HDR Opportunities in the TD School

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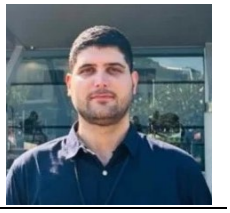
Dr Arnick Abdollahi



Research Scientist, TD School

Arnick.Abdollahi@uts.edu.au

Background

Arnick is a research scientist at the University of Technology Sydney (UTS), specialising in Earth and space science informatics, artificial intelligence (AI), and environmental science. He completed his Ph.D. at UTS and was a research fellow at the Bushfire Research Centre of Excellence, Australian National University (ANU), where he led national AI-driven sensing initiatives to enhance bushfire resilience. His work has advanced bushfire behaviour analysis, promoted responsible AI in environmental monitoring, and influenced national strategies for remote sensing and risk management. Arnick conducts transdisciplinary research that bridges artificial intelligence, remote sensing, environmental science, and sustainable agriculture. His work focuses on developing AI-powered prediction tools to support livestock producers in making informed and climate-resilient decisions. He is also leading research on creating a data-driven bushfire resilience framework for agricultural livestock farms by assessing bushfire risks and their impacts on farm productivity and sustainability. He is particularly interested in integrating Responsible AI with Earth observation to enhance food security, promote sustainable land use, and foster transparency, trust, and long-term resilience in agricultural and environmental systems.

Keywords: Earth Observation, Remote Sensing, Artificial Intelligence, Responsible AI, Bushfire Resilience, Sustainable Agriculture, Livestock Farm Management, Environmental Informatics, Geospatial Analytics, Climate Resilience

Research Interest/HDR Project opportunities:

- AI-powered Earth observation for climate-resilient agricultural ecosystems
- Bushfire resilience frameworks for livestock farm productivity and sustainability
- Responsible AI for transparent and ethical environmental monitoring
- Machine learning for environmental disturbances and bushfire impacts analysis
- Remote sensing, geospatial, and time-series analytics for dynamic ecosystems change
- Data-driven approaches to enhance sustainable agriculture and food production

Methods/Research Skills commonly utilised in Arnick's research include:

- Remote sensing and Earth observation
- Artificial intelligence and advanced machine learning
- Geospatial analysis and time-series modelling
- Bushfire risk modelling, fuel monitoring, and resilience assessment
- Agricultural productivity and sustainability modelling
- Data analytics and predictive modelling using Python and R

Website/publications: UTS Profile | LinkedIn | Google Scholar

Dr Alex Baumber

Senior Lecturer, TD School

Alex.Baumber@uts.edu.au

Background

Alex's research focuses on environmental sustainability, resilience and regeneration. His recent projects cover a diverse range of contexts, including carbon abatement in agricultural systems, incentives for regeneration of degraded land, strategies to enhance community resilience and the impacts of the sharing economy. Key research partners have included AgriFutures Australia, The NSW Environmental Trust, Landcare NSW and the Blue Mountains World Heritage Trust.

Alex is currently seeking new PhD and Masters students for his work with the NSW Department of Primary Industries on demystifying carbon farming. Other potential areas for research collaboration include his work on the social licence of the sharing economy with colleagues from the UTS Business School and his work on community resilience in contexts ranging from far western New South Wales to the utopian community of Auroville in Tamil Nadu, India.

