-based learning approach, celebrates 40 years of delivery.

Respected for its game-changing focus on problem-based learning, teaching of patient-centred medicine and innovative admissions process, the medical program continues to attract a diverse group of students who are driving excellence in health care.

The University of Newcastle's community of more than 2,800 medicine graduates are scattered across the globe, improving health care delivery through their committed work in clinical practice, community outreach, research and philanthropy.

The University is also celebrating ten years of its Joint Medical Program (JMP) that supports our next generation of doctors to establish meaningful and productive networks with clinicians in rural, regional and urban locations.

As Australia's only joint medical program, delivered through a unique partnership with the University of New England,



Central Coast and Hunter New England Local Health Districts, the program enables more than 1,000 practising doctors from a variety of backgrounds, to support students with hands-on, practical learning.



## FIRST DOCTORAL TRAINING CENTRE ESTABLISHED

Our inaugural Doctoral Training Centre (DTC) launched to focus on the Mining Equipment, Technology and Services (METS) sector.

Fostering collaborative PhD projects, the Advanced METS DTC aims to deliver innovative and transformational technologies and develop skilled innovators of the future.

Australian METS companies provide world-leading products and services for the mining value chain. The sector is currently experiencing some skills and technology challenges that the DTC is working to address by engaging PhD candidates with business to deliver commercially-viable solutions for industry.

### ^ I2N

The University of Newcastle's I2N – Innovation Integrated Network Muswellbrook is one of Australia's leading Innovation Networks which has attracted over \$2M in state funding along with \$10M in funding for the Hunter Innovation Project.

## FOSTERING BRIGHT MINDS AND CREATIVITY

Passionate trailblazer and sustainable business founder, Stephanie Woollard, headlined the University's Enterprise + Innovation 2018 (E+I18) event, which aimed to inspire original ideas and new perspectives among staff and students.

Ms Woollard's public lecture, discussed how she used innovation and tenacity to develop the Seven Women organisation and empower more than 5,000 marginalised women in Nepal to lift themselves out of poverty.

Other E+I18 events saw campuses brought to life with vibrant exhibitions and inventive installations, while the Newcastle City Precinct featured twilight markets, food, music and a moonlight movie as part of its celebrations.

E+I18 has also launched MakerSpace, an ongoing initiative that provides dedicated student space and access to resources such as 3D printers and laser cutters.

As part of the ongoing commitment to growing the region's entrepreneurial capacity, the University's Integrated Innovation Network (I2N) also hosted a number of sessions to showcase its year-round resources.

## GOING STACKABLE WITH EDX TO TRANSFORM EDUCATIONAL LEADERSHIP

This University 'first' saw a taster MOOC recognised as a pathway into one of our postgraduate programs.

The School of Education's 12 week Professional Certificate in Leadership and Management in Education was developed with the Centre for Teaching and Learning and Senior Lecturer, Dr Scott Imig and Head of School, Professor John Fischetti who have over 50 years of combined global experience. The program supports the practical application of an evidence-based theoretical framework for new and current school leaders with Dr Imig's expertise in coaching for school transformation at its core.

## PUTTING SCIENCE ON THE AGENDA

Leading University statistician, Associate Professor Peter Howley, was one of ten inaugural ambassadors who will help strengthen the understanding and importance of science, technology, engineering and mathematics (STEMM) at a federal level.

Launched by Science and Technology Australia (STA), the new STEMM Ambassador program which runs for twelve months, connects experts with members of parliament to help inform evidence-based policy creation. Associate Professor Howley will work closely with the Member for Hunter and Shadow Minister for Agriculture, Fisheries and Forestry, Mr Joel Fitzgibbon, to increase STEMM knowledge and awareness.

## CONNECTING THE HUMANITIES WITH INDUSTRY

An app that connects consumers with ethically made goods, a symposium on the humanities' contribution to the future of humanity and a linguistics project that will preserve an endangered Torres Strait language were some of the projects that attracted funding and support at the University's inaugural Pitchfest.

Hosted by the Centre for 21st Century Humanities, Pitchfest attracted over 60 industry representatives, who gathered to hear about opportunities to partner with six humanities researchers and entrepreneurs. A total of \$28,000 was pledged during the event in the form of financial support, partnerships and mentorships.

 For more information visit [youtu.be/rkySuaZmNOE](https://youtu.be/rkySuaZmNOE)

## GLOBAL SCOPE IN OURIMBAH

Following the success of the first Global Scope pilot program at our Ourimbah Campus last year, the program returned with a new cross-cultural dimension with teams drawn from international and national student cohorts.

This year, University of Newcastle Central Coast and Study NSW supported three teams of sixteen students from nine different countries and ten different disciplines to work to address the real business needs of local government organisations while being mentored and supported.

Global Scope is an award-winning program run by Intersective for Study NSW that supports international students' work-ready skills and networks and provides a collaborative learning experience.

## ADDRESSING REAL-WORLD ISSUES WITH JOBS OF THE FUTURE

Australia's future aerospace and renewable energy engineers are set to emerge from the Hunter following the launch of two new degrees.

The Bachelor of Aerospace Engineering (Honours) and Bachelor of Renewable Energy Engineering (Honours) will support highly specialised professionals that meet identified industry need.

The new degrees will also support ongoing defence, energy and aerospace collaboration at the I2N Williamtown Hub and it is hoped, will support future faculty and staff at the Western Sydney Aerotropolis.



## MORE THAN 30,000 TEACHERS BENEFIT FROM EDUCATION FUNDING BOOST

Improving the quality of school teaching lies at the heart of a visionary education program for Australian schools.

Quality Teaching Rounds (QTR) is a program that supports teachers to make a positive impact on the lives of their students.

Laureate Professor Jenny Gore and colleagues, in partnership with the Paul Ramsay Foundation and the NSW Department of Education are expanding the program to cater to at least 30,000 additional Australian teachers over the next five years.

Originally conceived by Professor Gore and colleague, Dr Julie Bowe, QTR has revolutionised teacher professional development. Working in groups, teachers across all experience levels – from new graduates to school principals – are empowered to refine their practice collaboratively in a way that ensures ongoing improvement.

QTR places all participants at the same level, where they can assess the quality of teaching and provide specific feedback to their peers in a non-confrontational and collaborative way with application across all subject areas and year levels.

At \$16.4 million, the Paul Ramsay Foundation grant is the largest philanthropic investment for research in the University of Newcastle's history.

The program has already attracted international interest from the United Kingdom and Singapore. The QTR team is currently testing and refining its approach to upscaling so that teachers can participate from anywhere in the world.

### ^ QUALITY TEACHING ROUNDS CO-RESEARCHERS

Dr Drew Miller, Dr Elena Prieto-Rodriguez, Dr Julie Bowe, Professor David Lubans, Laureate Professor Jenny Gore, Professor Max Smith and Dr Jess Harris.



## IMPROVING LIVING AND LEARNING FOR INTERNATIONAL STUDENTS

A University initiative designed to break down barriers and increase opportunity for international students was joint winner of the NSW International Student Award for community engagement in the education provider category.

The Student Experience Passport, designed as part of the University's Language Centre's Student Experience program, breaks down barriers and opens opportunities for international students to engage in meaningful connections with the community.

The small passport-style booklet features a range of extra-curricular activities that students can work through to familiarise themselves with a new campus and city, foster friendships and improve their English.

The NSW International Student Awards celebrate outstanding international students across the state, and acknowledge organisations that excel in supporting them.



# INNOVATION AND WORLD-LEADING RESEARCH

We strive for excellence across all disciplines delivering bold and creative solutions to deliver world-leading research and research-led teaching.

## BIOTECH START-UP SELLS FOR \$502 MILLION

In what is one of the biggest biotech transactions in Australian history, Viralytics – an oncolytic virotherapy firm originating from The University of Newcastle - was acquired for \$502 million by the Merck pharmaceutical company.

