Australian Government
Department of Education

National Industry PhD Program

National Industry PhD Program

Round 4 2024 – Successful Projects

Application No.	Stream	Project Title	Project Description	Field of Research	Participating University	Industry Partner/s	State	No. of PhD Awards
36385	Industry Linked	Leveraging Artificial Intelligence and Camera-Based Markerless Motion Capture for Enhanced Athletic Performance and Injury Prevention	We will validate and enhance the use of artificial intelligence and two-dimensional motion capture for assessing human movement to provide a rapid, cost-effective method to enhance performance and minimise injury risk which will improve Australia's health and wellbeing.	Human Movement	Australian Catholic University	VueMotion Operations Pty Ltd	NSW	1
36434	Industry Linked	"RetainAble": Improving the retention and progression of employees with disabilities in small and medium-sized organisations in Australia	By examining the diverse perspectives of employees with disabilities in small and medium-sized businesses, this project will address the challenge of retaining the talent of employees with disabilities in the Australian workforce to improve their retention and progression.	Human Resource Management	Australian Catholic University	Asuria	NSW	1
36281	Industry Linked	Enhancing Human-Machine Teaming in Defence through Artificial Intelligence-Driven Collaboration	By leveraging AI-driven collaboration frameworks, we will revolutionise the interaction between human operators and autonomous systems in defence and enhance decision-making, situational awareness, and operational efficiency and support Australia's goal of becoming a global leader in technology and defence.	Information Systems, n.e.c.	Charles Sturt University	Hilmax Solutions Pty Ltd	NSW	1
36442	Industry Linked	Stakeholders' perspectives of strategies to embed a culturally tailored iSupport model for carers of people with dementia in community aged care services	Carers from culturally and linguistically diverse (CALD) groups experience structural discrimination in the social care system where high-quality dementia skill training and support programs in their preferred language and culture are not	Aged Care Nursing	Flinders University	Murray Mallee Aged Care Group	SA	1

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			available or accessible. We will explore stakeholders' perspectives of strategies to embed a culturally tailored iSupport model of care in routine ethno-specific aged care services.					
36449	Industry Linked	Optimising prenatal folic acid supplementation to reduce postnatal depression: an evidence-based precision approach to nutrient supplementation during pregnancy	Postnatal depression affects over 60,000 Australian women and their children each year. We will determine if women randomised to prenatal supplements with or without Folic Acid (FA) after the first trimester alters their risk of developing postnatal depression and whether their genetic profile moderates the effect of FA on depression.	Community Health	Flinders University	Factors Group Australia Pty Ltd	SA	1
36277	Industry Linked	Synthetic and Biodegradable 3D Printed Membranes for Guided Bone Tissue Regeneration	We will develop a barrier membrane that minimizes the need for invasive medical interventions in the treatment of gum disease. This innovation aims to support the three in ten Australians affected by gum disease, improving both clinical outcomes and overall health and well-being.	Manufacturing Engineering	La Trobe University	More Group Pty Ltd	VIC	1
36371	Industry Linked	The use of objective technologies to measure carcass composition in pork and estimate its retail value	A key profit driver within the pork industry is the amount of saleable meat, which varies due to variation in carcass fatness between carcasses of the same weight. We will compare the predictability of computed tomography (CT) and fat depth (P2) measurements to estimate commercial cut weights and saleable meat yield to establish which trait (P2 or CT) best reflects carcass value.	Agriculture, Environmental and Related Studies, n.e.c.	Murdoch University	Craig Mostyn & Co Pty Ltd	WA	1
36293	Industry Linked	Contextual Abnormal Gaze for Driver Monitoring Systems	Driver Monitoring Systems are the next frontier in reducing road vehicle crashes on Australian roads. Such systems aim to detect when drivers are not observing the road as they should. Our research will use novel deep learning techniques	Artificial Intelligence	Queensland University of Technology	Seeing Machines Pty Ltd	QLD	1