Keywords: Resilience, Social Licence, Carbon Farming, Transdisciplinary Learning, Rangelands, Regenerative Agriculture

Research Interest/HDR Project opportunities:

- Demystifying carbon farming
- Enhancing community resilience
- The social licence of the sharing economy
- Transdisciplinary learning strategies

Methods/Research Skills commonly utilised in Alex's research include:

- Semi-structured interviews
- Participatory appraisal
- Qualitative analysis (e.g. using NVivo)
- Policy analysis
- Life cycle assessment (LCA)

Website/publications: https://profiles.uts.edu.au/Alexander.Baumber

Dr Alice Dong

Lecturer, TD School

Xiaodan.dong@uts.edu.au

Background

Alice holds a PhD in Applied Statistics and a Master of Applied Science from the University of Sydney, as well as a Master of Information Technology from the University of Queensland. Currently, she teaches in the Master of Data Science and Innovation program at UTS. Her research focuses on practical applications of data science, particularly in the areas of artificial intelligence, Bayesian statistics, and machine learning for business analytics. With over 15 years of industry experience, she previously served as the Head of Analytics at HSBC Australia and held senior analytics and data science roles at major organisations including Commonwealth Bank, Toyota Finance, Insurance Australia Group (IAG), and Citibank. She brings a unique blend of academic rigor and real-world experience to her teaching and research, bridging the gap between theoretical knowledge and practical industry needs.

Keywords: Artificial intelligence (AI), Business Analytics, Bayesian Statistics, Optimization, Computer Vision, Deep Learning, Visualization

Research Interest/HDR Project opportunities:

- AI-Driven Credit Risk Modelling
- Financial Time Series Modelling
- AI and Visualizations
- Explainable AI (XAI) in financial visualization
- Computer Vision
- Road Safety research

Methods/Research Skills commonly utilised in Alice's research include:

- Artificial intelligence
- Deep learning and computer vision
- R and Python coding
- Bayesian Statistics
- Extensions of generalised linear models

Website: Alice Dong | About | University of Technology Sydney

Dr Jan Henrik Gruenhagen

Lecturer, TD School

JanHenrik.Gruenhagen@uts.edu.au

Background

Jan is a Lecturer in Innovation and Entrepreneurship at the TD School. His research interests include international entrepreneurship, the new venture creation process, innovation systems and the development, adoption and diffusion of new technologies. Jan has been involved in several research projects, including as a chief investigator of an externally funded project investigating decarbonisation initiatives in the resources sector. He is also exploring the use and application of machine learning techniques for research in the social sciences.

Prior to joining UTS, Jan worked as a Postdoctoral Research Fellow at the Centre for METS Business Innovation at QUT Business School researching firm and system level enablers and barriers to technology development, adoption and diffusion. He received his PhD for his research at the Australian Centre for Entrepreneurship Research at QUT investigating start-up activities and impact of returnee entrepreneurs in emerging economies. Before working in academia, Jan accumulated extensive industry experiences as a journalist and editor for radio and print media in Germany.

Keywords: International entrepreneurship, new venture creation, technological innovation systems, adoption and diffusion of innovation, emerging economies

Research Interest/HDR Project opportunities:

- Emerging technologies and sustainability transitions
- Agency in innovation (eco)systems
- Transdisciplinary perspectives on entrepreneurship
- Entrepreneurship in emerging economies
- Drivers and barriers to technology development, adoption and diffusion

Methods/Research Skills commonly utilised in Jan's research include:

- Statistical analysis
- Interviews
- Document analysis
- Big data & Natural language processing (Python)

Website/publications: https://profiles.uts.edu.au/janhenrik.gruenhagen

Dr Leila Khanjaninejad

Lecturer, TD School

Leila.Khanjaninejad@uts.edu.au

Background

Leila holds a PhD in Management from the University of New South Wales (UNSW). She works towards advancing gender equity, social impact, and inclusive organisational practices, particularly in traditionally male-dominated sectors where women and underrepresented groups remain marginalised, such as sport and STEM fields and leadership. Her expertise spans across social sustainability, development studies and organisational policy. Leila is open to supervising HDR projects in areas such as women in sport, gender equity in STEM, inclusive innovation, and socially engaged research with real-world impact.

Keywords: Gender equity, social impact, diversity and inclusion, social sustainability, organisational policy.