Based on the work of Associate Professor Darren Shafren and his team, the basic premise of CAVATAK<sup>®</sup> is to cause cancer cells to rupture and die, while also stimulating a wider immune system response in the body.

On completion of the transaction, US based Merck gain full rights to Viralytics' experimental immunotherapy compound – CAVATAK<sup>®</sup> – a form of common cold virus which infects and kill cancer cells. CAVATAK is currently undergoing multiple Phase I and Phase II clinical trials.

The historical buyout is a culmination of over 20 years of development work by Associate Professor Shafren. His work has been supported since its inception by the Hunter Medical Research Institute (HMRI) with Newcastle Innovation, the University's tech transfer arm, also facilitating early funding for Viralytics'.



### TOP 9

in Australia for research income (HERDC), \$100.8M in total<sup>1</sup>



### OVER 90%

of our research is 'at' or 'above world standard'<sup>2</sup>

#### < ASSOCIATE PROFESSOR DARREN SHAFREN

School of Biomedical Sciences and Pharmacy  
(Immunology and Microbiology)

<sup>1</sup> The Audited Higher Education Research Data Collection Returns 2017

<sup>2</sup> Excellence in Research Australia 2015

## ELECTRIC PARTNERSHIP POWERS ENERGY INNOVATION

**A historic commercial partnership is forged, for printed solar cells that are at the top of the technology readiness tree**

With Australia's energy crisis dominating news headlines, a powerful new industry-research collaboration has signalled the emergence of a new renewable energy market – organic printed solar.

Created by Physicist, Professor Paul Dastoor, organic printed solar cells are electronic inks printed onto sub-millimetre thin plastic sheets using conventional printers. CHEP, a Brambles company, has become the first commercial partner to help explore the potential of the technology.

In what is a fine example of private enterprise and community leading the way, the partnership represents the first commercial uptake of printed solar in Australia and possibly the world. The commercial-scale installation on CHEP's Beresfield pallet repair facility is the final step before the technology becomes widely available.

The commercial installation comes just one year after the team's Australian first, lab-scale demonstration of printed solar. During the lab scale phase, the system's aesthetics, installation method and cell efficiency was improved, with the team hoping that cell output can be doubled again during this commercial phase.

 For further information please see our video at: [youtu.be/mvCEf\\_Au65k](https://youtu.be/mvCEf_Au65k)

## VIRTUAL BIOBANK SUPPORTS CANCER RESEARCH

**Academics from the University and from the Hunter Medical Research Institute (HMRI) have developed the world's first virtual platform to host 3D copies of human cancer tissues, revolutionising the way researchers access critical information needed to advance cancer treatment.**

Chief investigators Dr Jamie Flynn, Dr Antony Martin and Dr William Palmer developed The Virtual Biobank as an open resource to accelerate and enhance medical research activities.

Each digital cancer sample in The Virtual Biobank is made up of high-resolution microscopy images in both 2D and 3D, plus important clinical and molecular information that provides the foundation for virtual research into cancer.

Tiny samples from tumor biopsies stored at the Hunter Cancer Biobank\* have been converted into virtual copies, allowing anyone from around the world to carry out research from their computers or request access to the physical sample they need. In this way the physical sample remains intact, but a 3D, digital copy with clinical and experimental information is kept online for future use which is particularly important in the case of rare cancers, which are hard to study because of limited sample numbers.

\* The Hunter Cancer Biobank was first established in 2012 as a joint initiative of Hunter Cancer Research Alliance, Pathology North (Hunter New England) and Hunter New England Local Health District. Collaborating clinicians from Calvary Mater Newcastle and Hunter New England Local Health District provide access to patients willing to donate specimens to the biobank.

## IMPRESSIVE WINS IN MAJOR GRANT ROUNDS

**Our researchers have performed strongly, securing \$21.6 million in NHMRC funding and \$11.3 million from ARC. This represents an eight per cent increase in overall performance across NHMRC funding rounds and in the case of the ARC Discovery Project scheme, more than doubling our number of successful applications from 2016.**

### Funding success to address chronic disease

This increase in funding translated into more than \$5.8 million in funding from the NHMRC, in addition to \$1.4 million previously earmarked for male and female health strategies. Key funding included almost \$2.5 million for a new Centre for Research Excellence (CRE), the University's fourth CRE in as many years, to help community services deliver chronic disease prevention programs. The NHMRC Centre for Research Excellence in Implementation for Community Chronic Disease Prevention is being led by the University's Associate Professor Luke Wolfenden, a leading behavioural scientist with the Hunter Medical Research Institute (HMRI) and Hunter New England Health (HNELHD).

### Support for Indigenous Australians living with dementia

Laureate Professor Robert Sanson-Fisher also received more than \$3 million in funding from the National Health and Medical Research Council (NHMRC) to improve the outcomes of Indigenous Australians living with dementia. Lead Chief Investigator Laureate Professor Sanson-Fisher, an affiliate of the Hunter Medical Research Institute, is examining the effectiveness and cost efficiency of a community-based approach to increase the timely diagnosis of dementia, and the delivery of best practice care. Working with communities in Queensland, New South Wales, Western Australia, South Australia and the Northern Territory, a randomised trial will help determine the viability of a new approach to providing care, which, if effective, could be rolled out in communities across Australia.

## FUNDING TO ADVANCE ACUTE STROKE THERAPIES

**Conjoint Professor Chris Levi from the University of Newcastle will be able to continue vital research into stroke treatment therapies after receiving \$577,188 in funding from the inaugural Medical Research Future Fund (MRFF).**

The MRFF is a new funding scheme designed to support Australia's leading researchers in the health and medical sector.

Through his partnership with the Hunter Medical Research Institute (HMRI), Professor Levi is renowned for his global trial investigations into improving stroke treatment options for patients using the clot-dissolving drug, Tenecteplase (TNK).



## TSUNAMI RESEARCH CAUSES MEDIA STORM

Whirlpools at the Spit, inundation of Manly Corso and major disruptions are possible impacts revealed in a first-of-its-kind study into the tsunami threat to Sydney Harbour.

The study findings were picked up by almost every major news outlet in Australia as well as by National and Australian Geographic. The story resulted in more than 270 media clips with a total reach of almost 170 million people with the video explainer viewed more than 17,000 times on Facebook.

Published in Scientific Reports and supported by the NSW Office of Emergency Management, coastal researchers, PhD candidate Kaya Wilson and supervisor Dr Hannah Power modelled the effects of tsunami inundation in Sydney. The

results showed the potential for significant changes in the water, from powerful currents to the formation of dangerous whirlpools, highlighting the need for increased community awareness. The United Nations International Strategy for Disaster Reduction (UNISDR) also shared the story and invited Kaya to present the research at a number of upcoming conferences.

[i For further information please see: t.co/Tlq0niyAjj](https://t.co/Tlq0niyAjj)

^ DR HANNAH POWER, PROJECT LEAD  
AND MR KAYA WILSON, LEAD AUTHOR



## PREVENTING CHRONIC DISEASE AMONG PEOPLE WITH MENTAL ILLNESS

Increased support to prevent chronic disease in people with mental illness will be the focus of a \$597,507 Medical Research Future Fund (MRFF) investment for Australian researchers.

Worldwide, the life expectancy of people living with mental illness is 12 to 30 years less than those without mental illness, an inequity largely attributable to a greater burden from chronic diseases including cardiovascular disease, cancers and diabetes. However, many of these diseases can be prevented by addressing harmful lifestyle behaviours including smoking, inadequate physical activity, harmful alcohol consumption and poor nutrition.

Funded by the MRFF through The Australian Prevention Partnership Centre, Professor Jenny Bowman will lead a collaborative team of researchers in exploring the role community managed organisations (CMO) can play in reducing the risk of chronic disease in people with mental illness.

