



12th ACUR Conference
2–3 December 2024
#ACUR2024@USYD



Hosted by
THE UNIVERSITY OF SYDNEY

2-3 December 2024

The University of Sydney, Camperdown Campus

Time	Monday 2 December – Day 1 of ACUR 2024		
	Event Location – Sydney Nanoscience Hub		
08:00 – 08:50	Arrival and Registration – Foyer outside Messel Lecture Theatre (4002)		
08:50 – 08:55	Welcome Professor Pauline Ross (Conference Chair)		
08:55 – 09:00	Introduction/Welcome – Emeritus Professor Angela Brew (ACUR, President)		
09:00 – 09:10	Welcome to Gadigal Country – Metropolitan Lands Council		
09:10 – 09:20	Undergraduate Research – Professor Louise Sharpe – PVC (Researcher Training)		
09:20 – 10:00	Keynote Address 1 – Professor Susan Rowland		
10:00 – 10:30	Morning Tea incl Poster Expo in Foyer		
10:30 – 12:15	Oral Presentations – Session 1		
	MLT (4002) Medicine/Health	LG17 Chemistry/Biology	LG18 Psychology
10:30 – 10:45	Positional obstructive sleep apnoea Ai Xin Chew University of Queensland	Developing Safe Modification Methods for Nutrient Adsorption Jack Gore Swinburne University	Therapeutic Effects of Naturalistic Hallucinogen Use on OCD Symptoms Dora Szabo Macquarie University
10:45 – 11:00	Subjective and Objective Sleepiness in Insomnia, Non-Restorative Sleep, and Healthy Controls Anastasia Stuart Macquarie University	Formation of the embryonic skeleton in the seahorse <i>Hippocampus abdominalis</i> Arda Poda The University of Sydney	Renal and Cardiovascular Function in Children with FASD: Links to Food Approach and Avoidance Behaviors Jinyang Yang University of Queensland
11:00 – 11:15	Evaluation of Regional and Global Placental Perfusion in the Third-Trimester Fetus Zoe Warland UNSW	Identification of <i>Gambierdiscus</i> species from a single cell using a novel protocol Amanda Joyce UTS	Longitudinal Assessment of Medical Students' Perceptions of Social Isolation and Wellbeing Minha Lee Western Sydney University
11:15 – 11:30	The Impact of Synthetic Heparan Sulphate on Adipose-Derived Stem Cells Diane Young University of Queensland	Detecting the age and the blood-feeding history of <i>Aedes aegypti</i> using NIRvascan and AI-based machine learning algorithms Ayako Takahashi University of Queensland	Is Your Phone Distracting You? The Effect of Phone-like Vibration Interruptions on Sustained Attention in a Dynamic Task. Anna Fioretti Macquarie University
11:30 – 11:45	Investigating Immune Cell Migration across the Blood-Brain Barrier in Multiple Sclerosis Patients Stella Morton The University of Sydney	Investigating Erbium Impurities in NaCl Crystals at Cryogenic Temperatures Huzaiifa Khan The University of Sydney	Predicting Aggression from Problematic Screen Use: The Roles of Gender and Neurodiversity Laetitia Carlile-Purcarea Macquarie University

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11:45 – 12:00	Proteomics as an Alternative to Genomics in Melanoma Diagnosis Elizabeth Giblett The University of Sydney	Using Modified Tea Towel to Remove Phosphate from Water Natasha Grant Swinburne University	Dark Tetrad of Personality and Cyberbullying: The Role of Hostile Attribution Bias, Social Intelligence and Parental Emotional Warmth Ridmee Nanayakkara Macquarie University
12:00 – 12:15	Equitable Genomics: A framework for improving access in the age of AI to clinical genomic services for culturally and linguistically diverse communities Sara Wardak The University of Sydney	Surface Modification – Paving the Way for Safer Medical Implants. Andrew Tran Swinburne University	Recombinant expression of sodium channel fragments to probe domain interactions in epilepsy. Azmam Haroon Swinburne University
12:15 – 13:15	Lunch incl. Poster Expo in Foyer		
13:15 – 15:00	Oral Presentations – Session 2		
	MLT (4002) Psychology	LG17 Physics/Mathematics	LG18 Technology
13:15 – 13:30	Investigating Self-Compassion's Effectiveness in Protecting Against Masculinity Threats Cormac Lennon Macquarie University	Standardising the Parkes Radio Telescope Data Processing Pipelines Agastya Kapur Macquarie University	Secret Silicon Snowballs: Limitations of Artificial Intelligence Regulation Lily Ballot Jones Swinburne University
13:30 – 13:45	Are AI Models Too Bootylicious? The perceptual effects of exposure to curvaceous bodies Sharlene Robbins Macquarie University	Random Number Generation via Characteristic Functions Angus Stewart Macquarie University	Information Cascades: The Effects of incorporating an informed or uninformed agent in Endogenous Time Guan-Jia Huang University of Queensland
13:45 – 14:00	"The Future Weighs on me": An IPA of the Lived Experience of Typically Developing Siblings of Individuals with Neurodevelopmental Disability Jamie Chapman Macquarie University	Investigating the Ball Impact Response of Shear-Thickening Fluids Across Different Temperatures Philip Milosevski University of the Sunshine Coast	A Machine Learning Paradigm for mRNA Display Selection Tommy Lu The University of Sydney
14:00 – 14:15	A High-Pitched Blink: Investigating Visual Motion-Sound Synaesthesia Jordan Ratcliffe Macquarie University	Lie Symmetries of Nonlinear Partial Differential Equations of Optical Solitons Akito Koike & Mani Shayestehfar The University of Sydney	Using Classification Models for Additional Security in NFC-based Access Control Systems Daniella Gullotta University of Canberra
14:15 – 14:30		On Non-Integrability and Singularities of Dispersion-Generalised NLSE Peter Lavilles The University of Sydney	"So now I feel I have somewhere to go to" Evaluating the Diagnostic Yield and Clinical Utility of an Undiagnosed Disease Program and Clinician Perspectives on its Value Yoonji Kim UNSW