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			for next-gen Driver Monitoring Systems that improve the detection of abnormal eye gaze behaviour in relation to specific diverse driving scenarios. This will enable early warnings for factors like distraction, fatigue or daydreaming.					
36323	Industry Linked	Patient-specific optimal implant size prediction in Reverse Shoulder Arthroplasty using preoperative planning tools enhanced by numerical analysis & AI	Worldwide, approximately 10% of shoulder replacement procedures require revision which involves removing failed surgical implant components. This research will develop a fast-paced AI-based preoperative planning tool to predict optimal stem length and position for Reverse Shoulder Arthroplasty patients to improve implant choices, reduce failure rates, and enhance patient outcomes.	Mechanical Engineering	Queensland University of Technology	Akunah Medical Technologies (Akunah)	QLD	1
36336	Industry Linked	Dual Attention Alignment for Safer Automated Driving and Enhanced Driver Readiness	This project aims to enhance the safety and functionality of automated driving systems (ADS) through dual attention alignment. This involves comparing and aligning the attention of the ADS with that of the human user, and exploring how this process can benefit both, particularly in the context of Australian highways and lane-keeping tasks. This collaboration will advance human-machine interaction and contribute to a safer introduction of ADS in Australia.	Artificial Intelligence	Queensland University of Technology	Seeing Machines Pty Ltd.	QLD	1
36300	Industry Linked	AI-empowered microgrid control systems	Recent research shows that microgrids can increase energy efficiency by as much as 60% when properly utilized. This collaboration will develop AI-driven algorithms capable of optimizing microgrid performance by leveraging vast operational data, ensuring grid stability, minimizing costs, and maximizing revenue generation.	Electrical Engineering	RMIT University	OpusV Tech Group Pty Ltd	VIC	1

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36364	Industry Linked	Intelligent Online Control and Energy Management for Vehicle-to-Home Integration	The uptake of Electric Vehicles (EVs) is ramping up in Australia. EVs can be connected to homes through vehicle-to-home capability where their batteries can be discharged back to home when needed. We will look to optimise the interaction between EVs and home energy systems, such as solar panels and battery storage, to significantly improve energy efficiency and grid stability.	Electrical Engineering	RMIT University	ADL Building Services (Applied Solar Energy trade mark)	VIC	1
36464	Industry Linked	Unraveling the Genetic Basis and Molecular Mechanisms of Rice Glycemic Index to Develop Low GI Varieties with Enhanced Texture	This collaboration will develop rice varieties with low and ultra-low glycemic index for integration into Australian rice breeding programs. Giving Australians access to healthier varieties of rice, adapted to Australian conditions, that can help mitigate the risk of type II diabetes and related health issues, while meeting consumer preferences.	Agriculture, n.e.c.	Swinburne University of Technology	Rice Breeding Australia Ltd.	VIC	1
36400	Industry Linked	Techno-Economic and Optimisation of a Zero-Emission Power Production System Using fuel cells and green ammonia	Australia's favourable solar radiation makes it an ideal location for producing hydrogen as a renewable energy carrier. Converting hydrogen to ammonia offers a promising solution for more efficient storage and transport. This research will determine the optimal integration of an ammonia cracking reactor with fuel cells, with a focus on energy conversion and seeks to identify the most efficient and cost-effective method to combine these technologies for electricity production.	Mechanical Engineering	The Australian National University	Cavendish Renewable Technology	ACT	1
36419	Industry Linked	Nanowire breath sensors for metabolic health diagnosis and monitoring of animals	This collaboration will develop sensors for diagnosing and monitoring metabolic health in livestock and other animals, reducing related costs, improving animal welfare, and making significant contributions to Australia’s agriculture industry and the growing pet care market.	Electrical Engineering	The Australian National University	Agscent Pty Ltd	ACT	1