Professor Jenny Bowman is a health psychologist and researcher with our Priority Research Centre for Health Behaviour. She is also a member of the Hunter Medical Research Institute's Public Health research program.

The team is comprised of Professor Jenny Bowman, Professor John Wiggers, Associate Professor Luke Wolfenden, Dr Kate Bartlem, Dr Tara Clinton-McHarg, Associate Professor Andrew Searles and Professor Andrew Wilson.

**^ PROFESSOR JENNY BOWMAN**  
School of Psychology (Psychology)

## MAGNETS PROVE REPELLENT TO SHARKS AND RAYS

A new study has revealed simple magnets may be the solution to reducing the number of sharks and rays (elasmobranchs) caught as bycatch from commercial fishing activities.

With populations of species around the world in decline because of commercial fishing, the experimental study found that incorporating magnets into fish traps reduced incidences of bycatch by more than 30 per cent and increased the catch of targeted fish species by the same amount. University of Newcastle lead researcher, Dr Vincent Raoult, believes the results could have considerable implications for the conservation of sharks and rays.

 For further information please see: <https://www.nationalgeographic.com/animals/2018/08/sharks-repel-magnets-fishing-animals/>

## INDIGENOUS LANGUAGE LINK SPARKS GLOBAL INTEREST

Research showing that all Australian Indigenous languages descend from one common ancestor has reached more than 150 million people.

The research is a result of collaboration between the University's Chief Investigator, Centre for 21st Century Humanities member and historical linguist, Associate Professor Mark Harvey, and Western Sydney University Chief Investigator, Associate Professor Robert Mailhammer. Their findings were released in March in the historical linguistics journal, *Diachronica*.

For the first time research proves that all Australian languages derive from one language, Proto-Australian.

The research, which is a culmination of three years' work, created a wave of national and global interest with more than 120 media pick-ups around the world.

## TWO NEW PATHWAYS EXPAND THE HORIZON FOR CANCER RESEARCH

Following the discovery of two new pathways that could play a role in cancer treatments, breakthrough research is offering the potential to dramatically reshape the scope of cancer research.

Until now, global cancer research has focused on two per cent of the human genome that make proteins. However, research at the University has established exciting possibilities with genes that were previously thought to be 'non-functioning' in cancer cells. The discovery was made by investigating a special class of genes known as noncoding RNA's (ncRNA) found in the human genome (DNA). Led by Professor Xu Dong Zhang\*, Dr Lei Jin\* and Dr Rick Thorne\*, identification of the two unique pathways could lead to the development of new, more targeted cancer therapies.

\* Professor Zhang, Dr Jin and Dr Thorne are members of the Hunter Cancer Research Alliance (HCRA) group, a collaborative partnership between the Hunter Medical Research Institute, the University of Newcastle, Hunter New England Health and the Calvary Mater Newcastle.

## GRANT TO CURB DEAFNESS AND DISADVANTAGE

A \$69,000 RP Medical Fund philanthropic grant will accelerate a new project to offer early intervention in ear health in Aboriginal communities throughout the Hunter New England region.

Ear Nose and Throat (ENT) surgeon and Hunter Medical Research Institute (HMRI) researcher Dr Kelvin Kong, will lead the research project trialling a new method of early diagnosis of ear infections in rural and remote communities through the Aboriginal Medical Service.

The funding will allow the team to purchase innovative technology for ENT specialists to remotely assess patients quickly and efficiently. Delayed care can have a serious impact on children's ear health, quality of life and their culture and identity.

A Worimi man, and Australia's first Indigenous surgeon, Dr Kong is passionate about reducing the disparity that exists between Aboriginal and Torres Strait Islander kids and our non-Indigenous population.

## BRAIN FERTILISER NURTURES NEW HOPE FOR STROKE SURVIVORS

A hormone already at our fingertips could provide a simple answer for a first-of-its-kind treatment to promote 'brain fertilisers' and significantly improve quality of life for stroke survivors, potentially even months or years after experiencing a stroke.

In Australia, someone suffers a stroke every ten minutes, with memory loss and learning difficulties impacting on up to 80 per cent of survivors. However, new research has demonstrated an encouraging link between the administration of growth hormone and an improvement in cognition after experiencing stroke.

A team of researchers from the University and from the Hunter Medical Research Institute (HMRI) worked in collaboration with leading endocrinologist Professor Jörgen Isgaard from the University of Gothenburg, Sweden, to make the discovery with results published in the prestigious journal *Stroke*.

The research suggests that growth hormone could play a critical role in brain repair after injury and that growth hormone treatment after stroke significantly improved learning and memory performance.

## **\$1.96 MILLION TO PERSONALISE CANCER TREATMENT AND CHANGE PATIENT LIVES**

University of Newcastle's Professor Jennifer Martin received \$1.96 million in Cancer Council NSW research funding to develop a personalised chemotherapy dosing system for cancer patients to improve quality of life, reduce side effects and increase chance of survival.

Leading clinical pharmacologist Professor Martin and her team received a Cancer Council 'Pathways to a Cancer-Free Future' grant at the NSW's annual research awards.

## **FUNDING TO AID EARLY INTERVENTIONS FOR CANCER AND STROKE**

Two exceptional Early to Mid-Career Researchers have secured more than \$1.16 million to explore early intervention methods for two significant health challenges.

The fellowships will facilitate the exploration of early prevention against heart disease in cancer survivors, and early detection of neurological deterioration in ischaemic stroke.

### **The recipients and projects are:**

\$582,391 for Associate Professor Doan Ngo to explore the implementation of strategies for early detection and prevention of chemotherapy-induced cardiotoxicity in cancer patients.

\$577,670 for Dr Adjanie Patabendige to implement Steps Towards Understanding and Preventing Early Neurological Deterioration in Ischaemic Stroke (STUPENDIS).

## **ARC LINKAGE PROJECT SUCCESS FOR ENGINEERING AUTHORITY**

Emeritus Laureate Professor Graham Goodwin received \$240,000 in funding from the Australian Research Council (ARC) Linkage Project scheme to improve the operation of steam boilers in Australia's sugar industry.

Working with Wilmar Sugar Pty Ltd in Northern Queensland, Professor Goodwin is developing new control techniques to improve the safe operation of boilers, to improve sugar production and the electricity cogeneration capabilities of the sugar industry.

## **HUMBLE SALT FIGHTS MASS FROG EXTINCTION**

It has been touted as a natural health cure for centuries, now a new study reveals that salt may halt the devastating chytrid disease (chytridiomycosis) in frogs.

According to lead researcher Dr Simon Clulow, this highly infectious disease has proliferated, sending more than one third of the world's frog species into decline and driving more than 100 species to extinction across Australia, the Americas, Africa and Europe. This research offers real hope for frog survival worldwide, as Chytrid is thought to be one of the main drivers of current frog extinctions.

## **LONGITUDINAL STUDY APPLAUDS CAREGIVING GRANDMOTHERS**

A University of Newcastle and University of Queensland study found that 60 per cent of women in their mid-sixties and 12 per cent of women in their late eighties provided regular, unpaid childcare for their grandchildren.

Study Director Professor Julie Byles said that the work done by these women goes largely unrecognised. The report from the Australian Longitudinal Study on Women's Health also revealed that more than half of the women providing unpaid, daily care for their grandchildren were employed, with 23 per cent working full-time jobs. However roughly one in four women in their sixties who provided care for a grandchild as well as for an ill, frail or disabled adult, were in danger of being depressed and over-stressed.

## **MULTI-MILLION DOLLAR BOOST FOR CRUCIAL RESEARCH**

Twenty-one research projects across science, engineering, health and the humanities will share in \$8.75 million from the Australian Research Council (ARC).

