MACQUARIE University | INCUBATOR

Meet our finalists!

Susan Caldis | Faculty of Arts
CoMAP

Dr Susan Caldis is a lecturer and early-career researcher in the Macquarie School of Education. Susan's research focuses on understanding how trainee teachers and early-career teachers navigate the complexities of transitioning from university into the teaching profession. Today, Susan will be sharing her research about out-of-field teaching (or teaching beyond subject specialisation), as a complexity of transitioning into the teaching profession. Susan will present 'CoMAP' as a research-informed solution to the perpetual problem of there being an absence of support structures to develop agency and capacity amongst graduate teachers who are required to teach beyond their specialisation. Susan is pitching not only for funding to develop CoMAP's for a range of subjects but also for input from industry as part of the co-design strategy.

Kevin Purnell | Faculty of Science & Engineering
Towards error-free Smart Legal Documents without Programmers

The 'Smart Document Editor' came about because of progress in using a declarative language to turn legal documents into computer programs, undertaken as research between 2019 and 2022. This research is still early-stage (only a proof-of-concept system has been built and applied to a few use-cases); however, the literature and peers suggest that the approach is promising and worth some outreach. The outreach may come in useful because our next step (building a prototype) will require more resources than we have. The team at this early stage is Kevin Purnell, a PhD student and his supervisors (Dr. Rolf Schwitter and Prof. Mehmet Orgun) from the School of Computing in the Faculty of Science and Engineering at Macquarie University. This pitch will describe the features and benefits of our approach to making legal documents into smart digital artefacts.

Patime Osman | Faculty of Science & Engineering
Gold Digger? Digging DEEP Project

Gold is an important precious metal in everyday life, such as electronics, satellites, personal happiness, etc. However, gold mining has problems such as sustainability. Today, Patime will propose to improve the ore-grade sensitivity to reduce the impact of environmental pollution. Her holistic approach to looking at the distribution of gold deposits will provide higher precision in determining the mining location and depth.

Ian Wood (pitching), Dali Kaafar, Michal Kepkowski, Nardine Basta and Conor Atkins | Faculty of Science & Engineering
Apate
Defeating Global Phone Scams with Conversational AI

Actively breaking the scamming business model. We aim to disrupt, expose and even scam the world's scammers. We design and deploy advanced conversational AI techniques to develop Adaptive AI bots, ensuring more scammers' time is wasted. At worst, we achieve a substantial reduction in scam calls. At best, scam calls are all but eradicated.

Sergey Tumanov (pitching) & Polina Nedoboy | The Heart Institute
Fluxomics

Dr Sergey Tumanov is the Project Lead for establishing Australia's first Fluxomics Centre for cardiovascular disease.
Dr Tumanov is a bioanalytical chemist with extensive experience in studying metabolism using mass spectrometry and stable isotope tracing.
Fluxomics is an innovative technology and an -omics member of systems biology that allows us to describe cellular metabolism as a process in time. Fluxomics relies on instrumentation such as mass spectrometry. The discovery power of Fluxomics comes with its ability to quantitatively describe metabolic changes in response to different stimuli: drug treatments, gene manipulations, or environmental changes. Fluxomics can be applied in biotech (biofuel, biohydrogen, biologicals, cultured meat, etc.) and biomed (metabolic diseases, drug targets, drug design, etc.) fields by providing a dynamic model of cellular metabolism.

Meet the judges!

Dan Bennett

Dan Bennett, a founder, investor, and trusted partner, goes beyond to uplift others for success. He co-founded Salus Ventures, influencing Australia's critical tech scene. As Managing Partner at OurCrowd, a global venture investor, he's been active for nearly a decade. Dan founded Safewill, a leader in Aussie legal tech. With 12+ years in VC and deep tech, he boasts extensive networks in Australia, UK, Israel, US, and Asia. He excels in spotting remarkable founders, backing startups like Advance Navigation, Instaclustr, Propeller, and Hailo. He also has a decade's experience in banking and law. Dan holds a Bachelor of Laws and Commerce from UNSW, and serves as a non-executive director in unlisted companies and non-profits. He's a passionate yogi and ocean enthusiast.

Prof. Lucy Marshall

Lucy Marshall, Engineering Professor and Executive Dean of Science and Engineering at Macquarie University, specializes in water resources engineering, focusing on hydrologic modeling and environmental uncertainty. Her work extends from heavily instrumented US watersheds to ungauged Australian catchments. Passionate about inclusive STEMM education, she mentors future leaders in innovation. Lucy earned her degrees at UNSW, and worked at Montana State University before returning to UNSW as a Future Fellow. She held various leadership roles, including Associate Dean and Water Research Centre Director, and joined Macquarie University as an Executive Dean in 2022.

Dr. Zachary Smith

Zachary Smith is Director of Algorithms & Applications at Cochlear Ltd, where he leads teams of hearing scientists, data scientists, and research engineers at multiple sites in Australia. Zach received his PhD from the Harvard-MIT Division of Health Sciences and Technology and additional postdoctoral training at the Johns Hopkins School of Medicine. He is an Honorary Adjunct Fellow at Macquarie University Hearing and an international expert on algorithms for cochlear implants. Zach is an inventor on 34 patent families and is continuously on the lookout to translate new research findings into solving commercial problems.

Prof. Dan Johnson

Dan Johnson, with extensive experience in research, development, and innovation, led The Australian Wine Research Institute for nearly a decade. Now at Macquarie University, he is the Pro Vice-Chancellor of Research, Innovation, and Enterprise. Dan excels in strategic leadership, with a proven track record in raising and managing over $300 million for research, startups, and venture capital. He's been instrumental in establishing nine startups and holds an impressive publication record. Dan holds an MBA from the University of Adelaide, and a PhD and Bachelor of Science (Hons) from Flinders University. He's a graduate of the Australian Institute of Company Directors and has completed courses at Harvard, INSEAD, IESE, and Oxford.

Hear what our previous participants have said about the IMPACT Program!

"I'd recommend the research impact course to other academics in any faculty. It was the catalyst to get me to do what I had been thinking about doing... it also helped re-shape the significance of research beyond publications and to value these as outcomes for impact and of value to a wider public."

– Ray Laurence, 2022 IMPACT Program Pitch Final Winner | Founder of Ancient Rome in Motion

"The IMPACT program gave me a conceptual framework for thinking about an idea and going through a systematic but also quite fluid and iterative process to determine where it might be useful. It provided me with an entirely new way of thinking about impact."

– Wendy Lipworth, 2022 IMPACT Program Pitch Final Runner Up | Founder of Attest

Scan to learn more about the IMPACT Program!

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