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36435	Industry Linked	Femtosecond laser application in dentistry	This collaboration will investigate femtosecond laser-driven repair options in dental settings and characterise hard and soft tissue removal, leading to minimally interventional procedures with greater precision and outcomes.	Dentistry	The Australian National University	Dentroid Pty Ltd	ACT	1
36421	Industry Linked	Reinforcement learning for accurate, online price prediction in the Australian National Electricity Market	This collaboration aims to develop an AI-driven model of the bidding behaviour of generators and storage assets in the Australian National Electricity Market. This model will be used to increase market transparency and improve electricity price prediction, thereby enhancing resource allocation and contributing to a more efficient electricity market that delivers lower prices for consumers.	Artificial Intelligence	The University of Adelaide	OptiGrid Pty Ltd	SA	1
36424	Industry Linked	Unified approach for price prediction and battery operation in the Australian National Electricity Market	This collaboration aims to develop a unified model that combines market forecast and operation optimisation of grid-connected batteries in a single framework using end-to-end learning. This research can improve the economics of large-scale batteries in the Australian grid by enabling them to maximise their revenue. Efficient battery operation also helps stabilise the grid, facilitate more renewables, and accelerate Australia's progress toward achieving fully renewable power grid.	Artificial Intelligence	The University of Adelaide	OptiGrid Pty Ltd	SA	1
36473	Industry Linked	Advancing Signal Modelling with Physics-Informed Neural Networks	This collaboration will develop Physics Informed Neural Networks for more efficient modelling in areas such as weather prediction, signal tracking, fluid dynamics, and space exploration.	Natural and Physical Sciences, n.e.c.	The University of Adelaide	Advanced Systems and Technologies (AST), Lockheed Martin Australia	SA	1
36356	Industry Linked	AI-assisted Multiscale Simulation Framework for Intentional Design of Dental Restorative Materials (Multiple Application)	Advances in dental restorative materials play a critical role in addressing challenges associated with their clinical application, longevity, and biosafety. A chemistry-informed framework for the design and development of new restorative dental	Materials Engineering	The University of Melbourne	SDI Limited	VIC	1

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			products based on glass reinforced resin composites. This collaboration will look at Machine Learning-accelerated experimental studies of filling material/tissue interactions and pulpal responses.					
36397	Industry Linked	AI-assisted Multiscale Simulation Framework for Intentional Design of Dental Restorative Materials (Multiple Application)	This collaboration will develop a chemistry-informed framework for the design and development of new restorative dental products. The research will address challenges associated with clinical application, longevity, and biosafety of dental restorative materials.	Materials Engineering	The University of Melbourne	SDI Limited	VIC	1
36398	Industry Linked	AI-assisted Multiscale Simulation Framework for Intentional Design of Dental Restorative Materials (Multiple Application)	Advances in dental restorative materials play a critical role in addressing challenges associated with their clinical application, longevity, and biosafety. This collaboration will develop a chemistry-informed framework for the design and development of new restorative dental products.	Materials Engineering	The University of Melbourne	SDI Limited	VIC	1
36307	Industry Linked	Metabolic modelling of microbial co-cultures for biotherapeutic production	This research will develop a comprehensive co-culture metabolic model to explain cell growth and associated metabolic behaviour to assist in the treatment of gut-related diseases such as irritable bowel syndrome and Crohn's disease.	Chemical Engineering	The University of Queensland	Sacco System	QLD	1
36311	Industry Linked	Design and manufacturing of next-generation ultra-stable peptide radiotracers for precision diagnosis and therapy	Molecular targeted radiation has emerged as a powerful way of providing real-time quantifiable information on tissues previously unachievable through invasive biopsies of small tissue samples. This collaboration will engineer new targeting molecules for accurate localisation of tumours in the body and rapid clearance to lower exposure of the radiation.	Biochemistry and Cell Biology	The University of Queensland	Telix Pharmaceuticals	QLD	1
36337	Industry Linked	Leveraging AI to automate Open-Source workflow application development	This PhD project aims to revolutionise AI code generation by targeting the creation of workflow applications, significantly enhancing developer productivity. While current AI tools are limited in	Artificial Intelligence	University of Canberra	NetApp Australia Pty Ltd	ACT	1