Awarded to research that demonstrates benefit and impact to the Australian community, successful projects included:

- \$472,000 to Associate Professor Mark Baker to understand the genetic causes that underpin bull and cattle infertility and investigate better methods to predict the fertility status of bulls.
- \$420,000 to Dr Lawrence Ong to future-proof secure communication systems against large-scale quantum computers, which threaten current encryption approaches. The project aims to ensure that data transmitted over communication networks can never be revealed to hackers, even in public WiFi.
- \$496,166 to Dr Dane Lamb, to directly improve our ability to assess risks associated with environmental contamination.

# COMBING THE SEAS FOR CANCER TREATMENT OPTIONS

Pancreatic cancer is the fourth leading cause of cancer death in Western societies with low survival rates that have remained stagnant since the 1970s.

Associate Professor Chris Scarlett and his team are searching the ocean floor for sea sponges to uncover biological compounds that could offer hope for pancreatic cancer sufferers.

Early cancer therapies came from a certain type of sea sponge and with thousands of species still available, it is hoped that a new therapeutic treatment can be derived from the sponge samples that are being taken from trawler nets around the world.

Chris and a team of PhD students are also working on the breakthrough discovery of a protein associated with the aggressive spread of pancreatic cancers to try to pinpoint more effective treatment options.





Australian Government

NEW COLOMBO PLAN  
Connect to Australia's future - study in the region

Odette Merinda Brown

Congratulations on being awarded a 2019

*New Colombo Plan Scholarship*

*Marina Payne*  
Senator the Hon. Marina Payne  
Minister for Foreign Affairs

# ENGAGING GLOBALLY

We are increasing our global reach and reputation and broadening student and staff opportunities with strategic partnerships that support our ongoing drive for excellence.

## NEW COLOMBO PLAN STRENGTHENS GLOBAL CONNECTIONS

The Australian Government has awarded the University of Newcastle \$1,267,750 million in funding under the 2019 New Colombo Plan Mobility Program.

Funding is supporting 334 students to undertake 23 mobility projects in 15 countries across the Indo-Pacific region, with the University leading five cross-institutional projects addressing global environment, health and business topics.

### CELEBRATING FOUR NEW COLOMBO PLAN SCHOLARSHIP RECIPIENTS

Our students joined an elite group of over 120 students from across the nation who will enrich their studies through semester-based study and internship/mentorship program opportunities during 2019. The recipients are:

- Odette Brown who is completing a Bachelor of Laws/ Bachelor of Aboriginal Professional Practice, and will undertake studies at Waseda School, University of International Studies, Japan.

- Josiebel Cardona, Bachelor of Civil Engineering, will undertake studies at Hong Kong Polytechnic, Hong Kong, and plans to take internship with an organisation that develops sustainable solutions for urban living.
- Kelsey Gray, Bachelor of Laws/Science, will undertake studies at Nanyang Technological University (NTU), Singapore, and plans to intern with the United Nations Economic and Social Commission.
- Jack Steed, Bachelor of Business/Bachelor of Commerce, will undertake studies at the Chinese University of Hong Kong (CUHK), Shenzhen, China, and will look to intern with a Chinese sporting organisation.

### < NEW COLOUMBO PLAN SCHOLARSHIP RECIPIENT

Odette Brown is presented with her scholarship from Ms Frances Adamson, Secretary for the Department of Foreign Affairs and Trade.

### **PUBLIC HEALTH EXPERT AWARDED AUSTRALIAN THAILAND ALUMNI AWARD**

Renowned public health expert and alumnus, Dr Thira Woratanarat received the Australian Thailand Alumni Community Engagement Award.

An Assistant Professor in the Department of Preventive and Social Medicine, at Chulalongkorn University, Dr Woratanarat plays a leading role in preventive medicine and health promotion to improve population health. He holds specialist research interests in the fields of HIV/AIDS, health systems and policy, clinical trials and health equity.

### **SCHOLARSHIP AWARD FOR ENTREPRENEURIAL KENYAN**

A mobile app to enable farmers in rural Kenya to advertise and sell any daily surplus crops has won the 2018 Nairobi Young Entrepreneur Challenge, hosted by the Newcastle Business School.

Aamir Pirani from the Aga Khan Academy in Nairobi won first place for his business plan innovation, collecting a \$25,000 University of Newcastle study scholarship. Aamir's 'Soko phone' app business plan enables low income customers to access cheaper farm produce by engaging directly with suppliers and features transaction capability through existing cellular money transfer apps. Aamir was one of four finalists selected to present their plans at the Australian High Commission. In addition to scholarships, the four finalists competed for a prize pool of 250,000 Kenyan shillings (approximately AU\$3300) to share with their schools in Kenya.

The Nairobi Young Entrepreneur Challenge is an initiative of Dr Michael Seamer of the Newcastle Business School and conducted in partnership with the University's agent in Nairobi – Koala IAC. The competition is based on the NSW Year 11 Business Plan Challenge developed by Dr Seamer, which is now in its fifteenth year.

### **FUNDING SOLUTIONS TO HEALTH CHALLENGES ACROSS THE PACIFIC**

Conjoint Professor David Durrheim received \$1.48 million in funding under the Australian Government's Health Security Initiative for the Indo-Pacific, designed to strengthen health security throughout Southeast Asia and the Pacific.

Professor Durrheim is Director of Health Protection for Hunter New England Local Health District and a leading researcher with the University of Newcastle and the Hunter Medical Research Institute (HMRI). Under this project, he and his team will engage a skilled team of health practitioners to lead infectious disease detection, response and priority research activities in Papua New Guinea (PNG).

### **HUNTER PRESIDENT FOR OCEANIA CHAPTER**

The Society for Research on Nicotine and Tobacco (SRNT) has recently established an Oceania chapter (SRNT-O) – and the Hunter Medical Research Institute's Professor Billie Bonevski is its inaugural founding President.

The SRNT has more than 1000 members in over 40 countries around the globe and is the only professional association dedicated to the support of researchers, academics, treatment professionals and people working in the field of nicotine and tobacco research. Researchers in Australia, New Zealand and the Oceania region are punching above their weight in this field of research – from research into the implementation of plain packaging and graphic health warnings on cigarette packages to New Zealand's world-first smoke-free goal.

### **INTERNATIONAL RESEARCH MOU**

The University and Calvary Mater Newcastle welcomed nine delegates from the prestigious Princess Chulabhorn Royal Academy, Thailand, in celebration of a medical physics research Memorandum of Understanding (MOU).

This agreement will foster academic collaboration and joint research in the field of medical physics, and will support student exchange between the facilities.



## INNOVATIVE PARTNERSHIP SET TO STRENGTHEN PUBLIC SERVICE PERFORMANCE

A new partnership between the University of Newcastle, the Kenyan Government and the Australian Government will facilitate a valuable education initiative under the Australia Awards Fellowships.

A collaboration between academics and government representatives, the fellowship is aimed at strengthening public service performance and building governance capacity in Kenya. Business school lecturers, Dr Patricia Johnson and Professor Jim Jose are leading the fellowship, which will involve a fortnight of workshops with senior executive officers of the Kenyan Public Service Commission.

### RESEARCHERS

Professor Jim Jose, Ambassador and Chairperson of the Kenyan Public Service Commission, Mr Peter Nkuraiya, Dr Patricia Johnson and Chief Executive Officer of the Kenyan Public Service Commission, Alice Otuala.



## ALUMNUS JOINS THE ACADEMY

Blending art with science, Yasser Hamed, a mechanical engineering alumnus has forged a successful career as a senior creative at Walt Disney Animation Studio in Los Angeles.

University of Newcastle alumnus, Yasser Hamed, has risen to the top of his field in film animation, joining the prestigious Academy of Motion Picture Arts and Science.

