



University of
Southern
Queensland

RESEARCH FLAGSHIPS SHOWCASE

Research Symposium **2026**

Wednesday 19 August 2026

9.00 am – 5.00 pm · University of Southern Queensland



ACKNOWLEDGEMENT OF COUNTRY

The University of Southern Queensland acknowledges the First Nations of Southern Queensland and their ongoing connection to Country, lands, and waterways.

Further, we recognise Aboriginal and Torres Strait Islander peoples as the first educators and researchers of Australia. We pay deep respect to Elders past and present.

A WARM WELCOME

Welcome to the 2026 Research Symposium



It is my pleasure to welcome you to the University of Southern Queensland Research Symposium. Today we celebrate the talent, curiosity and ambition of our PhD candidates, whose work spans our four Research Flagships — agriculture, climate and the environment; communities and regional development; health; and space, defence and advanced technologies. Across the day you will hear from twenty-three researchers whose discoveries are shaping the future of our regions and beyond. I encourage you to engage with our presenters, ask questions, and share in the spirit of enquiry that defines our University.

Professor Paul Mazerolle

Vice-Chancellor and President

Draft welcome message — for approval.

Program at a glance

8.30 – 9.00 am	Registration & arrival refreshments	
9.00 – 9.20 am	Welcome & Official Opening Professor Paul Mazerolle, Vice-Chancellor and President	
9.20 – 10.50 am	Session 1 · Agriculture, Climate & the Environment Six research presentations · Chair: Joseph Charles	
10.50 – 11.10 am	Morning tea	
11.10 – 12.40 pm	Session 2 · Communities & Regional Development Six research presentations · Chair: Champa Wijetunga	
12.40 – 1.25 pm	Lunch & Networking Meet the researchers and staff	
1.25 – 2.55 pm	Session 3 · Space, Defence & Advanced Technologies Five research presentations · Chair: Alissa Reinke (TBC)	
2.55 – 3.15 pm	Afternoon tea	
3.15 – 4.45 pm	Session 4 · Health Six research presentations · Chair: Anjani Kalra	
4.45 – 5.00 pm	Closing Address & Awards Presentation	

Each session comprises up to six research presentations of approximately 15 minutes, including questions. Sessions run for 1.5 hours.

Institute for Agriculture, Climate & the Environment

Providing a focus for researchers in agriculture, crop health, natural resource management, environment and climate sciences.

Session Chair: Joseph Charles

RESEARCH PRESENTATIONS

1

Matthew Shearer

Image segmentation for robotic meat processing automation

Supervisors: A/Prof Cheryl McCarthy & Dr Basem Aly

2

Somwang Leekar

Understanding the causes of gaps in sugarcane rows in making appropriate management decisions

Supervisors: A/Prof Troy Jensen, Mr Ampon Chumpia & Prof Bernard Schroeder

3

Sunil Thapa

Seen from space, felt on the ground: Rethinking wildfire risk across Queensland

Supervisors: Prof Tek Maraseni, Prof Armando Apan & Dr Bikram Banerjee

4

Joseph Charles

Deep learning the droughts: Monitoring recurrent dry conditions in Queensland

Supervisors: Dr Qingxia (Jenny) Wang, Prof Yan Li & Prof Shahbaz Mushtaq

5

Fred Wassena

Developing a targeted user-informed climate information system model for sustainable livestock production

Supervisors: Kathryn Reardon-Smith

6

Jo Owens

Improved evapotranspiration estimates in grazed woodlands using flux tower, satellite remote sensing, machine learning and modelling approaches

Supervisors: A/Prof Timothy Cowan, Prof Lindsay Hutley, Dr Jackie Webb & Prof Andrew Western

Institute for Communities & Regional Development

Conducting multi-disciplinary research that helps regional communities embrace and adapt to change whilst maintaining their unique identities.