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			scope, this project focuses on leveraging the "durable function" style of workflow execution provided by the Cadence workflow engine, known for its maintainability, scalability, and reliability in stateful applications. The project addresses the time-consuming challenge of porting existing applications to this superior approach by developing an AI-driven platform for automated workflow generation, microservice discovery, and codebase migration. By making this tool open source, the project seeks to foster wider adoption and collaboration, ultimately designing viable automation solutions with practical industry applications. Key components include Cadence, Python, TensorFlow, Apache Cassandra/PostgreSQL, Docker, Kubernetes, and RESTful APIs.					
36283	Industry Linked	Advancing Keyhole Joint Surgery through 2D-to-3D Video Conversion with High Accuracy and Low Latency	This collaboration will enhance arthroscopy, a keyhole joint surgery performed on over 50 million patients annually, by developing an advanced technique to accurately convert 2D videos into 3D in a robot-assisted arthroscopy. This will allow surgeons to navigate anatomical structures in three dimensions with accuracy and without significant delay.	Biomedical Engineering	University of New South Wales	CONVERGENCE MEDICAL PTY LTD	NSW	1
36367	Industry Linked	Recyclable Bio-based Polymers for Sustainable Water and Wastewater Treatment	For decades, the water industry has used flocculants including metal salts and synthetic polymers to aggregate and remove contaminants from water. This collaboration will create novel, sustainable flocculants to enhance contaminant removal, lower dose requirements, toxicity and sludge volumes, leading to more sustainable and	Chemical Engineering	University of New South Wales	Harrison SPARC	NSW	1

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			improved water treatment processes, and enhanced public health and safety.					
36445	Industry Linked	High-dimensional Transformation of Healthcare Data to Identify Private Health Insurance Members at Risk of Hospitalization from Chronic Diseases	Chronic diseases impose the largest burden on Australia's healthcare system. This collaboration will develop AI models using Hospital Casemix Protocol data to help Private Health Insurances identify at-risk members and target them with Chronic Disease Management Programs effectively, reducing hospitalisations due to chronic diseases.	Artificial Intelligence	University of Newcastle	Honeysuckle Health	NSW	1
36457	Industry Linked	Development and manufacturing of an indocyanine green nanoformulation towards improved intraoperative fluorescence-guided surgery of pancreatic tumour	While surgeons are increasingly using fluorescent agents and surgical cameras for guidance during solid tumour removal, currently there are no agents clinically approved for pancreatic cancer. This collaboration will explore fluorescent agents with high binding specificity to pancreatic tumours to enable surgeons to distinguish tumour tissues more precisely, leading to improved surgery and consequently patient outcomes and survival.	Organic Chemistry	University of South Australia	Ferranova	SA	1
36395	Industry Linked	Using ocean observations from fishing vessels in the Australian tuna longline fishery to elucidate the catchability of commercially valuable fish under climate change	The Australian tuna industry contributes ~$185 million to the economy annually. However, Australian fish populations are affected by the changing climate. This collaboration will use new ocean data streams from fishing vessels and regional ocean models to build ecological data products to inform industry and management authorities of the effects of environmental variability on the catchability of commercially valuable tunas.	Marine Science	University of the Sunshine Coast	Tuna Australia	QLD	1
36291	Industry Linked	Development of a novel pharmacological therapy for treating methamphetamine addiction	This research will develop a non-hallucinogenic drug inspired by the neural mechanisms of psychedelics for the treat methamphetamine addiction, offering a novel approach for a	Medical Studies, n.e.c.	The University of Sydney	Psylo Pty Ltd	NSW	1

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			condition with no approved therapies. Success in this area could establish the first effective treatment, benefiting patients, advancing scientific knowledge, and supporting innovation in biotechnology.					
36324	Industry Linked	Diminishing the carbon emissions of mines: Green manufacturing of high performance thin bimetals for lightweight mining equipment	This collaboration is the first to use water-based nanolubricants in the manufacturing of thin bimetals for lightweight mining equipment in Australia. The resulting bimetals will protect the environment while enhancing the durability and reducing the weight of these materials, decreasing operating costs and limiting the physical strain imposed on operators.	Manufacturing Engineering	University of Wollongong	Azure Mining Technology Pty Ltd	NSW	1
36359	Industry Linked	Improving coastal management in NSW using the sediment compartment approach	This collaboration will develop a novel approach to predict the volume, movement, and distribution of sediment along the NSW coast due to sea-level rise, extreme storms and coastal erosion. The approach will help governments manage these significant hazards through reliable Coastal Management Programs that inform coastal actions and decisions.	Natural and Physical Sciences, n.e.c.	University of Wollongong	NSW Department of Climate Change, Energy, the Environment and Water Biodiversity, Conservation and Science Group	NSW	1
36313	Industry Researcher	A Predictive Model for Thermal Control in Precast T-Beam Concrete Utilizing Green Concrete and Achieve Early Stripping Strength	This collaboration will evaluate core temperature in concrete T girder end blocks and develop a green concrete mix to lower temperatures and optimise early strength. The project outcome will enhance concrete durability, improve production efficiency, and reduce carbon emissions in precast beam manufacturing.	Construction Engineering	Charles Darwin University	ALL Cast NT	NT	1
36448	Industry Researcher	Physics-informed Deep Reinforcement learning towards	This collaboration will develop an innovative, physics-informed deep reinforcement learning framework for modelling and optimising mineral	Artificial Intelligence	Deakin University	Molycop	VIC	1

