RMIT UNIVERSITY Vice-Chancellor's Research Fellowships

RMIT Vice-Chancellor's Indigenous Research Fellowships

2025 Strategic Research Priority Areas & High-Priority Topics

Regenerative Futures

The concept of 'Regenerative Futures' places Indigenous knowledge and modes of care at its core – as an approach which goes beyond 'sustainable' practices to those which restore, renew and revitalise social, economic, and environmental systems. Aboriginal and Torres Strait Islander peoples have regenerated and cared for Country for millennia. This approach inspires and informs the RMIT approach to Regenerative Futures – which moves knowledges and practices beyond a sustainability framing to advance and accelerate societal efforts to restore, renew, reconstruct and revitalise human, ecological and material systems for inhabitable planetary futures. At RMIT researchers are building visionary interdisciplinary approaches to regenerative futures across the fields of technology, design, enterprise and society. The effort is oriented towards inclusion and justice, located in places on First Nations country, and centered on collaboration and partnerships with diverse stakeholders. Such collaborative approaches imply new approaches to local and planetary civics that can transform the structures and processes that shape how we govern our entangled planet.
We are seeking Aboriginal and Torres Strait Islander Researchers who can contribute to regenerative practice across the following three thematic areas:

- **Regenerating systems** – Contributing to systemic change through such areas as epidemiology, policy simulation, clothing regeneration, and generative modelling for social and environmental benefit. Rebalancing energy and living systems to respect planetary boundaries and living ecosystems. Revaluing Indigenous knowledge systems by strengthening connections with Aboriginal and Torres Strait Islander peoples, knowledge and practice, and other diverse perspectives for stewarding planetary health

- **Reviving places and communities** – Enhancing the built environment, through sustainable technologies, creative economies, and strategies for enhancing design-led innovation and entrepreneurialism. Creating greater environmental resilience through innovations in circular economies, materiality and adaptive reuse. Reactivating design leadership – providing strategic design leadership as an agent for change

- **Reimagining the economy, business and social enterprise** through tools and capacity for such areas as sustainable production, circular engineering, next generation materials, and regenerative design for social innovation. Reforming policy, law, organisational design and governance by strengthening and supporting long term decision making, addressing climate justice, and increasing equity for future generations

MedTech Innovation

Medical technologies are revolutionising health outcomes and health expectations. RMIT leads, and is investing heavily, in areas including better disease diagnosis via advances in imaging, biosensors and biomarkers, as well as harnessing state-of-the-art smart materials such as optoelectronics, new bioinformatics and digital health AI-enabled tools. We are also engaging nanotechnology for health in areas ranging from agriculture to cancer, supporting community health across the lifespan.

These innovations can bring improvements in practices and services that support healthy Aboriginal and Torres Strait Islander peoples and communities. RMIT has a deep commitment to ensuring medical technologies are designed to make a practical contribution to clinical outcomes and health providers, supported by our range of partnerships and co-location initiatives with major hospitals, health providers, and community organisations. RMIT also has its own supporting infrastructure including the Micro Nano Research Facility (MNRF), Advanced Manufacturing Precinct (including digital manufacturing), The Victoria Medical Device Prototyping and Scale-Up Facility – Discovery to Device, and the Accelerator for Translational Research in Clinical Trials (ATRACT) Centre, central to human clinical trials in cancer, ageing and infectious diseases with collaborators Australia-wide.

Across these diverse areas we need committed and innovative Aboriginal and Torres Strait Islander Researchers to drive forward our research strategy for impact, and that build on collaborative initiatives with strategic research partners such as the Aikenhead Centre for Medical Discovery (ACMD), and Northern Health. As well as specialised expertise, this theme further encourages applicants with effective biological data analysis and integration capabilities including bioinformatics, multi-omics and, where relevant, AI and biostatistics.
RMIT is seeking to build and enhance our research and innovation capability in MedTech in the following areas:

- **Medical technology innovation** in such areas as engineering design, systems integration, bioinformatics, artificial intelligence, computational modelling, medical device development, bioengineering, and biomarker platforms

- **Health innovations** supporting longevity, healthy aging, remote monitoring, and independent living, including within Aboriginal and Torres Strait Islander communities

- **Next generation biomedical innovations** through advanced digital design, modelling, and additive manufacturing, including such areas as smart materials and high-performance, customisable implants

Digital Innovation

Digital innovation is pivotal to our shared digital futures. Emerging digital technologies have created new businesses, pushed automation deep into economic administration and operations, and disrupted industries and ways of working. RMIT is deeply involved in shaping this digital future and committed to exploring research innovations relevant to Aboriginal and Torres Strait Islander peoples. We have national leadership in digital technologies for artificial intelligence, information retrieval, digital design, and digital

manufacturing, coupled with a focus on human behaviour, digital harms reduction, digital care technologies, enhancing security and resilience with digital technologies, and digital technologies in education. In a future where businesses, governments, communities, and citizens interact in previously unimagined ways, RMIT's commitment is to advance world-leading and multidisciplinary digital innovation research for a prosperous and secure digital future.

As part of our research strategy for impact, RMIT is building on our existing world class research capability in digital innovation by identifying established and emerging Aboriginal and Torres Strait Islander research leaders with the capability to enhance Digital Innovation in the following high-priority topics:

- **Exploring digital applications** with implications for individuals, organisations, and society, including Indigenous communities. This includes such areas as digital harms reduction, telehealth, digital learning platforms, digital twins, emergency response, and regenerative digital design

- **AI-driven innovations** across a range of community, government, and industry sectors, where solution design is intertwined with considerations for human-centred design, purpose, and fit within a range of social and cultural contexts, including Indigenous communities. This includes such areas as additive manufacturing, automation, robotics, sensors and sensing technologies, and adaptive production environments