

DOCTORAL TRAINING CENTRES

CANDIDATE INFORMATION



THE UNIVERSITY OF
NEWCASTLE
AUSTRALIA

nier

SOLUTIONS FOR GLOBAL CHALLENGES
ENERGY RESOURCES FOOD WATER

NEWCASTLE.EDU.AU/DTC-NIER

Inspiring the next generation of industry leaders with transformative knowledge, new ways of working and smarter solutions to industry challenges.



Doctoral Training Centres (DTCs) provide industry embedded PhD candidates the opportunity to tailor their doctoral training experience with opportunities to enhance skillsets, increase industry exposure and boost employability. With a focus on sector engagement and transferable skills, DTCs produce the next generation of industry leaders and innovative contributors working to solve global challenges impacting key sectors.

BENEFITS FOR CANDIDATES

DTCs provide an enhanced doctoral training experience through the inclusion of unique opportunities, including:

- Tailored training to promote professional skills development, including sector and industry relevant workshops
- Opportunities to join interdisciplinary seminars/short courses and industry site tours
- Valuable industry engagement opportunities, including conferences and engagement with peak industry bodies and other relevant associations
- Knowledge and expertise through exposure to a team of multidisciplinary researchers, providing pathways into multiple industries
- Access to funding towards professional development and training opportunities to support individual career development

NIER currently administers Doctoral Training Centres across three crucial sectors:

RESOURCES

The DTC for Resources is aimed at delivering transformational technologies supporting innovation, optimisation, efficiency productivity and sustainability in the sector. To improve enterprise across the minerals and resource recovery value chains, research projects in this DTC focus on:

- Application of new technologies
- Sensor Systems and automation
- Resource recovery and circular economy
- Health, safety and environment

FOOD & AGRIBUSINESS

As the first centre of its kind on the Central Coast, the DTC for Food & Agribusiness provides a platform for interdisciplinary research and training in a growing industry with strong regional ties, and is committed to collaboration through education and research. This DTC focuses on four key themes:

- Product science
- Climate resilience and sustainability
- Advanced technology
- Market access

ENERGY

The DTC for Energy is committed to creating new knowledge and driving better solutions to challenges and opportunities shaping the sector. Research undertaken in this DTC has a focus on:

- Energy generation and storage
- Renewable energy and alternative energy sources
- Emissions reduction technologies
- Grid systems and stability

“The DTC has given me so many opportunities including gaining experience from working alongside industry, developing skills from their programs, and making connections from various networking forums where I have had the opportunity to present my work.”

- Samantha Clark, DTC Candidate

CAROLINE GOMES DE OLIVEIRA

CASE STUDY - DTC RESOURCES

Caroline's project, supervised by Professor Kenneth Williams, is investigating the lifespan of various liner materials that are applied in transfer chutes inside mining machinery.

Partnering with Metso Outotec, Caroline regularly visits their facilities and participates in meetings with the company's engineers. This engagement provides insight and technical support regarding analysis, experimental planning, samples, and technical knowledge all which contribute to her research.

Through the DTC, Caroline has been able to attend workshops and engage more broadly with industry representatives. She has presented her research at conferences which have become networking opportunities to broaden her contacts, experience and knowledge of bulk solids and the resource sector.

“Activities through the DTC such as site visits and events have provided me with new contacts and context as to where my research may be able to be applied.”

- Caroline Gomes De Oliveira, DTC Candidate

IRMA DUPUIS

CASE STUDY - DTC FOOD & AGRIBUSINESS

Irma's Wine Provenance Project, co-supervised by Professor Lisa Toohey from the University's Law school, Dr Sidsel Grimstad from the Business School, and Dr Tamara Bucher from the School of Environmental and Life Sciences, is focusing on blockchain enabled wine labels and their effects on consumer trust.

Having received a Wine Australia HDR scholarship to help further support her project, Irma hopes to improve the user experience for wine consumers by helping producers use blockchain technology to communicate authenticity and provenance information to consumers. Tamburlaine Organic Wines has already released two million bottles into the market with smart label technology, making Irma's research a valued asset.

“I am partnered with Hunter Valley Producers First Creek and Tamburlaine Organic Wines, along with MCC Label, a label company, and Laava, a smart label specialist, all who contribute important industry knowledge to my research.”

- Irma Dupuis, DTC Candidate



PATHWAYS

To be eligible to become part of a DTC, candidates must:

- Be currently completing a PhD, and
- Be conducting research in one of the DTC focus areas, and
- Meet at least ONE of the below industry engagement requirements:
 - Completing an industry funded PhD, or
 - Enrolled in the University of Newcastle Industry Engaged PhD Pathway, or
 - Engaging with industry on their PhD Research project

If you meet requirements, have questions about how you fit the criteria or are interested to find out more, get in touch today.

FOR FURTHER INFORMATION:

Please email DTC-NIER@newcastle.edu.au

or visit <https://www.newcastle.edu.au/dtc-nier>

The DTCs outlined in this brochure are administered by NIER. Our objective is to strengthen regional resilience through the delivery of sustainable solutions to global challenges related to energy, food and water security and resource sustainability through collaborative research, translation, and education.

Clear pathways through the DTCs make it easier for businesses, industry, and community to connect and collaborate with the University.



**DOCTORAL
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