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		Sustainable Mineral Process Modelling and Optimization	processing. By integrating domain-specific physical principles, this framework enables accurate data-driven dynamical modelling and intelligent decision-making. It will support the mining industry's digital transition, enhance productivity, energy efficiency, and sustainability, while reducing Australia's emissions and strengthening global competitiveness.					
36450	Industry Researcher	Creating a triple bottom line evaluation framework to support health decision makers transition appropriate services to virtual delivery models	This collaboration will develop a framework to assess the economic, social, and environmental impacts of virtual health services to support better decision-making in health systems, enabling clinically appropriate transition to low-carbon care delivery models.	Health, n.e.c.	Flinders University	Healthdirect Australia	SA	1
36348	Industry Researcher	What is the association between health literacy and the experience of injury and illness in professional rugby league, and can it be changed?	This collaboration will investigate how health literacy in professional rugby league players relates to their experience of injury and illness. Enhancing players' health literacy will improve their well-being, inform health decisions, and boost both individual and team performance.	Health Promotion	Griffith University	Titans Rugby League PTY LTD	QLD	1
36379	Industry Researcher	Designing Eco-Pods for Off-Grid Sustainability in Diverse Climates	This research will develop self-sufficient, off-grid eco-pods adaptable to various climates by integrating advanced building technologies and design. Supporting efforts to address Australia's housing crisis, it will offer sustainable, energy-independent housing solutions that will reduce environmental impact and can be scaled for regional housing needs.	Architecture	Griffith University	EPIC DESIGN CO PTY LTD	QLD	1
36263	Industry Researcher	Genetic Diversity and Coral Resilience Across Reef Environments	This collaboration will explore the impact of genetic diversity on coral resilience during restoration and natural bleaching events to identify optimal gene pools for reef restoration. It will also advance effective restoration techniques,	Marine Science	Macquarie University	Australian Institute of Marine Science	NSW	1

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			supporting coral adaptation to climate change, and enhance Australia's large-scale reef conservation efforts.					
36276	Industry Researcher	Social Cohesion, Racism and a Framework for Australia	This research will provide a critical review of Australian anti-racism approaches with the intent of developing a new framework to address social cohesion in a culturally diverse society. By understanding the fears behind perpetrators of discrimination, it will contribute to enhancing anti-racism strategies and fostering more effective responses to combat cultural discrimination.	Sociology	Monash University	Scanlon Foundation Research Institute	VIC	1
36286	Industry Researcher	Towards Automated, Generalised and Flexible Bone and Joint Measurements	This collaboration will investigate innovative machine learning and computer vision techniques, alongside the world-leading weight-bearing CT scanners, to automate and standardize bone and joint measurements for improved musculoskeletal disease diagnosis and surgical planning. This will reduce workload for healthcare professionals, enhance diagnostic precision, and improve patient care through reliable data support for clinical decision-making.	Artificial Intelligence	Monash University	CurveBeam AI Ltd	VIC	1
36285	Industry Researcher	Developing Metrics, Analytics, and Guidelines for Successful Business Transformation	This collaboration will develop a comprehensive set of metrics, analytics, and guidelines to assess and enhance the effectiveness of interconnected business transformation initiatives. Outcomes will include helping achieve transformation objectives more efficiently, reducing costs, and enabling further study into sustainable business transformation in complex environments.	Information Systems, n.e.c.	Queensland University of Technology	Weir Minerals Australia	QLD	1
36365	Industry Researcher	Pioneering Studies for the Detection of Paracetamol Misuse in Racing Animals: Improved Integrity and Animal Welfare	This research will develop new methods to identify paracetamol misuse in racing animals, and address gaps in doping control within the Australian equine and canine industries. It will enhance industry	Organic Chemistry	The Australian National University	Racing Analytical Services Ltd	ACT	1