Research Interest/HDR Project opportunities:

- Equity, diversity and inclusion
- Women in sport
- Gender inequity in STEM fields
- Gender equity in male dominated sectors
- Social Impact

Methods/Research Skills commonly utilised in Fanny's research include:

- Mixed methods
- Qualitative approach
- Surveys- SPSS
- NVivo

Website/publications: https://profiles.uts.edu.au/Leila.Khanjaninejad

Dr Giedre Kligyte

Senior Lecturer, Transdisciplinary School

Giedre.Kligyte@uts.edu.au

Background

Dr. Giedre Kligyte holds a PhD in Education from the University of Sydney. Her research focuses on transforming university education to advance more sustainable and equitable futures. She investigates how students can develop transdisciplinary, future-oriented capabilities—including systems thinking, futures thinking, creativity, innovation, collaboration, change-making, and reflexivity. Central to her work is the concept of "third spaces"—environments where difference, experimentation, and co-creation are embraced to stimulate mutual learning, new ways of thinking, and creativity.

Keywords: Higher Education, Transdisciplinarity, Future-Oriented Capabilities, Collaboration, Creativity, Agency, Societal Transformations, Impact

Research Interest/HDR Project opportunities:

- Future-oriented transdisciplinary capabilities
- Transforming education systems
- Educational innovation for societal impact
- Student agency and transformative learning

Methods/Research Skills commonly utilised in Fanny's research include:

- Qualitative analysis
- Interviews and focus groups
- Participatory approaches
- Action research

Website/publications: https://profiles.uts.edu.au/Giedre.Kligyte/

Dr Simon Knight

Senior Lecturer, TD School

Simon.Knight@uts.edu.au

Background

Simon has a PhD in learning analytics from the Open University (UK), drawing on his background in philosophy, psychology, and education (with degrees from Leeds, UCL, and Cambridge). Simon joined the UTS Connected Intelligence Centre in 2015, and is now based in TD School, teaching onto the Masters in Data Science and Innovation. Simon is the Director of the UTS Centre for Research on Education in a Digital Society (CREDS), a cross-faculty research centre that applies a learning and technologies lens across a range of problem spaces. We seek to address the dual concerns of how technologies change our learning needs, and how technologies can support our learning. He is interested in research that develops tools to understand and support learning, drawing on the learning sciences, technology design, and areas in virtue ethics and epistemology. Simon's work explores how we learn to ethically navigate uncertainty, disagreement, and evidence.

Keywords: learning analytics, educational technology, learning sciences, epistemic cognition, ethics, virtue epistemology, virtue ethics, professional learning,

Research Interest/HDR Project opportunities:

- Design for learning how to navigate uncertainty and disagreement
- Task & analytics development for probing how people deal with disagreement
- Models of how people navigate the intersection of ethics and uncertainty in selection and use of AI tools, particularly in educational contexts

Methods/Research Skills used in Simon's research include:

- Design based research and design for learning
- Interview methods
- Sociocultural discourse analysis
- Learning analytics (data analytics on behaviours in learning contexts)
- R (and Python) coding for tool prototyping and statistical analysis
- Thematic analysis (e.g., using Nvivo)

Website/publications: https://profiles.uts.edu.au/simon.knight

Dr Jarnae Leslie

Lecturer, TD School

Jarnae.leslie@uts.edu.au

Background

As a sustainability researcher and designer, Jarnae's research pursues mixed methods approaches to complex climate-related challenges. Jarnae has a PhD in system change and waste reduction from the University of Technology Sydney (UTS), TD School. Her work bridges boundaries between reporting and social science to understand factors impacting system change towards sustainable futures development. Jarnae's most recent projects explore bush fire preparation and recovery, sustainable manufacturing, and city waste management.
Jarnae is currently seeking PhD and Masters students to engage in research that supports sustainable futures development (i.e., all sectors, disciplines, and topic areas are welcomed). Work that adopts a systems perspective or applies mixed methodologies are encouraged. Experienced in collaborating with government agencies and other universities, Jarnae encourages cross-sector collaborative work.