Session Chair: Champa Wijetunga

RESEARCH PRESENTATIONS

1

Paul Carmody

Reconnecting First Australian school students to education through on-Country land management courses and providing pathways to tertiary education
Supervisors: Prof Simon Young

2

John Panaretos

Indigenous roots and Greek migrants: Commercialisation of Australia's macadamia
Supervisors: Dr Catherine Dewhurst & Prof Celmara Pocock

3

Emma Wilson

Singing teachers' vocal health: Strengthening access, community, and wellbeing
Supervisors: A/Prof Melissa Forbes & Dr Anna Girardi

4

Sana Bashir

Assessing the decarbonisation initiative's impact on agricultural productivity in Australia
Supervisors: Prof Tapan Sarker, Prof Shahbaz Mushtaq & Dr Muhammad Arif Watto

5

Matthew Simons

Cyber security situational awareness for older adults
Supervisors: A/Prof Anup Shrestha & Dr KC Chan

6

Prince Adjei

Designing trustworthy AI for regional communities
Supervisors: A/Prof Anup Shrestha, Dr Sachithra Lokuge & Mr Ransford Mensah

Institute for Space, Defence & Advanced Technologies

A dedicated facility for space and defence research, specialising in hypersonic propulsion systems, rocket development, astrophysics, machine vision technologies and advanced materials manufacturing.

Session Chair: Alissa Reinke (TBC)

RESEARCH PRESENTATIONS

1

Jack Williamson

Simultaneous vehicle design and trajectory optimisation of a multi-stage hypersonic boost-glide system

Supervisors: Prof Ingo Jahn & A/Prof Fabian Zander

2

Juliana Silva de Moraes

Effects of roughness-induced transition in hypersonic conditions

Supervisors: Prof Ingo Jahn, Prof David Buttsworth & Dr Tamara Sopek

3

Saurav Koirala

Integrated thermal dynamics and trajectory optimisation for hypersonic vehicles

Supervisors: Prof Ingo Jahn, Prof David Buttsworth & A/Prof Fabian Zander

4

Zahra Parhizi

From trash to treasure: How fungi a greener future

Supervisors: Prof Polly Burey, A/Prof John Dearnaley & Dr Dierdre Mikkelsen

5

Chundu Tamang

Reprocessing of waste plastics composites

Supervisors: Prof Allan Manalo, Prof Polly Burey, A/Prof Wahid Ferdous & Dr Tristan Shelley

Institute for Health

Harnessing diverse, interdisciplinary expertise to address the most pressing health and healthcare challenges facing our communities.

Session Chair: Anjani Kalra

RESEARCH PRESENTATIONS

1

Amber Johnson

Life stories and mental health experiences of plurisexual Australians

Supervisors: Prof Amy Mullens, A/Prof Annette Bromdal & Prof Lorelle Burton

2

Alissa Reinke

Development of a novel biomaterial to investigate metastatic cancers

Supervisors: Dr Louisa Windus, Prof Polly Burey, Dr Jessica Feldman, Dr Nikita Walz & Prof Eliza Whiteside

3

Melinda Covey-Hansen

Local government policy in shaping environments that support active living

Supervisors: Prof Tracy Kolbe-Alexander, Mrs Paula Grant & Dr Anthony Kimpton

4

Jessica Elliot

Beyond clinical hours: The secret sauce of community and belonging

Supervisors: Prof Daniel Terry, Prof Leah East & Dr Liz Ryan

5

Tahnee Downs

Breast cancer, brain health and exercise: Insights from novel clinical studies

Supervisors: A/Prof Edward Bliss, A/Prof Dean Mills & Prof Eliza Whiteside

6

Rebecca Terlich

Monitoring child mental health: The validity & utility of routine school data

Supervisors: A/Prof Govind Krishnamoorthy, A/Prof Erich Fein, Prof Sonja March & Prof Rajib Rana

4.45 – 5.00 PM

Closing Address & Awards Presentation

To close the day, we will recognise the outstanding contributions of our student presenters across all four Research Flagships and celebrate the breadth of research underway at the University of Southern Queensland.

Closing address and award recipients to be confirmed.

SYMPOSIUM

Notes

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Notes

THANK YOU FOR JOINING US

2026 Research Symposium

Showcasing our four Research Flagships



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