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14:30 – 14:45	Enhancing the Detection of Vicarious Touch: A Novel Visual-tactile Interference Task Chloe Langbein Macquarie University	Kolmogorov Arnold Networks: An interpretable and accurate Alternative to MLPs for Stochastic Data Forecasting Tabish Rather Swinburne University	Transforming Australia's Lending Sector: Unveiling Key Drivers and AI-Driven Innovations Yaxin Zheng Australian National University
14:45 – 15:00		Translucent AI: A small field with some growing opportunities Flynn Lauridsen Macquarie University	
15:00 – 15:20	Afternoon Tea incl. Poster Expo in Foyer		
15:20 – 16:20	Science Communication Workshop – Associate Professor Alice Motion		
	Transition to talks		
16:30 – 17:15	Oral Presentations – Session 3		
	MLT (4002) Medicine/Health	LG17 Science/Environment	LG18 Arts/Media
16:30 – 16:45	Machine Learning for Ischemic Stroke: Predicting Ischemic Core on Non-contrast CT and CT Angiography Kevin Zou UNSW	The Precipice of Plant Nitrogen Acquisition: A Phenotypical Investigation into the Effects of Small, but Mighty Signaling Peptides Nathan Wise Western Sydney University	Representing the Past: The Minor Details Matter Kiara Gormlie University of Notre Dame
16:45 – 17:00	Crossing Boundaries: Transferable Cell-Type Specific Biomarkers for Parkinson's Disease Diagnosis Jasmine Gu The University of Sydney	The Regeneration of an Australian Shrubby Woodland After Low and High Severity Fire Danielle Dexter University of New England	Mapping Decay: Thomas Ligotti's Fiction and the Decline of the American City Alex More University of Notre Dame
17:00 – 17:15	Quantifying Vertebral Morphology Asymmetries in Adolescent Idiopathic Scoliosis: A Case-Control Study Lachlan Andrews University of Queensland	Understanding the Air We Breathe: Chemical Analysis of Rainwater as a Proxy for Air Pollution Jack Henwood Swinburne University	How Depictions of Death and Negativity Impact Meaningful Media Choice Brandon Crotty Australian College of Applied Professions
17:30 – 20:00	Dinner @ Courtyard		

Tuesday 3 December – Day 2 of Conference

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08:15 – 08:50	Registration – for those attending Day 2 only - Foyer outside Messel LT (4002)		
08:50 – 09:20	Welcome to Day 2 Keynote Address – Professor David James (Charles Perkins Centre)		
09:20 – 10:00	Panel Discussion - The role of AI in Research - Pauline Ross (Facilitator), Angela Brew, Ben Miller, Adam Bridgeman, Sara Wardak		
10:00 – 10:30	Morning Tea incl. Poster Expo in Foyer		
10:30 – 12:00	Oral Presentations – Session 4		
	MLT (4002) Medicine/ Psychology	LG17 Technology/ Biology	LG18 Arts/Law
10:30 – 10:45	Comparative Efficacy of Psychological and Pharmacological Interventions for Chronic Pelvic Pain in Males Yuqi (Richard) Liu University of Queensland	Can AI Lead a Team? Exploring Communication, Movement Dynamics, and Compliance in Human-Autonomy Teaming Sigrid Seage & Daniel Somerville Macquarie University	Tipping the Scales: The Effects of Performance Monitoring and Metrics on Burnout, and the Role of Procedural Justice and Feedback Favourability Jemima F. Davis University of Queensland
10:45 – 11:00	The Effectiveness of a Video-Based Anti-Stigma Intervention for Reducing Stigma Toward Borderline Personality Disorder Gabriella Tiernan ACAP	Green Energy from Ground Bugs Zachary Cooper Swinburne University	How Timing of Knowledge of a Hidden Facility Dog Impacts Juror Perceptions and Decision-Making in Sexual Assault Trials Samantha Hamilton Macquarie University
11:00 – 11:15	Understanding How People Use Unidimensional Pain Scales: The Factors Influencing Simple Pain Ratings Jaden White The University of Sydney	Optimal Stopping Problems and Sequential Decision Making Rakshaiyan Somasundaram Macquarie University	Social Media as Cultural Artefact: Examining Museum Collection Practices in the Digital Age Eloise Cicero University of Queensland
11:15 – 11:30	Mobile applications to improve self-management practices in kidney disease and its risk factors: Are there any artificial intelligence-based tools? Afnaan Mohamad University of Queensland	Cost-Effective Robotic Solutions for Enhanced Productivity in Vertical Farming Ishraf Ismath Swinburne University	Infant Directed Speech: A Human Role AI Can't Replicate Aaliya Shakoor Western Sydney University
11:30 – 11:45	Development of Glycotherapeutics to Alleviate Chronic Inflammation Elena Ninkovic University of Queensland	Modifying The Predicted Secondary Structure of Huntingtin Exon 1 N-terminal Sequence Influences Its Aggregation and Neurotoxicity Jade Upton University of Queensland	The Anxious Eyewitness: Investigating How Anxiety and Confidence Impacts Eyewitness Identification Accuracy Renee Viveiros Macquarie University