Keywords: Sustainability, Transition, Futures, Design, Complexity, Change, Systems, Human Behaviour, Transdisciplinarity, Mixed-Methods, Waste, Reporting, Public Policy

Research Interest/HDR Project opportunities:

- Complexity & Systems Perspectives
- Transition Design
- Climate Adaptation (e.g., Bush Fires)
- Public Policy
- All of the Above (where it relates to sustainability)

Methods/Research Skills commonly utilised in Jarnae's research include:

- Interviews, Focus Groups and Desktop Review Methods
- Participatory Action Research (PAR) Approaches
- Thematic Analysis (e.g., using NVivo)
- Field Work in Regional and Rural Areas Data Collection

Website/publications: https://profiles.uts.edu.au/Jarnae.Leslie

Dr Luis Lozano-Paredes

Lecturer, Transdisciplinary School

luishernando.lozanoparedes@uts.edu.au

Background

I'm a Lecturer at the Transdisciplinary School, where I help students map and understand how technology is transforming people and society. My idea is to bring both academic rigour and real-world experience from my time working with the University of Technology Sydney, the University of Sydney, the University of Melbourne, Simon Fraser University (Canada), Universidad Torcuato di Tella (Argentina), international development organisations and the Argentine federal government. My research currently focuses on how generative AI, digital platforms, and emerging technologies reshape governance, work, and social life.

I'm very passionate about developing students' critical, complex and systems thinking skills for our tech-driven future. With five languages under my belt (English, Spanish, French, Portuguese and Hebrew), I bring a genuinely global perspective to help research students see the connections between technology, people, society, and the built environment.

My research interests include:

- *Built Environment, Design, Digital Geography, Digital Humanities, Ethics of Research, Governance, Platformisation, STS (Science, Technology and Society), Human-Computer Interaction, Media Studies and Infrastructure Studies.*

Keywords: Transdisciplinary Research, STS (Science, Technology and Society), Urbanism, Architecture, Design, Platforms, AI, Socio-Technical Systems

Methods and Research Skills:

- Design Methods
- Digital Ethnography
- Conversational AI
- Autoethnography
- Spatial Analysis
- Synthetic Data
- Action Research
- Interviews/Focus Groups
- Qualitative Analysis with GenAI

Websites: https://profiles.uts.edu.au/LuisHernando.LozanoParedes; https://luis-lozanoparedes.net/

Dr Jarrod Ormiston

Senior Lecturer in Social Entrepreneurship

TD School

Jarrod.Ormiston@uts.edu.au

Background

Jarrod's research focuses on working with social enterprises and impact investors to enhance their impact, supporting entrepreneurs from marginalized backgrounds, educating entrepreneurs from marginalised backgrounds, and understanding the role of emotions, place and time in entrepreneurship. His PhD explored the role of impact measurement as a transdisciplinary practice in the fields of social entrepreneurship and impact investment. Alongside his research, Jarrod has worked as a consultant to the Australian Government, the OECD and United Nations on entrepreneurship and education.

Keywords: Social entrepreneurship, sustainable organising, alternative forms of business, social impact measurement, impact investing, cross-sector partnering, collective emotions, place, temporality

Research Interest/HDR Project opportunities:

- How emotions shape social/sustainable entrepreneurship
- Regenerative entrepreneurship/organising
- Process perspectives on (social) entrepreneurial ecosystems
- The role of place and time in social/sustainable organising/investing

Methods/Research Skills commonly utilised in Jarrod's research include:

- Qualitative analysis
- Critical discourse analysis
- Interviews and observational data
- Video-based ethnography
- NVivo, Atlas.ti

