



**MACQUARIE**  
University  
SYDNEY · AUSTRALIA



# Engaging the world

MACQUARIE UNIVERSITY

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## MACQUARIE UNIVERSITY SNAPSHOT

 <p><b>RANKED IN THE TOP 10</b> in Australia and in the top 50 in Asia-Pacific <small>Academic Ranking of World Universities, 2015</small></p>	 <p><b>MORE THAN 164,000</b> alumni in more than 140 countries</p>
 <p><b>100 PER CENT</b> of research activity rated at world standard or above at the 2-digit level</p>	 <p><b>MORE THAN 100</b> companies on campus or in the adjacent high-tech precinct, providing access to internship and job opportunities</p>
 <p><b>MORE THAN 150</b> partner universities for student exchange in more than 40 countries</p>	 <p><b>MORE THAN 40,000</b> students from more than 100 countries</p>



As a nexus of inspired and unconstrained thinking, Macquarie is uniquely positioned to help shape the complex issues that define our collective future.

# Driving discovery

## MACQUARIE IS DISTINCTLY DIFFERENT TO OTHER UNIVERSITIES

Founded more than 50 years ago to offer students, staff and partners a more flexible alternative to the dogma of the prevailing university model, Macquarie is now reaping the rewards for its innovative, interdisciplinary approach.

Macquarie is widely regarded as a progressive institution, both locally and internationally. Ranked among the top two per cent of universities in the world and with a 5-star QS rating, Macquarie is considered one of the world's best universities, producing highly sought-after graduates.

With a strong tradition of pioneering thinking, ingenuity and exploration, we continue to break new ground as we work to solve some of the world's most pressing issues to build a positive future for all.

We invite you to join us on our journey.

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Macquarie brings together the brightest minds to conduct cutting-edge research that crosses traditional disciplinary boundaries and addresses the big issues facing the world.

# Advancing the research agenda

## OUR RESEARCH PRIORITIES

Unconstrained by tradition, we take a pioneering approach to research.

Our framework for the future – world-leading research with world-changing impact – is brought to life by renowned researchers and their audacious solutions to both local and global problems.

Collectively, our approach to research and discovery sees Macquarie consistently rate highly in the Excellence in Research for Australia (ERA) evaluations, with 100 per cent of our research activity rated as performing at world standard or above in the most recent evaluation.

With such complex challenges ahead, we are well positioned to develop innovative, multidisciplinary solutions to issues of both national and global significance.



*“My research is shedding light on, and accounting for, the various patterns of collective violence in the Syrian conflict. It offers a structured overview of how the Syrian revolution transitioned from peaceful demonstrations for political change into a full-scale conflict involving regional and international actors. It also highlights the significant influence social media and external support have exercised in shaping collective violence in the Syrian conflict.”*

**RIFAIE TAMMAM**  
MASTER OF RESEARCH CANDIDATE



*“I’m researching derivatives market microstructures, particularly related to the areas of market design and linkages among global futures markets. I successfully applied a commonality in liquidity model to global futures markets and assessed how these co-movements in futures markets vary through time, which allows researchers to measure and quantify global liquidity risk in futures markets. The research has important implications for cross-border clearing houses and capital adequacy requirements that protect Australian investors.”*

**IVY ZEHANG ZHOU**  
PHD CANDIDATE  
MACQUARIE GRADUATE SCHOOL OF MANAGEMENT



*“My PhD research focuses on the philosophy of ‘ecosystem services’ – benefits that humans derive from nature for their wellbeing. I aim to contribute to this emerging philosophy and see how it can improve ecosystem management, as well as shape the wellbeing of different sections of society.”*

**SUNITA CHAUDHARY**  
PHD CANDIDATE



*“I’m researching the devastating neurodegenerative diseases motor neuron disease (MND) and frontotemporal dementia (FTD) within the biggest MND research centre in Australia. Using zebrafish models we have a unique opportunity for translational research – from lab to the clinic or ‘bench to bedside.’”*