The Academy of Motion Picture Arts and Science is a professional honorary organisation aimed at advancing the arts and science of motion pictures. Known for its annual awards, The Oscars, academy membership is drawn exclusively from qualified filmmakers from around the world.

Blending art with science, Yasser has forged a successful career as a senior creative at Walt Disney Animation Studio in Los Angeles. His high profile projects include Academy Award Best Animated Feature Film *Big Hero 6* and Academy-nominated films *Wreck it Ralph* and *Moana*.

### ^ MR YASSER HAMED

Mechanical engineering alumnus, and Crowds Animation Supervisor at Walt Disney Animation Studios

## HEALTH-CARE FIRST IN CHINA

PhD graduate Jiemin Zhu has developed a first-of-its-kind mobile application to provide women with breast cancer free access to support services across China.

Breast cancer is the most common cancer for Chinese women, but an increase in diagnosis and shortage of oncology specialists pose challenges for women to access adequate support from health care professionals. Ms Zhu's e-Support program has four components – a learning forum, a discussion forum, an ask-the-expert forum and a personal story forum.

The learning forum provides knowledge and symptom management strategies, while the discussion forum is an online platform for women to chat with one another. Women can ask questions and receive advice directly from experts within 24 hours through the ask-the-expert portal and hear from other breast cancer survivors via the personal story feature.

After completing a Bachelor of Nursing in China and a Master of Nursing in Canada, Ms Zhu was drawn to the University of Newcastle because of her PhD supervisor, Professor Sally Chan, whom Ms Zhu admires for her quality research and passion for nursing.

## DEEPENING TIES WITH ISLAND NATIONS

The University has partnered with the Secretariat of the Pacific Regional Environment Programme (SPREP) to advance critical environmental research in the Pacific.

The partnership aims to deliver co-operative solutions through in-country capacity building and knowledge sharing. A Pacific island research 'node' will be located at SPREP's headquarters in Apia, Samoa with activity coordinated through our Global Impact Cluster for Energy, Resources, Food and Water. The node will support strategic research and training to promote skill development and innovation in the region.

## UNIVERSITY OF NEWCASTLE STUDENTS RECEIVE NEW HUNTER WATER SCHOLARSHIPS

Three students receive Hunter Water scholarships to support their educational goals.

Jack Roberts, a first year Bachelor of Commerce student, received the Hunter Water Indigenous Scholarship of \$22,500 over three years. Jack said the scholarship would enable him to focus on his studies and his end goal of excelling in business.

University of Newcastle Business student, Tahleigha Compton, was awarded the Hunter Water Indigenous Community Leadership Scholarship. The scholarship offers a benefit of \$7,500 each year for up to three years to a student who is committed to making a difference in their community.

Tahleigha said the scholarship has helped her and allowed her to purchase her own laptop for the first time so she can work while on the move.

Hunter Water also offers an annual Undergraduate Disability Scholarship, which was awarded to combined Social Science and Law student, Joseph Popov.

## STUDENT EXCHANGE AGREEMENTS WITH NIHON UNIVERSITY, JAPAN

Two new Student Mobility Agreements have been established with Nihon University that sees it become the first foreign University to establish a bricks and mortar presence in Newcastle. The initiative has been designed to support stronger engagement, language teaching and cultural studies, student mobility, research collaboration, and alumni and philanthropy efforts.

Through the new student exchange program, UON students will have the opportunity to study for one semester in Japan, while Nihon University students will have the same opportunity. In addition, Japanese students will also visit us during study tours for short term English language improvement programs.

# FIRST COHORT OF MA & MORLEY SCHOLARS VISIT CHINA

Our next generation of globally-aware and socially conscious Australian leaders embarked on their journey as Ma & Morley Scholars at the University.



When the paths of Chinese entrepreneur Mr Jack Ma and respected Novocastrian, the late Mr Ken Morley, crossed almost four decades ago, the encounter led to a lifelong friendship and shaped the teenage Jack Ma's life journey.

A group of twenty-seven of our students, the historic first cohort of Ma & Morley Scholars, visited China for an immersion experience, designed to replicate the eye-opening encounter Jack Ma had when he visited Newcastle for the first time.

The program is unique to the Australian Higher Education sector, as the scholarship goes beyond financial support. The Program aims to inspire, cultivate and educate the

next generation of globally aware and socially conscious Australian leaders by providing a comprehensive personal engagement and enrichment experience to establish key networks and friendships and develop practical global leadership qualities.

The life-changing Ma & Morley Scholarship Program has been made possible thanks to a very generous AUD\$26 million philanthropic commitment from Alibaba founder and executive chairman, Mr Jack Ma, through the Jack Ma Foundation. This is the first contribution in Australia by the Foundation.

① For further information please see our video: [youtu.be/RsNjf2S8iJo](https://youtu.be/RsNjf2S8iJo)

Alibaba Group  
阿里巴巴集团  
阿里空间  
阿里巴巴欢迎您!  
Welcome to Alibaba!





## OUTSTANDING LEADERS RECOGNISED AT OUR ALUMNI AWARDS

Twenty-seven outstanding leaders across the fields of science, engineering, business, medicine and creative industries had their career achievements recognised at the 2018 University of Newcastle Alumni Awards.

### ALUMNI MEDAL FOR PROFESSIONAL EXCELLENCE

#### Dr Gary Quinlan AO

Honorary Degree – Doctor of Letters 2007  
Bachelor of Arts 1973

Dr Gary Quinlan AO is Australia's Ambassador to Indonesia, a senior career officer with the Department of Foreign Affairs and Trade (DFAT) and was most recently Deputy Secretary, and Australia's Senior Official to ASEAN and to the East Asia Summit.

As a skilled and proven diplomat, Dr Quinlan was selected and appointed as the Australian Representative on the United Nations Security Council for the 2013-2014 term, representing Australia on matters of international peace and security.

### ^ ALUMNI AWARD WINNERS 2018

**Standing:** Dr Bernard Curran AM,  
Dr Gary Quinlan AO, Mr Bernard Collins,  
Mr Kyle Loades, Mr Peter McArdle,  
Dr Kristopher Rallah-Baker.

**Seated:** Dr Jessica Allen, Dr John Doyle AM.

**Not shown:** Professor Thomas Borody,  
Professor Richard Wortley AM.

**NEWTON-JOHN AWARD****Dr John Doyle AM**

Honorary Degree – Doctor of Letters 2001  
Bachelor of Arts 1982

John Doyle is an accomplished actor and writer for stage and screen, most known for his alter ego Rampaging Roy Slaven, one half of the duo Roy and HG. Starting with a radio show in the 1980s, This Sporting Life, the duo have gone on to produce shows including This Voting Life; The Cream; and The Dream, a late-night Olympic commentary show resulting in their inclusion by the Australian Olympic Committee in the closing ceremony.

**INDIGENOUS ALUMNI AWARD****Dr Kristopher Rallah-Baker**

Bachelor of Medicine 2002

Kristopher (Kris) Rallah-Baker, a Yuggera/Biri-Gubba-Juru man, is the first Australian Indigenous Ophthalmologist. He works closely with Indigenous communities by providing quality eye health care that they may not otherwise receive.

**INTERNATIONAL LEADERSHIP AWARD****Professor Richard Wortley AM**

Bachelor of Arts 1978

Over his career of more than 40 years, Professor Richard Wortley has developed an international reputation in the study and prevention of crime. The implementation of his research has led to international changes in situational crime prevention, including the creation of the Working with Children Check.

**NATIONAL LEADERSHIP AWARD****Mr Kyle Loades (joint recipient)**

Master of Business Administration 2015  
Graduate Certificate in Business Administration 2000

Kyle Loades is currently a non-executive director of Credit Union Australia, Chair of Drive Yello, Chair of Hunter Medical Research Institute and a Conjoint Professor in the Faculty of Business and Law at The University of Newcastle.