Website/publications: https://profiles.uts.edu.au/Jarrod.Ormiston

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Dr Daniel Ramp

Associate Professor, TD School

Daniel.Ramp@uts.edu.au

Background

Dan has a PhD in Botany and Zoology from the University of Melbourne. He has held an ARC Post-Doctoral Fellowship at UNSW and joined UTS in 2011. Dan is the Founder and Director of the Centre for Compassionate Conservation at UTS, where he leads the development of research, teaching, and public outreach in the Centre which seeks to stimulate innovation, novel research, and conservation practices that make the lives of all wild animals better. Dan conducts transdisciplinary research on human-wildlife interactions, wildlife trade, conservation practice, and wild animal welfare, engaging in projects around the world. He is interested in research that recognises and incorporates the agency, sapience, and personhood of all beings, with particular emphasis on relational ontologies and multispecies entanglements that lead to peaceful cohabitation and flourishing.

Keywords: Compassionate Conservation, Trophic Cascades, Landscape Ecology, Sustainable Agriculture, Predator-prey Ecology, Conservation Ethics, Wild Animal Welfare, Cognition, Ethology, Autonomy, Animal Cultures

Research Interest/HDR Project opportunities:

- Agency and culture in non-humans
- Championing the lives of maligned species
- Applications for wild animal welfare in conservation
- Future paradigms in conservation
- Transitioning agriculture towards just food production

Methods/Research Skills commonly utilised in Dan's research include:

- Field work in remote areas
- Sensing technologies, including cameras, acoustics, climate, satellite imagery
- Behavioural analysis
- Machine learning and data analytics
- R and Python coding

Website/publications: https://profiles.uts.edu.au/daniel.ramp

Dr Helena Robinson

Senior Lecturer, Transdisciplinary School

helena.robinson@uts.edu.au

Background

Helena's scholarship straddles museum theory and practice, transdisciplinarity, and educational research. These diverse fields are united under the theme of disciplinary exchange and integration.

Grounded in her professional experience as a curator and collection manager, Helena's museum-focused research explores how the cultural significance of museum collections is constructed through the interaction of curatorial practices, institutional governance, cultural policy, and stakeholder agency. Her PhD investigated the convergence of galleries, libraries, archives and museums (GLAM), while her recent museological research deals with museum education and practices of stakeholder participation in cultural programs.

Helena has extensive experience in problem-based experiential learning, focused on complex problem-solving and innovation in partnership with external industry, not-for-profit, and government stakeholders. Her educational research examines how students learn, and academics teach in a transdisciplinary context, with a special interest in the dynamics of collaboration.

Keywords: Museums, Heritage, Culture, Higher Education, Transdisciplinary Methods.

Research Interest/HDR Project opportunities:

- Museums sites of cultural heritage enactment
- Evaluation of museum education programs
- Transdisciplinary research methodologies
- Transdisciplinary pedagogy in higher education

Methods/Research Skills commonly utilised in Fanny's research include:

- Qualitative analysis
- Interviews and focus groups
- Mixed methods and case studies
- Participatory approaches

Website/publications: https://profiles.uts.edu.au/Helena.Robinson

Dr Fanny Salignac

Associate Professor, TD School

Fanny.Salignac@uts.edu.au

Background

Fanny has a PhD in International Business (Business Ethics) from the University of Sydney. In her research, Fanny works towards understanding how to address complex social problems and the processes that create a better society (e.g., partnerships, collaboration, and co-production). Her expertise spans across areas of Social Change, Impact and Policy; as well as Business Ethics, Sustainability and Corporate Social Responsibility. Her work to date has focused primarily on financial resilience and wellbeing, gender equality, collaboration for social impact and outcomes evaluations.