**JACK STODDART**  
PHD CANDIDATE



*“I’m researching electromagnetic and antenna design using artificial intelligence. I have found the experience at Macquarie University the most precious in my academic life as I’ve had the opportunity to work in CELANE – one of the world’s leading electromagnetic and antenna research groups.”*

**ALI LALBAKSH**  
MASTER OF RESEARCH GRADUATE, PHD CANDIDATE

 **\$202 million** in research funding from 2009 to 2013

 **150 researchers** have authored papers rated in the top 1% of publications worldwide

 **100% of research** rated at world standard or higher (Excellence in Research for Australia, 2015)

# Our future-shaping research priorities

WE PURSUE EXCELLENCE IN A BROAD RANGE OF RESEARCH AREAS

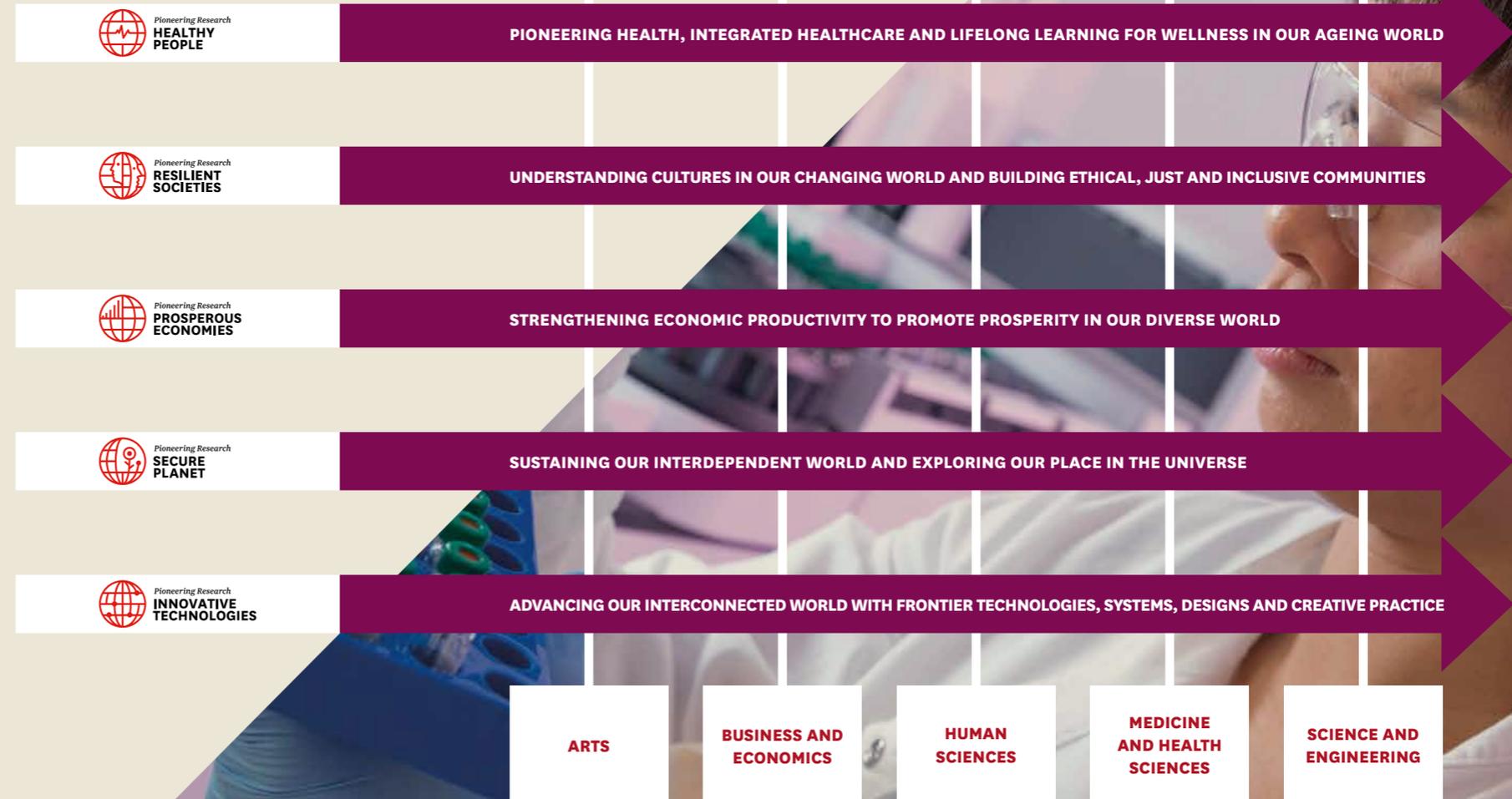
Our five interdisciplinary strategic research priorities – Healthy People, Resilient Societies, Prosperous Economies, Secure Planet and Innovative Technologies – respond to globally significant challenges and opportunities to improve the lives of millions. Together, these priorities provide a focal point for research, with discoveries translating into real improvements in the lives of communities everywhere.