**Professor Thomas Borody (joint recipient)**

Doctor of Philosophy (Immunology and Microbiology) 2005

Professor Thomas Borody is internationally recognised for his ground-breaking research and innovation in digestive health that has led to hundreds of thousands of treatments, improving the quality of life for countless Australians. In the 1980s, he was one of the first in Australia to understand the role of microbes and bacteria in a person's overall health.

**REGIONAL LEADERSHIP AWARD****Mr Bernard (Barney) Collins**

Bachelor of Architecture 1981  
Bachelor of Design (Architecture) 1978

Barney Collins is an award-winning architect who has shaped the Newcastle landscape. His landmark projects include The University of Newcastle's NeW Space and the Newcastle Memorial Walk.

**EXCEPTIONAL COMMUNITY SERVICE****Dr Bernard Curran, AM**

Doctor of Philosophy 1974  
Bachelor of Arts 1968

Dr Bernard (Bernie) Curran has played a central role in The University of Newcastle's community for more than 40 years. In his time, he has been a student, rugby player, committed and dedicated sports leader, academic and teacher, community leader, mentor, fundraiser, active alumni leader, public speaker, strategist, donor, researcher and above all, a compassionate friend to many.

**BERYL NASHAR YOUNG RESEARCHER AWARD****Dr Jessica Allen**

Doctor of Philosophy (Chemistry) 2011  
Bachelor of Engineering (Chemical) 2008

Dr Jessica Allen is a young researcher who is making headway in the critical field of clean energy. Her substantial research is already seeing recognition in the fields of low emission coal, renewable energy systems for biomass and solar thermals, and energy storage.

**YOUNG ALUMNI AWARD****Mr Peter McArdle**

Bachelor of Engineering (Civil) 2009

Mr Peter McArdle's work with the Red Cross has been invaluable to many developing communities affected by natural disaster or conflict. The technical and social problems Peter has had to overcome is exemplified by his most highly regarded contribution managing the Red Cross Ebola treatment centre and burial team in Sierra Leone in 2015.



# CONNECTING WITH OUR COMMUNITIES

We support students and staff to contribute to the social, cultural and economic wellbeing of the communities we serve. Working with stakeholders, we deliver value and positive results through innovative teaching, research and community outreach.

## INNOVATIVE ARTS HEALTH PROGRAM DELIVERS TANGIBLE RESULTS ACROSS NEW ENGLAND

The Gomeroi gaaynggal ('Babies from Gomeroi lands') and community ArtsHealth programs have been improving health outcomes and opportunities for Aboriginal women and their children in Tamworth and Walgett since 2007.

The Gomeroi gaaynggal Centre in Tamworth provides a safe and culturally appropriate environment for women of all ages to connect with their culture and community and better understand artistic and cultural practices and health and education.

Transformative research at the centre includes longitudinal research on how Aboriginal babies grow and develop during pregnancy and for the first ten years of life. Other PhD studies focus on chronic disease development, nutrition, health technology approaches, obesity and mental health to improve health outcomes for Indigenous communities locally and globally.

The Centre's ArtsHealth program, which includes a successful schools-outreach component, draws together artists and the Indigenous and non-Indigenous community to inspire, share stories and produce artwork that is globally acclaimed and that financially benefits many of the communities' talented artists.



# 1455

Australian Redcross - RED25  
blood donations by Univer-  
sity staff. No. 1 in the Hunter  
Valley for blood donations<sup>1</sup>



## CHILDREN EXPERIENCE A TASTE OF UNIVERSITY LIFE

Local school students experienced a taste of university life and explored subjects including nursing, engineering, cartoon drawing and psychology at the Children's University on Campus experiential learning day.

Attendees took part in a number of hands-on workshops that showcased the diversity of education opportunities available outside the constraints of the school-based curriculum.

Hosted as part of the Children's University Newcastle initiative, the event is one of a series of opportunities aimed at encouraging children between the ages of seven and 14 to be curious learners.

The University is one of only a handful of universities offering this program in Australia, and the only one in New South Wales.

^ CHILDREN'S UNIVERSITY  
ON CAMPUS EXPERIENTIAL  
LEARNING DAY

## CHILDHOOD ASTHMA RATES REDUCED THROUGH TAILORED INTERVENTION

Researchers from the Hunter Medical Research Institute and the University, in collaboration with the University of Queensland and The Children's Hospital at Westmead, have confirmed that when a woman's asthma medication is optimally controlled during pregnancy, the rate of asthma in her offspring is nearly halved.

The research which has been peer reviewed and published in a leading international journal, demonstrates the benefits of using inhaled corticosteroids, precisely tailored to measurements of lung inflammation during pregnancy.

Professor Joerg Mattes, Director of the university's Priority Research Centre Grow Up Well, says that the research and intervention is exciting because one of the holy grails of asthma research is to demonstrate that childhood asthma can be prevented.

## FLUTRACKING SURVEILLANCE SPREADS ACROSS THE TASMAN

For the first time, FluTracking, the highly successful online health surveillance system that helps detect epidemics of influenza throughout Australia, has expanded its reach to New Zealand.

What started in 2006 with just 400 participants, FluTracking has now grown to become the largest crowd-sourcing influenza surveillance system in the world with more than 37,000 Australians currently reporting their flu symptoms every Monday morning.

A joint initiative of the University of Newcastle, Hunter New England Population Health and the Hunter Medical Research Institute (HMRI), FluTracking aims to develop a system that can rapidly determine the onset of influenza in Australia; the severity of circulating influenza strains; and if influenza strains have changed. Founder and co-ordinator, Dr Craig Dalton, said the project's success as an integral part of Australian influenza surveillance had led to its expansion in New Zealand.

## FROM TAREE TO TASSIE, TELEHEALTH NUTRITION INTERVENTION GOES NATIONAL

Hunter nutrition researchers are casting a nation-wide net with a tele-dietary intervention to help parents who are concerned about their child's eating habits or weight.

Called Nutrition Connect, and supported by nib foundation and Hunter Medical Research Institute (HMRI), the project has previously assisted rural families in the New England region by bringing an accredited 'virtual' dietitian into their homes.

According to researchers, Professor Clare Collins and Associate Professor Tracy Burrows, parents complete the nationally recognised Australian Eating Survey then receive feedback and support, based on individual dietary assessment results, via their home-based iPad or computer.

## INTERGENERATIONAL PLACEMENT: FROM PEN TO PAL

Dr Tamara Bakemore, Field Education Coordinator and acting Head of Discipline for Social Work has worked with in home nursing care provider, Hunter Nursing and Valentine Public School to develop a novel placement opportunity.

Two third year social work students, Jessica Phelps and Katyana Shultz Goodger supported the implementation of a highly successful intergenerational pen pal program between year 6 students from Valentine Public School and clients from Hunter Nursing.

Twenty-eight student and client pairs participated in the program where they exchanged letters over eight weeks on topics including love and security, health, participating, identity and culture, material basics, and learning.

## OPEN DAYS ATTRACT MORE STUDENTS

Revitalised Open Days broke attendance records this year, as prospective students, families and community members took part in a range of immersive and interactive activities across our campuses in Callaghan, NeW Space, Ourimbah and Port Macquarie.

An army of staff and students welcomed visitors to the university and engaged with prospective new students.

In excess of 6,500 attendees visited our campuses while our first ever 'virtual' campus tour on social media, reached a domestic and international audience of close to one million.

 See our virtual campus tour at: <https://www.facebook.com/watch/?v=233786100669407>

## KIDS HAVE HEALTHIER HEARTS THANKS TO NEW SCHOOL PROGRAM

Cardiovascular disease risk in kids due to poor aerobic fitness has been cut by more than half in primary schools through a new online physical activity training program for teachers.