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11:45 – 12:00	PeptAide: An ensemble approach for accelerating the discovery of antimicrobial peptides against priority pathogens Jiayi Lu The University of Sydney	Developing Stem Cell Models for Oligodendrocytes to Study Neurodegenerative Diseases In Vitro Jaime Vanek Swinburne University	Peaks of Twitter Activity: Investigating the Drivers of Viral Information Spread on Social Networks Tian Yi (Amy) Shi The University of Sydney
12:00 – 13:00	Lunch incl. Poster Expo in Foyer		
13:00 – 14:00	ACUR Annual General Meeting		
14:00 – 15:30	Oral Presentations – Session 5		
	MLT (4002) Psychology/Technology	LG17 Education	LG18 Medicine/Health
14:00 – 14:15	Assistants, Friends, and Lovers: Psychological Responses to AI Anne Dillon UNSW	Exploring Teacher Professional Identity in a Digitally Transforming Landscape Valerie Wong University of Queensland	Examining the Influence of Subjective Cognitive Decline and Educational Attainment on Dementia Risk Assessment Liam Andersson University of the Sunshine Coast
14:15 – 14:30	Exploring the Role of MHealth Technologies and Doctor-Patient Communication Styles for Women with Pre-existing Diabetes: A Qualitative Review Jia Thadani Western Sydney University	Educator Gesture Use and Infant-Educator Conversational Balance in Australian Long-Day Care Centres Claudia Bonaccorso Macquarie University	Targeting the leading cause of vascular dementia: 40Hz visual stimulation as a possible therapeutic for cerebral small vessel disease Patrick Wang University of Queensland
14:30 – 14:45	We Can Live and Adapt: An Interpretative Phenomenological Analysis of Carers' Outpatient Anorexia Nervosa Treatment Experiences Bailey Yoshia Macquarie University	Keeping Humans in the Loop: LLM Supported Oral Examinations Luke Glover Macquarie University	Understanding Tubulin Variants in Malformations of Cortical Development Ngoc Bao Chau Duong The University of Sydney
14:45 – 15:00	Assessing Cognitive Load during Multitasking Using Non-Linear Analyses Measures and Pose Estimation Edlyn Kim Macquarie University	Play (-) : On a Mimetic Politic Benjamin Nguyen Australian Catholic University	Spatial Mapping of Epithelial and Immune Cell Dynamics in the Gut Mucosa Abbey Waddington University of Queensland
15:00 – 15:15	Digitally Connected? Exploring whether negative social comparison and gratitude influence the relationship between social media use and loneliness Izzy de Lorm Macquarie University	AI in the Feedback Process of Undergraduate Thesis Writing: Benefits and Limitations Aaron Chakerian Macquarie University	Astrobubble: Modulating Immune Responses in Space with DNA Origami Nanostructures Premjai Vongvises The University of Sydney

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15:15 – 15:30	Walk In Their Shoes: Inspiring Indigenous Students into Healthcare Careers through Immersive 360-Degree Video Technology Sara Du The University of Sydney	Undergraduate nursing students' knowledge of lifestyle modifications and long-term complications of type 1 and 2 diabetes Jianne Lamadrid University of the Sunshine Coast	Biomarkers of Islet Cell Loss After Transplantation Riley Hayward Western Sydney University
15:15 – 15:45			A Narrative Review of The Acute and Long-Term Effects of Repeated Non- Concussive Impacts on Mental Health of Athletes Qijie Shen Edith Cowan University
15:30 – 16:00	Poster Expo – judging Afternoon Tea		
16:00 – 17:00	Closing Remarks Awards Thanks ACUR2025		

Venues:

Sydney Nanoscience Hub (A31) - Messel Lecture Theatre

Physics Road Learning Hub (CG1A): Seminar room LG17

Physics Road Learning Hub (CG1A): Seminar room LG18