Our unique approach is increasingly making us the partner of choice for leading organisations, including Johnson & Johnson, Cochlear and Microsoft. These partnerships give our corporate partners access to pioneering researchers and talented undergraduates. In turn, our academics, researchers and students benefit from the opportunity to collaborate on game-changing initiatives.

The breadth and depth of research at Macquarie also informs our approach to teaching and learning, and adds significant value to a student's experience of university, as they learn about the latest breakthroughs in their field from the world-renowned researchers who made them.

Our groundbreaking Master of Research was also the first of its kind in Australia and is widely regarded as Australia's most innovative research pathway model. Its strength lies in the quality of the research training provided, which prepares students to complete their PhD in only three years – well below the national average.

These initiatives ensure our courses are internationally aligned and globally relevant.



We recognise that each of our students has unique career and life goals, so we give them the freedom to build their own interdisciplinary study program. Equally important, we actively support their journey from student to early-career professional through practical training and skills development initiatives.

# Learning for the future

## ENRICHING OUR STUDENTS' EXPERIENCES

We offer a wide range of exceptional undergraduate, postgraduate and research courses that are underpinned by our world-leading research discoveries. Many of our courses are designed in collaboration with industry and enjoy accreditation by peak professional bodies, which gives our students a head start on their careers.

Undergraduate and postgraduate study is offered across a range of areas, including:

- business
- education
- engineering and IT
- environment
- health and medical sciences
- law, security and intelligence
- media, creative arts and communication
- science
- society, history and languages.

Our core mission is to educate, inform and equip future generations for the world of tomorrow, and to help shape that world through rigorous research and discovery. To help us achieve these goals we have pioneered learning and teaching approaches that challenge convention and shift thinking.

Our approach is built around a connected learning community. Our students are considered partners and co-creators in their learning experience. Their face-to-face experience is paired with sophisticated and interactive digital resources, while their courses are linked to the latest research discoveries.

### WORK-INTEGRATED LEARNING THROUGH PACE

Supported by our many corporate partners, our signature PACE (Professional and Community Engagement) program helps students enrich their classroom learning through placements and internships at world-leading companies and not-for-profits, as well as in community development programs, both locally and internationally.

Fully integrated into the academic program, PACE distinguishes Macquarie in learning and teaching, and is a key contributor to our graduates' employability.

### GLOBAL LEADERSHIP PROGRAM

Our Global Leadership Program is an extracurricular initiative that gives students the opportunity to develop leadership, cross-cultural and other practical skills, while connecting them with internationally renowned, inspirational thought leaders.

### INTERNATIONAL EXCHANGE

Our international exchange program gives students the opportunity to spend a session or two at one of our partner universities overseas, supported by university funding and resources. Students can even gain academic credit for recognised courses.