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			integrity, improve animal welfare, and establish an integrated platform to monitor emerging substances of concern.					
36368	Industry Researcher	Use of instrumentation to characterise plant-based meat analogues (PBMA) and develop flavour improvements to drive purchase intent	This collaboration will investigate the flavour, taste, and colour attributes of plant-based meat analogues (PBMAs) primarily made from soy to address issues like taste, off-flavours, and colour discrepancies and produce more attractive PBMAs that meet consumer demands while ensuring a cost-effective and efficient supply chain.	Food Science and Biotechnology	The University of Adelaide	v2food	SA	1
36289	Industry Researcher	Pilot-Scale All-Iron Flow Battery Test Rig Development	This collaboration will develop an all-iron redox flow battery (IRFBs) pilot-scale test rig to show performance and scalability of long-term energy storage. The outcomes include reduced production costs, enhanced energy density, and improved efficiency, along with supporting carbon reduction goals.	Chemical Engineering	The University of Queensland	Energy Storage Industries Asia Pacific	QLD	1
36297	Industry Researcher	Targeted Alpha Therapies and Biological Responses: Improving Prognostic Power and Regimen Design	Targeted alpha-therapies (TATs) offer precise, localised cancer treatment by delivering potent radiotherapeutics with minimal side-effects. This collaboration will advance our understanding of biological responses to TATs, leading to improved dosing strategies and real-time feedback, enhancing patient outcomes and providing new prognostic tools.	Health, n.e.c.	The University of Queensland	Advancell Isotopes Pty Ltd	QLD	1
36329	Industry Researcher	Prospective analysis of para swimming- investigating talent identification, talent development and the impact on impairment and performance	This collaboration will investigate talent identification and development in para swimmers, especially athletes with high support needs, to build pathways from community participation to high performance. It will strengthen para sport by enhancing inclusive sports participation, addressing knowledge gaps in talent development,	Human Movement	The University of Queensland	Swimming Australia	QLD	1

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			and boosting Australia's medal potential in swimming.					
36292	Industry Researcher	Development of new drug candidates against brain tumours	This collaboration will focus on creating new drug candidates to target chemotherapy resistance in glioblastoma. The development of these inhibitors will lead to new treatment options, offering hope for improved outcomes in glioblastoma and advancing research in cancer therapeutics.	Pharmacy	The University of Sydney	Syntara Limited	NSW	1
36321	Industry Researcher	Why did critical metals form at Gonneville: the key to unlocking a new critical metal deposit and a new critical metal province?	This research will investigate the formation of critical metal deposits to help enhance the discovery potential of more deposits in Western Australia's underexplored southwest. By refining processing models, it will mitigate financial risks from exploration to mining, supporting a reliable domestic supply of essential metals for Australia's energy transition.	Geology	The University of Western Australia	Chalice Mining Limited	WA	1
36408	Industry Researcher	The development and validation of a novel ultrasound-based device that improves visualisation and selection of peripheral vessels to aid in cannulation	Intravenous catheter cannulation is essential, with 90% of inpatients requiring one, however, 40-50% of first attempts fail. This collaboration will develop a novel, accurate, ultraportable, easy to use ultrasound device that enables visualisation and selection of veins for cannulation, and providing crucial vein pathway information.	Biomedical Engineering	The University of Western Australia	VeinTech Pty Ltd	WA	1
36428	Industry Researcher	Application of Integrated Behaviour Models in Cyber-Physical Systems	This collaboration will enhance the resilience of cyber-physical machines through improved cybersecurity practices. By integrating qualitative and quantitative methods, it will support rapid capability development, foster collaboration, and strengthen digital asset management across industry and government.	Information Systems, n.e.c.	University of Canberra	Kompozition Pty Ltd	ACT	1
36260	Industry Researcher	Developing a Framework for Assessment Practices in STEM Higher Education	This project will create a STEM Assessment Framework for higher education in Australia, enhancing assessment practices to accurately	Teacher Education:	University of New South Wales	Australian Council for	NSW	1