Developed by the University's Priority Research Centre for Physical Activity and Nutrition and the Australian Catholic University's Institute for Positive Psychology and Education, the pilot program delivered the dramatic heart health and aerobic fitness improvements in a published study of 460 children.

Only one in five Australian children meet the recommended national daily physical activity guidelines of 60 minutes of moderate to intense physical activity every day (source: [www.health.gov.au](http://www.health.gov.au)). Physical inactivity is a significant risk factor for chronic diseases such as cardiovascular disease and diabetes. The iPLAY program was rolled out to more than 20,000 NSW state primary school students in 83 schools throughout the state.

## CHAMPIONING FOOD INDUSTRY ON THE CENTRAL COAST

Regional Development Australia Central Coast in partnership with Central Coast Industry Connect and the University, have launched the Central Coast Food Innovation Region Initiative.

The initiative aims to support the local food industry, create new jobs and build sustainable business competitiveness by connecting the University research strengths with government and industry.

Executive Director of the University's Global Impact Cluster for Energy, Resources, Food & Water and Newcastle Institute for Energy and Resources (NIER) Professor Alan Broadfoot said the initiative would help to translate research into tangible outcomes in the region and beyond.

## SUPPORTING ACCESS FOR STUDENTS FROM OUT OF HOME CARE

The Association of Children's Welfare Agencies awarded our Centre of Excellence for Equity in Higher Education (CEEHE) with the 2018 ACWA Innovation Award for the Live Learn Grow Program.

Live Learn Grow supports students with an Out of Home Care (OOHC) background to access and actively participate in higher education. It is the only program of its kind in Australia and provides practical support and guidance for students on all aspects of university life. The program was developed in consultation with a range of stakeholders to respond to some of the known barriers that prevent care-leavers from accessing higher education.

## EHEALTH PROGRAM TO REDUCE YOUNG PEOPLE'S DISEASE RISK

University researchers have collaborated on a world-first eHealth initiative aiming to target young people's 'big six' behaviours to help reduce their chronic disease risk.

Professor Frances Kay-Lambkin and Professor David Lubans are part of the online Health4Life Initiative, launched in collaboration with UNSW Sydney.

The project aims to help thousands of young Australian high school children reduce their chance of developing chronic diseases, including heart disease and mental health disorders, by preventing and modifying lifestyle risk behaviours that commonly emerge in adolescence.

The study published in *Frontiers in Public Health* found that more than three quarters of a sample of 853 18-year-olds had insufficient intake of vegetables (80 per cent) and more than half reported binge drinking at least monthly (52 per cent). More than 40 per cent showed inadequate consumption of fruit (42 per cent), approximately one-third reported sitting for longer than recommended periods (33 per cent), and approximately one quarter reported smoking (29 per cent) or failing to meet physical activity guidelines (23 per cent).

The online Health4Life Initiative is a collaborative effort, in partnership with the Paul Ramsay Foundation. It is led by UNSW's Professor Maree Teesson AC and other researchers from the NHMRC Centre of Research Excellence in Mental Health and Substance Use (CREMS), based at the National Drug and Alcohol Research Centre at UNSW Sydney in collaboration with Northwestern University USA, the University of Newcastle, Curtin University and the University of Queensland.



## \$2.4 MILLION PROGRAM PARTNERSHIP TO EMPOWER GIRLS IN SPORT

The NSW Government will invest \$2.4 million in a statewide rollout of the University's award-winning lifestyle program Dads And Daughters Exercising and Empowered (DADEE).

By helping fathers to improve their daughters' physical activity levels, sport skills and social-emotional wellbeing, DADEE is a key component of a four-year, multifaceted strategy called 'Her Sport Her Way.'

DADEE was conceived by physical activity researcher Professor Philip Morgan and colleagues, with the Hunter Medical Research Institute's support, as the first program to teach fathers to be agents of change for daughters. It originated from a Hunter Children's Research Foundation pilot grant in 2013 and received further backing from Port Waratah Coal Services (PWCS).

In 2019 the program will be replicated in England to help low-income families in London to get active with their children, via a \$A1 million grant from Sport England with UK organisations Women in Sport, the Fatherhood Institute, Fulham Football Club and the English Football League Trust.

**^ DADS AND DAUGHTERS  
EXERCISING AND EMPOWERED  
(DADEE)**



## UPPER HUNTER REGION RECEIVES BIO-RENEWABLE BOOST

Producing biofuels and other renewable chemicals from crop and forestry waste moved a step closer following the announcement of \$4.6 million in funding from the New South Wales Government to construct the Hunter Pilot Biorefinery (HPB) in Muswellbrook.

The purpose-built facility will be constructed by Apace Research Limited to enable the development and demonstration of biomass-based projects at pilot plant scale, including the Ethanol Technologies (Ethtec) Cellulosic Ethanol Pilot Plant Project.

In partnership with Muswellbrook Shire Council and the University of Newcastle's Newcastle Institute for Energy and Resources (NIER), Ethtec is developing an environmentally sustainable process to produce biofuels and other renewable chemicals from crop and forestry waste.

Ethtec Senior Biotechnologist, Dr Geoff Doherty, said securing funding for the HPB was the final piece of the puzzle for the project and an essential step on the commercialisation pathway.

^ DR GEOFF DOHERTY

School of Environmental and Life Sciences (Biological Sciences)

## HELPING DADS COPE WITH POSTNATAL DEPRESSION

Fatherhood may be an emotional time for as many as one in ten new dads who experience postnatal depression.

Researchers are exploring how new fathers think and feel. The What About New Dads (WAND) study asks fathers how they're faring, via a 15-minute online survey on paternal wellbeing and psychological experiences.

The study was developed by PhD student Ms Jaime Wroe, along with Associate Professor Richard Fletcher, Dr Linda Campbell and Dr Jennifer St George from the University and from the Hunter Medical Research Institute (HMRI).

## CREATIVE FESTIVAL TAKES CBD BY STORM

Creative industries students exhibited their final works at Festival X, a first-of-its-kind week-long festival in Newcastle.

The festival included short film screenings, concerts, pop-up music ensembles, TED-style talks and incorporated the annual Newcastle International Animation Festival featuring some of the world's best bite-sized animations.

Festival X also included a commercial component called Ricochet Songs, with Triple J host and artist Kristy Lee Peters, bringing together a group of female artists, producers and songwriters for a week of collaboration and creativity. This musical initiative was the direct result of industry partnerships forged through our Baraya record label, which launched this year. The festival allowed the community and would-be creative students to see and understand where a creative degree might lead.

## SUPPORTING FINANCIAL LITERACY IN THE COMMUNITY

The University and Greater Bank announced a five-year partnership, to deliver community education programs and practical facilities to support informed financial decision-making and money management.

The partnership includes the establishment of the Greater Bank Finance Lab, located at NeW Space, which is a dedicated teaching space equipped with 20 computers to facilitate hands-on, interactive learning across economic systems, monetary markets and financial decision-making and literacy.

The lab will support Business School students as they build their skills in financial decision-making, risk management and economic systems.

The Greater Finance Academy, a financial literacy outreach program, will be delivered to high schools in the Hunter, Central Coast and Western and Northern NSW regions while the Greater Finance Clinic, located in our City Campus at NeW Space, will provide a financial literacy outreach and support program for the broader community.

## RURAL MENTAL HEALTH PODCAST CREATES POSITIVE WAVES

A podcast series designed to encourage rural communities to talk about mental health has been recognised for its impact.

The Let's Talk Rural Mental Health podcast series is an initiative of the University's Centre for Rural and Remote Mental Health (CRRMH) and its major program the Rural Adversity Mental Health Program (RAMHP), together with journalist and producer Kia Handley.