Almost 8000 students have already benefited from life-changing experiences on exchange. They carry that experience with them not only to the classroom, but beyond to help build the foundations of their career.

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*"Exchange gave me a taste of the real world and taught me to be confident in my independence and in my ability to enjoy being so far from home. Since getting back to Australia, exchange keeps influencing my life, especially in job interviews because employers love hearing about the independence and initiative it takes to go on exchange."*

**STEPHANIE HUNT**  
BACHELOR OF PSYCHOLOGY (HONOURS)

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**Together, these programs help create empathetic, ethical and engaged global citizens. Our students are ready to embrace all the world has to offer and their unique experiences help them stand out in the crowded career marketplace.**



### FIRST ROBOTICS

FIRST® in Australia was pioneered at Macquarie and provides a training ground for young people to build their self-esteem and team skills, and celebrate their achievements in science and engineering.



### BIG HISTORY

Pioneered at Macquarie and embraced by educators across the world, Big History provides a new, cross-disciplinary way of looking at the place of humankind in the context of the evolution of the universe.



1 Number of partners

Our partnerships with global corporations and universities around the world help ensure our graduates are not just ready to work, but that they also have the skills to forge careers for the future.

# Macquarie's place in the world

OUR GLOBAL PERSPECTIVE IS AT THE HEART OF EVERYTHING WE DO

Our emphasis on practical experience combined with our global focus gives Macquarie graduates a unique outlook – one that prepares them both for the challenges and opportunities that life presents.

Macquarie is proud to have high-quality research training partnerships with universities and governments in Asia, the UK, Europe, the US, South America, Africa and Scandinavia.

We have hosted 269 cotutelle and joint PhD candidates from 110 universities in more than 30 countries. We send more than 500 exchange students overseas each year. More than 6000 students work with more than 1900 partner organisations across the public, private and not-for-profit sectors in Australia as part of their PACE experience, and hundreds more participate in community development and professional engagement projects around the world.

We are home to some of Australia's most exceptional facilities – innovation hubs that unite our students, researchers, academics and partners to achieve extraordinary things.



# World-leading facilities

PROGRESSIVE THINKING REQUIRES AN EXCEPTIONAL HOME

### MACQUARIE UNIVERSITY HEALTH SCIENCES CENTRE

We are home to Australia's first and only private, not-for-profit hospital on a university campus, and are setting new benchmarks in healthcare in the nation's only truly integrated academic campus. Our researchers collaborate with doctors and pharmaceutical industry partners to identify, refine and develop treatments that will cure or prevent illnesses economically and effectively. Macquarie is also home to the nation's leading melanoma research facility, the biggest motor neurone disease centre in Australia, and the Australian Institute of Health Innovation (AIHI), which is leading improvements in patient outcomes, preventing medical errors and reducing costs.

### MACQUARIE PARK INNOVATION DISTRICT

The Macquarie Park Innovation District (MPID) is Australia's premier innovation hub. Home to Macquarie University, Macquarie University Hospital, the Lighthouse Incubator and more than 180 large international and 200 small businesses, the vibrant technology park is set to transform the way collaboration and innovation are catalysed.

With an additional 40,000 employees coming to work in Macquarie Park in the next decade – taking the total to 85,000 – MPID's new incubators, collision spaces and events programs will ensure a thriving start-up ecosystem and dynamic innovation space.

