

# Successful recipients of the Australia-Germany Joint Research Cooperation Scheme 2023

Australian University	Project Title	German University/Institution
Deakin University	On developing a smart roll forming process for manufacturing lightweight automotive structure	Technical University of Darmstadt
James Cook University	Modelling plasma devices on femtosecond to millisecond timescales for compact particle-accelerator applications.	Deutsches Elektronen-Synchrotron-Hermann von Helmholtz Association of German Research Centres
La Trobe University	Adaptation capacity and action: Sub-national government responses to climate change	University of Freiburg
Macquarie University	Ocean Decarbonizing Technologies under International Law (DecarbLaw)	University of Hamburg
Macquarie University	Bridging the academic-practitioner gap: A comparative study in Australia and Germany	University of Bremen
Macquarie University	Accelerating Large Model Training with Preserved Data Privacy	The University of Göttingen
Monash University	Elucidating alterations in inter-organ crosstalk in chronic kidney disease	Heinrich Heine University
Monash University	Development of multimodal theranostic radiopharmaceuticals	Helmholtz-Zentrum Dresden-Rossendorf
Monash University	Development of multimodal theranostic radiopharmaceuticals	Humboldt University of Berlin
Queensland University of Technology	Open world perception for robotics in the age of vision-language models	University of Wuppertal
Queensland University of Technology	Neuromorphic sequential learning for visual place recognition	Technical University of Munich
Queensland University of Technology	'Life under Pressure (LivUP)' – mechano-optical assessment of neuro-cranium biophysical properties from shallow- and deep-sea sharks	Friedrich Alexander University of Erlangen-Nuremberg
RMIT University	inQBATE - Integrated quantum photonics in thin-film lithium niobate	Friedrich Schiller University Jena

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Swinburne University of Technology	Modelling and optimisation of hydrogen refuelling infrastructure for heavy duty mobility	Center of Energy Technology (ZET)
Swinburne University of Technology	Personalised mental health: Empowering patients through integration of smartphone self-monitoring with mental health care	Charité – Universitätsmedizin Berlin
The Australian National University	Improving micropollutant and inorganic pollutant removal from water supplies via molecular dissection of their transport in nanofiltration membranes	Karlsruhe Institute of Technology
The Australian National University	Higher-order nonlinearities in metasurfaces	Paderborn University
The Australian National University	Enhancement of laser guide star technologies for astronomy and satellite optical communications	Johannes Gutenberg University Mainz
The Australian National University	Chiral metaphotonics for sensing and nonlinear optics	Ludwig Maximilian University Munich
The Australian National University	Intercomparison and Integration of approaches to estimate fuel moisture content for fire danger assessment (2I Fuel)	Dresden University of Technology
The Australian National University	Data integration and federated learning for individual-privacy applications	Leipzig University
The University of Adelaide	Prediction of cardiovascular outcome and response to therapy in cardiovascular sleep medicine with artificial intelligence diagnostics	University of Regensburg
The University of Adelaide	3D-printed micro-endoscopes for more accurate detection of heart diseases	University of Stuttgart
The University of Adelaide	Ultrastructural characterisation of the invasion machinery of the malaria parasite	Bernhard Nocht Institute for Tropical Medicine, Hamburg
The University of Melbourne	Understanding social media users' perception of AI-generated misinformation (ARTIMIS)	Paderborn University
The University of Melbourne	Eigenstructure assignment and mu-synthesis for robust control	Ilmenau University of Technology
The University of Melbourne	Acoustofluidic-Enhanced 3D Bioprinting	Leibniz Institute for Solid State and Materials Research Dresden
The University of Melbourne	Optimised diamond-based single ion detection for scalable quantum technologies	Leipzig University

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The University of Newcastle	An interdisciplinary investigation of gendered violence in communities of Catholic women religious (CWR) in Germany and Australia	University of Regensburg
The University of Newcastle	Investigating the deposition of ultrafine minerals on bubbles	Helmholtz-Zentrum Dresden-Rossendorf, Technical University of Dresden
The University of Newcastle	Novel Ultraviolet Radiation Filters from Cyanobacteria	Technical University of Dresden
The University of Queensland	Future trajectories coral reef islands – integrating sediment budgets and reef island models	Leibniz Centre for Tropical Marine Research (ZMT)
The University of Queensland	Assessing Human Exposure to Halogenated Natural Products in Pooled Serum Samples from Australian Coastal and Inland Communities	University of Hohenheim
University of Southern Queensland	Digital construction of low-carbon concrete utilising waste clay minerals	Technical University of Dresden
University of Sydney	Monitoring Lithium-ion battery materials: A microstructure-informed framework integrated with electrical impedance measurements	Karlsruhe Institute of Technology
University of Sydney	Cultural and Virtual Reality Adaptation of the Social Brain Toolkit	University of Cologne
University of Sydney	Salmonella virulence modulation by outer membrane vesicles and bacteriophages	Medical School Berlin
University of Technology Sydney	Improving health, safety and performance of footballers playing in the heat.	Saarland University
University of Technology Sydney	Building Bridges: Understanding PrEP's Impact on Community Dynamics among Gay and Bisexual Men	Free University of Berlin
University of Western Australia	Functionalising Natural Deep Eutectic Solvents for a Greener Chemical Future	Technical University of Berlin
University of Western Australia	The role of large language models in the detection and mitigation of disinformation narratives	University of Munster
UNSW	Gut 'Avatars' as early Messengers of Degenerative Brain Disease ?	Friedrich Alexander University of Erlangen-Nuremberg

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UNSW	The Expectation Exchange: Empowering Young Scientists in Navigating the Interplay of Positive and Negative Treatment Expectation Effects (EXYST)	MSH Medical School Hamburg
UNSW	Geodynamically Assessments of Subsidence in the North West Shelf in Australia	Ludwig Maximilian University Munich
UNSW	Bioinspired light activated organic neuromorphic devices	RWTH Aachen
UNSW	Enabler of Global Grid Modernization: Expanding the role of Smart Transformers in Frequency Support and Stability Enhancement	Karlsruhe Institute of Technology
Western Sydney University	Solitary Silence & Social Sounds: Using music to alleviate feelings of loneliness in older adults	Humboldt University of Berlin