The podcast series won the 2018 The Mental Health Service (TheMHS) Media Award in the 'Special Journalism Award-Regional/Rural/Community' category. The award win coincided with the launch of a second podcast series.



# SUPPORTING AND CELEBRATING OUR PEOPLE

We continue to invest in our staff, in their experience and development, and in our facilities and infrastructure, to support connected and collaborative ways of working.

## PROGRAM SUPPORTS CORPORATE WOMEN

Our first cohort of women participated in an initiative designed to redress the gender equity imbalance in senior management and executive positions.

Driven by the University's Faculty of Business and Law and with partners from leading local organisations, the Women in Master of Business Administration (WiMBA) Scholarship program will help to grow the female talent pipeline and foster positive economic growth in the Newcastle region.

The scholarship includes financial support from the University and industry partners to cover the cost of studying the Master of Business Administration, as well as practical support and mentoring from employers to help recipients to develop their post-MBA career pathway.

## INAUGURAL WOMEN IN STEMM CHAIR

Professor Billie Bonevski was appointed as our first Women in STEMM Chair. In this role, Billie will provide leadership and a voice for the University's gender equity action plan, particularly across STEMM focused initiatives.

## FEMALE RESEARCHERS SPONSORED THROUGH ACADEMIC JOURNEY

Seven University researchers are helping to pave the way for their female peers, as recipients of a Women in Research (WIR) Fellowship designed to support the development of their academic careers.

With females representing 56 per cent of the university sector workforce but holding only 35 per cent of senior academic positions\*, the University of Newcastle's WIR Fellowships are designed to champion diversity and gender equity in the workplace.

The Fellows are: Dr Karen Blackmore, Dr Rachel Buchanan, Dr BoBae Choi, Dr Narelle Eather, Dr Kcasey McLoughlin, Dr Melissa Tadros and Dr Rachael Unicomb.

\*Universities HR Benchmarking Program 2018

## < WIMBA PROGRAM PATRON DR EILEEN DOYLE WITH SCHOLARSHIP RECIPIENTS

Melissa Rowe, People and Culture Excellence Manager - Newcastle Airport Pty Ltd,  
Jessica Turk, Organisational Development Specialist - NIB Health Funds,  
Kate Dash, Accounting and Tax adviser - Prosperity Advisory Group,  
Fiona Hack, APAC Planning and Logistics Manager - Sandvik Mining and Rock Technology,  
Rebecca Johnston, Planning Officer - Port of Newcastle,  
Kirsty Jones, Water Resilience Project Manager - Hunter Water Corporation,  
Carla McEntyre, Business Program Manager Service and Experience - Hunter Water Corporation, not shown.



## FIRST AMERICAN FULBRIGHT SCHOLARS

In an historic first, under a partnership agreement with the Australian-American Fulbright Commission, the University welcomed three American Fulbright Scholars to support international collaboration and strengthen global impact.

The Fulbright Program is the flagship foreign exchange program in the USA and the largest educational program in the world. Founded in 1949, the program aims to increase global collaboration and cultural understanding by internationally immersing selected researchers in their chosen field of study.

Fulbright Scholars, Professor Bradford Worrall from the University of Virginia, Associate Professor Stefan Paula from Purdue University and Professor Seth Rasmussen from North Dakota State University collaborated across specialist areas including genetics, computer-assisted drug discovery and organic electronics.

### ^ FULBRIGHT SCHOLARS VISIT

Wollotuka Institute Director, Mrs Leah Armstrong, Professor John Maynard, UON Resident Artist, Ms Nicole Chaffey, Senior Deputy Vice-Chancellor Research and Innovation, Professor Kevin Hall, Aunty Sandra Griffin (Awabaka), Senior Scholar North Dakota State University, Professor Seth Rasmussen, Vice-Chancellor Professor Caroline McMillen, Ms Tammy Small, Senior Scholar Purdue University, Professor Stefan Paula, Distinguished Chair, University of Virginia School of Medicine, Professor Bradford Burke Worrall.

## UNDERSTANDING THE JOURNEY FOR WOMEN IN STEMM

More than forty staff, students, industry colleagues and members of the Newcastle community took part in our International Women's Day 'Press for Progress' panel discussion at NeW Space.

The event centred on the progress of girls and women through STEMM from early learning through to senior career roles in academia and industry. During an engaged discussion, panellists from a variety of sectors reflected on their experiences at all the stages in this journey.

A round of 'thought starters' from each of the panellists provided the framework for an engaged discussion. Director of KU Children's Services Mayfield, Karen Hugo, highlighted that the way children under five engage in play based STEM learning – through her centre's accredited Little Scientist Program – signal that gender differences are not apparent in early childhood though subtle differences begin to emerge in girls as they approach the age of five.

Moving into the school years, Senior Lecturer in Mathematics Education, Dr Elena Prieto, outlined how transition from primary to high school was a critical stage on the STEMM journey and one that indicated something was going drastically wrong for many young people – girls and boys - with many actively disliking maths classes.

## DEVELOPMENT PROGRAM TO REMOVE BARRIERS TO SUCCESS

**Fifteen female early and mid-year career researchers are on course to progress their academic careers with a development program designed to break through gender barriers.**

As part of the University's ongoing commitment to gender equity, the Faculty of Health and Medicine's Gender Equity Committee hosted the 2018 Women's Development Program facilitated by ThinkWell, aimed at removing professional obstacles faced by women in the fields of health and medicine.

Women comprise more than half of all PhD graduates and Early Career Researchers, but make up just 17 per cent of senior academics in Australian universities and research institutes. The Faculty of Health and Medicine has committed to improving these statistics by providing avenues for women in STEMM to achieve their goals alongside their male counterparts in the health and medical profession.

## STAFF RECOGNISED FOR DELIVERING WORLD-CLASS RESEARCH AND EDUCATION

This year's Vice-Chancellor's Awards for Excellence recognised more than 60 exceptional academic and professional staff in all faculties and divisions for their incredible achievements, diverse contributions, initiative and dedication throughout the year.

Award recipients included:

### Overall Winner for the Vice-Chancellor's Award for Teaching Excellence

Denise Higgins - Faculty of Health and Medicine, for innovative and entrepreneurial oral health teaching designs including the re-development of simulation-based education and the original creation of oral health simulators.

### Overall winners for the Vice-Chancellor's Award for Professional Staff

Gomeroi gaaynggal Centre (Jodie Herden, Lyniece Keogh, Paris Knox and Kathryn Sutherland - Faculty of Health and Medicine), for coordinating and delivering an outstanding research and community engagement program with the Indigenous community in Tamworth.

### Overall winners for the Vice-Chancellor's Award for Early Career Researcher of the Year

Dr Elise Kalokerinos - Faculty of Science, for her innovative research program on the regulation of emotion, for her outstanding funding track-record and for work which is both theoretically original as well as of direct applied relevance. Dr Jordan Smith - Faculty of Education and Arts, also received the award for his clear commitment to research excellence, through numerous high-impact publications, award winning conference presentations and for his highly competitive research income relative to opportunity (notable funding includes support to develop a smartphone application and innovative video resources to support teacher professional learning and the delivery of a school physical activity intervention known as Resistance Training for Teens) based on his PhD work.

### Overall winner for the Vice-Chancellors' Award for Research Supervisor of the Year

Professor Anna Giacomini - Faculty of Engineering and Built Environment, who has achieved great success in establishing rock mechanics as a research area within Civil Engineering and has shared her passion for research with several Higher Degree by Research (HDR), Masters students, and early career academics, demonstrating high training capabilities and exceptional dedication, care and respect for her students.

 For a full line-up of our award recipients please visit: [newcastle.edu.au/newsroom/current-staff/2018-vice-chancellors-award-winners-announced](http://newcastle.edu.au/newsroom/current-staff/2018-vice-chancellors-award-winners-announced)