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			measure students' knowledge and skills. By improving assessment relevance and accessibility, especially in a post-pandemic landscape influenced by generative AI, it seeks to boost student engagement, degree attainment, and the quality of STEM graduates.	Higher Education		Educational Research		
36427	Industry Researcher	Techno-Economic Modelling of Printed Solar to Identify Commercialisation Pathways for Industry	This collaboration will focus on assessing the economic feasibility of Printed Solar, an alternative photovoltaic technology, through a comprehensive analysis spanning the full lifecycle. By identifying cost drivers and market opportunities, this will support Australia's transition to domestically manufactured solar solutions, reducing import reliance and strengthening local industry.	Manufacturing Engineering and Technology, n.e.c.	University of Newcastle	Kardinia Energy	NSW	1
36305	Industry Researcher	The use of low carbon composite binders to improve the carbon sink potential of concrete	This project investigates the carbon sink potential of innovative 'green' concrete that uses low carbon emission clay cement and will address knowledge gaps in the long-term CO2 absorption of alternative binders. By developing accelerated CO2 mineral carbonation curing technology, the project will evaluate whether we can enhance carbon absorption throughout the concrete's lifecycle, supporting Australia's emissions reduction goals.	Structural Engineering	University of South Australia	Adbri Cement	SA	1
36420	Industry Researcher	Bridging the confidence gap of additive manufactured parts in a maritime environment through material and process qualification	This collaboration will investigate manufacturing process complexities to enhance the qualification and certification of metal Additive Manufacturing for maritime applications. By generating reliable data on heat transfer, defect detection, and metallography, it will boost industry confidence and adoption of the innovative technology within the supply chain for submarine construction and maintenance.	Manufacturing Engineering	University of South Australia	ASC Pty Ltd	SA	1

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36431	Industry Researcher	Addressing Australia's healthcare workforce crisis: development of a competent and safe healthcare professions workforce	This project will enhance the implementation of Entrustable Professional Activities in healthcare training and provide a structured framework for trainee assessment and development. This will help address the critical shortage of healthcare workers by filling existing research gaps and ensure safe and effective trainee progress.	Work Practices Programmes	University of South Australia	Statewide Clinical Support Services, Central Adelaide Local Health Network	SA	1
36403	Industry Researcher	Developing a multidisciplinary model of survivorship care for Australian men with prostate cancer on active surveillance	This collaboration will develop a multidisciplinary care model for men undergoing active surveillance for prostate cancer, underpinned by best practice principles of prostate cancer survivorship care. By improving adherence to active surveillance protocols, the model aims to enhance quality of life and reduce health-service costs associated with this prostate cancer treatment.	Health, n.e.c.	University of Southern Queensland	Prostate Cancer Foundation of Australia (PCFA)	QLD	1
36410	Industry Researcher	The Innovative Application of Artificial Intelligence to Project and Portfolio Management Solutions: Enhancing Project Success	This research will develop and evaluate proof-of-concept applications to demonstrate how AI can enhance project success in project and portfolio management solutions. This project will address current management shortcomings and improve project outcomes, reduce failure rates, and provide substantial financial benefits across various industry sectors.	Artificial Intelligence	University of Southern Queensland	Sensei Productivity Pty Ltd, trading as Sensei Project Solutions	QLD	1
36414	Industry Researcher	AI-powered Design and Optimisation of PolyFeed/PolyGeneration Plant to Convert Coal/Biomass into Sustainable Low-Carbon Fuels	This collaboration will combine advanced chemical engineering with AI and machine learning to improve resource efficiency, reduce environmental impact, and enhance the economic viability of low-carbon fuels.	Process and Resources Engineering, n.e.c.	University of Southern Queensland	Verbrec Australia Pty Ltd	QLD	1
36411	Industry Researcher	Advanced structural systems for prefabricated residential building envelopes utilising engineered wood products sourced from low-grade forest resources	This project will explore and develop refined structural systems that enhance construction efficiency and resource utilization. It will support Australia's net-zero targets by increasing carbon sequestration, reducing embodied energy,	Building Science and Technology	University of Tasmania	FH Management Pty Ltd, Trading as Valley Workshop	TAS	1