Keywords: Social Impact, Impact Measurement, Collaboration, Complex Social Issues, Gender Inequality, Wellbeing, Resilience

Research Interest/HDR Project opportunities:

- Measuring CSR activities' impact on society
- Wellbeing over the life course
- Gender inequality in male dominated industries
- Resilience for thriving communities

Methods/Research Skills commonly utilised in Fanny's research include:

- Qualitative analysis
- Discourse analysis
- Interviews and focus groups
- Surveys
- NVivo

Website/publications: https://profiles.uts.edu.au/fanny.salignac

Dr Nicole Vincent

Senior Lecturer, TD School

Nicole.Vincent@uts.edu.au

Background

Wicked problems in complex socio-technical systems – or ethical, legal, social, and personal dimensions of advances in science and emerging technologies – are the focus of my work. Some of my interests include artificial intelligence, blockchain, automation and autonomous systems, digital transformation, brain-computer-interfaces, gene editing, neuroscience, human enhancement, medicine, law, behavioural economics, transgender policy, feminism, and misinformation — all served with a free side of ethics, complexity, and futures thinking.

Here are some questions that pique my curiosity. What happens to human agency in an age of artificial intelligence, where humans increasingly interact with each other and artificial agents on malleable hybrid virtual-physical landscapes? Where's the difference between improved service delivery and abrogation of responsibility for the future, when we allow corporations to use data – about our tastes and preferences; our hopes and fears; our social networks; our spending and saving habits; and even our intimate physiological processes collected in real time from smart phones and personal wearable devices – to bring bespoke services, goods, and information to increasingly-satisfied customers? Rather than inheriting a future that today's actions will inevitably leave behind, what other futures might we create, which of them are worth wanting, and how can we take responsibly for our future?

My work has been funded by over $1.5 million grants. I've published in excess of 40 peer reviewed academic papers plus edited books across many disciplines, delivered over 100 keynotes and academic talks in 14 countries, and organised dozens of international conferences. The Supreme Court of the United States of America cites my work, and I frequently discuss important topics and issues with the public through large live events and mainstream media. Among examples of my public engagement are TED talks, including one to 2,500 people at the Sydney Opera House; Intelligence Squared public debates across Sydney, Atlanta, and Washington DC; and regular contributions to The Age, Sydney Morning Herald, ABC News and Radio, The Feed, SBS Insight, The Philosopher's Zone, The Conversation, Gizmodo, Radio Times WHYY Philadelphia, and CCTV America.

Keywords: Science, technology, society, ethics, law, complexity, futures, methodology, philosophy.

Your research opportunities and my supervision: Let's talk if you resonate with the above.

Some methods / research skills used by Nicole and her research students include:

- complex systems theory
- ethical analysis
- behavioural economics
- value-sensitive design
- responsible innovation
- social theory

Websites: https://scholar.google.com.au/citations?user=al5JITAAAAAJ&hl=en and https://nicolevincent.net

Dr Samuel Wearne

Lecturer, TD School

Samuel.Wearne@uts.edu.au

Background

Sam is a sustainability practitioner and transdisciplinary academic exploring systemic change toward sustainability futures. Sam came to academia after establishing himself as a sustainability expert in industry. He has led the design and delivery of organisational climate change and responsible business programs for large corporations and led interdisciplinary projects supporting sustainable finance, regional development, and social change at local, national and international scales. In 2016, UNESCO engaged Sam as an independent researcher to draw on his practical experience and draft a chapter for a flagship UN report that outlined the education and learning required to deliver the Sustainable Development Goals.

Sam's research explores socio-cultural dynamics, systems change, and how we can unlock agency in the pursuit of sustainable futures.

Keywords: sustainability, sustainable development, bioeconomy, systems change, social ecological systems research, place-based futures

Research Interest/HDR Project opportunities:

- Transitioning to a bioeconomy and uplifting biomaterials in society
- Social-ecological systems research
- Sustainability transitions and transformations
- Environmental discourse analysis
- Deliberation, democracy, and constructive discussion
- Corporate sustainability and organisational change

Methods/Research Skills commonly utilised in Sam's research include:

- Co-design / Action Research
- Corpus-assisted discourse studies
- Interviews & document analysis

Website/publications: https://profiles.uts.edu.au/Samuel.Wearne/about