HDR Opportunities in the TD School

Dr Shibani Antonette

Lecturer, TD School

antonette.shibani@uts.edu.au

Background

Shibani has a background in computer science engineering and teaches into the Master of Data Science and Innovation course at UTS. Her research is in applied areas of data science including learning analytics, artificial intelligence in education and more broadly, data for social impact. Having established a strong research profile in educational technology, Shibani has served as a program committee member and reviewer for a number of conferences and peer-reviewed journals. She is an executive member of Society for Learning Analytics Research (SoLAR) and co-hosts the podcast 'SoLAR Spotlight: Conversations on Learning Analytics'. She has a wide authorship network with international collaborators across the globe, with recognition and awards for leadership among early career female academics.

Keywords: Learning analytics, Educational technology, Artificial intelligence (AI), Human centred data science, Ethical AI, Natural language processing

Research Interest/HDR Project opportunities:
- AI-human complementarity in education
- Automated feedback for effective argumentation
- Tackling misinformation and conflicts in social media

Methods/Research Skills commonly utilised in Shibani's research include:
- Machine learning and data science
- R and Python coding
- Text analysis and Natural language processing
- Surveys and statistical analysis
- Interviews and qualitative analysis
- Participatory design

Website/publications: Personal Website | UTS Profile | 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 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
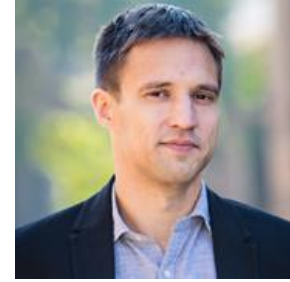- Drivers and barriers to technology development, adoption and diffusion

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 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 Jacqueline Melvold

Lecturer, TD School

Jacqueline.Melvold@uts.edu.au

Background

Jacqueline aims to drive and influence change as an education leader by exploring innovative and creative approaches to a lifetime of learning in collaborative and immersive transdisciplinary environments. Her work in education research focuses on the future of education in primary, secondary and tertiary contexts, where she creates a space for mutual learning between educators, academics, and students to support transdisciplinary learning, research, and professional practice for the empowerment of young people. She has won a plethora of teaching and learning grants and has led multiple research grants in this space. Her projects focus on transdisciplinary learning, student and staff agency, a holistic approach to education, cultivating creativity and innovation into education programs, complex problem solving, and reimagining preferable futures for the education sector.

Keywords: Education, transdisciplinarity, transformative education, agency, empowerment of young people.

Research Interest/HDR Project opportunities:
- Future of education
- Transdisciplinary and transformative education
- Student and educator empowerment
- Antimicrobial resistance

Methods/research skills commonly utilised in Jacqueline's research include:
- Action research
- Futuring
- Interviews and focus groups
- Impact measurement (via qualitative methods)

Website/publications: https://profiles.uts.edu.au/Jacqueline.Melvold

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

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 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

TD School Research Proposal Template

TD School HDR Research Proposal

Name: **Degree:** PhD / MRes

Proposed Supervisor:

Project Title

This should be a clear description of your proposed research project.

Lay Summary (200 words)

A simple summary in lay terms to explain the problem/purpose, how you intend to challenge it, and what impact you are hoping for.

Background & Context

This section should explain the background and context of the proposed research work with an indication of the main contribution to knowledge which you wish to make. Indicate why this area is an important area for research. You must address which disciplinary and transdisciplinary methods/theories may be involved and why your proposal is suited to the TD School. This section should also act as a review of the literature which should outline the most important research that has already been carried out in your research area.

Aims & Objectives

This section should spell out three or four aims/objectives for your research to show what you want to achieve.

Research Methodology

This section is a broad outline of the methodology you plan to use including:
- the broad approach — qualitative, quantitative etc
- how data/information will be generated and gathered and how you expect to deal with and analyse that data
- Indication of any broad theoretical framework you may be using, particularly transdisciplinary frameworks where applicable

- ethical considerations where the research involves interaction with humans or animals and where applicable, how consent would be obtained.

Research Plan and Timetable

This section should summarise the steps and approximate timing within a six-monthly schedule over the number of years of candidature for your degree.

Resources and Facilities Required

This section outlines the resources required for the project.

References

This section is a list of all the references that have been referred to in the proposal.