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			improving thermal efficiency, and lowering design and construction costs.					
36396	Industry Researcher	Impacts of Autonomous and Connected Vehicles on congestion: Closed networks controlled by adaptive traffic signals	The project will investigate two-way communication between Connected Autonomous Vehicles (CAVs) and Traffic Signals (Vehicle to Infrastructure – V2I communication) on approach to closed network systems. Vehicle flow rates, approach speeds and signal green times will be optimised across multiple entry points to reduce travel times and delays across the system. Thus, combining adaptive traffic signals with V2I communications can reduce; greenhouse gas emissions, and improving road network reliability and safety, especially in the context of managed motorway systems.	Automotive Engineering	University of Technology Sydney	PITT & SHERRY (OPERATIONS) PTY. LTD	NSW	1
36399	Industry Researcher	Wireless Connectivity for Autonomous Vessels	This research will assess the potential of fifth-generation cellular networks to support communication among autonomous vessels. The outcomes include evaluations of current telecommunications technologies, requirements for wireless connectivity in autonomous vessels, and the development of a model to explore the benefits and challenges of 5G technologies in this domain.	Communications Technologies	University of Technology Sydney	Navantia Australia Pty Ltd.	NSW	1
36401	Industry Researcher	Supporting Autonomous Landing Craft Operations: Situation-Aware Unmanned Surface Vehicle (USV) Navigation Through Multi-View Representation Learning	This project will develop a robust navigation system for unmanned surface vehicles, support the collaborative detection of objects and obstacles under varying weather and sea conditions and optimize navigation in congested waters. This will enhance Defence operations in key environments and improve transportation technologies in Australia by leveraging advanced computer vision	Computer Engineering	University of Technology Sydney	Navantia Australia Pty Ltd.	NSW	2

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			techniques for target classification in challenging conditions.					
36430	Industry Researcher	AI-Driven Smart Transportation Optimization: EV Fleet Operation and Resilience Management	This collaboration will revolutionise Electric Vehicle fleet management by integrating AI to enhance real-time maintenance planning and operational efficiency. This will reduce emissions, improve resource utilization, deliver smarter routing to alleviate traffic congestion, enhance grid management, lower operational costs, and increase fleet reliability and resilience.	Artificial Intelligence	University of Technology Sydney	NEC Australia Pty Ltd	NSW	1
36452	Industry Researcher	Affordable Housing for Marginalised Communities; Development and application of an alternate funding model for social impact investing	This project will transform large-scale housing development by integrating impact investing and the UN Sustainable Development Goals into innovative funding models. It will enhance economic and housing outcomes for marginalised communities while contributing to broader discussions on social, economic, and environmental transformation through inclusive funding practices.	Mixed Field Programmes, n.e.c.	University of Technology Sydney	Global Impact Initiative	NSW	1
36381	Industry Researcher	Design and develop a secure Digital Employment Medical Passport (DEMP)	This research will develop a Digital Employment Medical Passport to enhance the efficiency, security, and accessibility of occupational medical assessments. This will significantly reduce costs and improve productivity for employers while providing substantial economic benefits to employees and enhance overall workforce mobility and safety.	Information Systems, n.e.c.	University of Wollongong	Sample Assist	NSW	1

Application No.	Stream	Project Title	Project Description	Field of Research	Participating University	Industry Partner/s	State	No. of PhD Awards
36257	Industry Researcher	Improving care of people in mental health crisis: Co-design of an educational program to support mental health professionals' capacity to manage without police response	This collaboration will critically examine the factors leading mental health professionals to call police during crises and develop innovative solutions to reduce these responses. By building capacity in the mental health workforce, the project will lower the risk of critical incidents, enhance community safety, and alleviate pressure on police services.	Occupational Therapy	Western Sydney University	Mental Health Commission of New South Wales	NSW	1