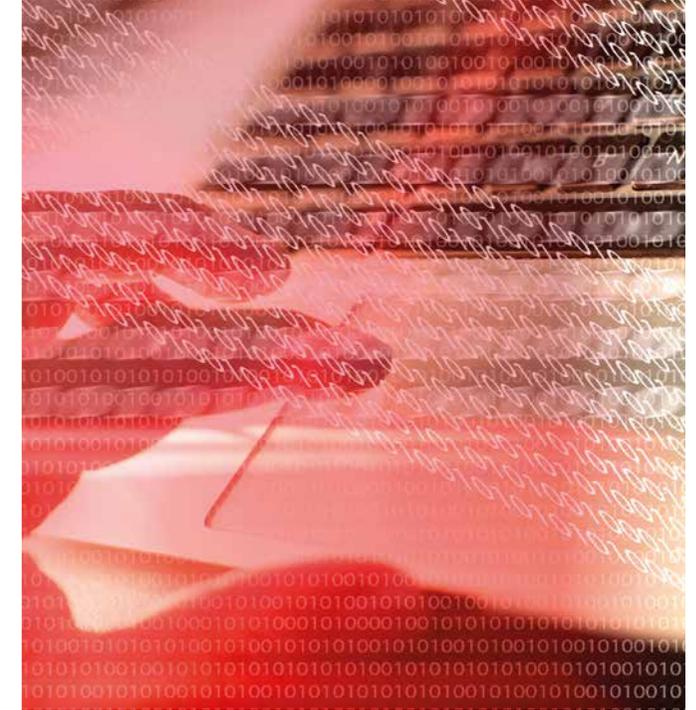
### SIMULATION HUB

The Simulation Hub houses simulation labs for driving, home, work and recreation, flight, motion capture and virtual reality in one location, enabling leading experts from the University and industry to collaborate on translational research across a wide range of disciplines.



### FUTURES LAB

The Futures Lab is home to the latest in networked digital media production technologies, and mirrors the platforms and systems in use by major broadcasters and online media outlets internationally.



### OPTUS MACQUARIE UNIVERSITY CYBER SECURITY HUB

The Cyber Security Hub focuses on the causes, effects, operations and motivations of cybercrime, and their implications for government, business and individual citizens.

### AUSTRALIAN HEARING HUB

The Australian Hearing Hub is a state-of-the-art facility that brings together some of the country's best researchers and service providers to advance research, education and innovation into hearing and language disorders. Our campus is also home to the world headquarters and principal manufacturing facilities of Cochlear, whose location on our campus facilitates outstanding research-industry partnerships.





*“My research at Macquarie – and now my work at BCAL Diagnostics – involved detecting and characterising novel biomarkers in blood and hair that can be used as the basis for a blood test for breast cancer. Whilst mammography is the gold standard in screening for the disease, it has a number of limitations. BCAL Diagnostics’ technology could utilise a single blood test to monitor younger women with a predisposition for breast cancer, right through to screening, diagnosis and monitoring during and post treatment. This will allow doctors to identify the disease earlier and to treat it, ultimately saving more lives and improving quality of life.”*

**DR DHARMICA MISTRY**  
PHD, MACQUARIE UNIVERSITY  
CHIEF SCIENTIST, BCAL DIAGNOSTICS  
YOUNG SCIENTIST AWARD, WORLD CONGRESS ON CONTROVERSIES IN BREAST CANCER, 2015  
NSW YOUNG WOMAN OF THE YEAR, 2016



**ALMOST 10,000**  
degrees awarded annually



**\$1 BILLION**  
invested in infrastructure and  
facilities in recent years



**5 QS STARS**  
in teaching, employability, research,  
internationalisation, facilities, innovation,  
access and specialist subjects



**THE ONLY**  
Australian university with  
a private hospital on campus



**THE ONLY**  
Australian university  
with its own train station



**MORE THAN 200**  
undergraduate and postgraduate degrees

We believe that being a great leader  
is all about being a great team player.

# Driving discovery through collaboration

## JOIN US

Our students, researchers and partners enjoy a distinct place in our team, and bring with them unique perspectives that allow us all to learn, grow and create in ways that would not be possible without collaboration. If you share our desire for innovation and discovery, we would love to have you join us.

[mq.edu.au](http://mq.edu.au)

Macquarie University  
NSW 2109 Australia  
T: +61 (2) 9850 7111  
mq.edu.au



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