

RMIT School of Design PhD and Master by Research Projects and Places 2020

Important information for applicants

Prospective applicants for School of Design HDR Projects / Places are required to submit an Expression of Interest (Eoi) through the [RMIT University Application Service](#).

Based on this Eoi applicants will be invited to undertake a Pre-Application Interview prior to formally submitting a full application (which may include Scholarship application).

The Eoi will consist of:

- Personal details
- Contact details
- Program details and proposed commencement date
- Supporting documents, including
 - Research proposal
 - Qualifications including transcripts and dissertation/thesis
 - Curriculum vitae/ resume
- Additional documents required for practice-based researchers
 - Portfolio
 - Critical reflection

Guidelines for prospective higher degree research applicants are available [here](#). This document includes further information on the supporting document requirements.

Further information about the application process can be found at [how to apply](#). Please apply for program code DR235 (PhD) or MR235 (Master by Research).

School of Design PhD Projects – commencing 2020

Pg	Project	Discipline/s	Field of Research	Supervisors
5	Co-creating publics for UNESCO Creative Cities: Design research in sustainable urban development	Communication	Strategic design	Dr Noel Waite Dr Marius Foley Dr Toni Roberts
6	New materialities in Communication Design practice	Communication	Communication design	Dr Neal Haslem Dr Andy Simionato
7	Strategic design and leadership for the health, cultural and NFP sectors and their publics	Communication	Strategic design	Dr Neal Haslem Dr Marius Foley Dr Leah Heiss
8	Material literacy: the significance of materials in design ideation	Communication	Communication design	Dr Neal Haslem Dr Jenny Grigg
9	Embracing plurality in design	Communication	Design for social innovation	A/Prof Yoko Akama Dr Jaz Hee-Jeong Choi Dr Juan Diego Santamari
10	Designing in the anthropocene	Communication	Design for social innovation	A/Prof Yoko Akama Dr Pirjo Haikola Dr Toni Roberts Dr Scott Mitchell A/Prof Mick Douglas Dr Gina Moore
11	Care-full design	Communication	Design for social innovation	Dr Jaz Hee-Jeong Choi A/Prof Yoko Akama Prof Laurene Vaughn Dr Jordan Lacey A/Prof Ellie Rennie
12	Communication design history: archival research relating to Melbourne design from the twentieth century onwards	Communication	Communication design	Prof Harriet Edquist Dr Noel Waite Dr Jenny Grigg
13	Advertising Design Futures	Communication	Communication design	Dr Oliver Vodeb A/Prof Brad Haylock Dr Noel Waite
14	Communication Design Education for Social Change	Communication	Design Pedagogy	Dr Oliver Vodeb Dr Noel Waite
15	Designing for experiences in museums (and other interpretive environments)	Communication Digital	Experience/interpretation design	Dr Toni Roberts Dr Noel Waite
16	Designing for conservation and environmental awareness	Communication Digital	Experience/interpretation design	Dr Toni Roberts Prof David Carlin
17	Audiokinetic Lab: audio experiences for entertainment and health	Digital	Sound design & virtual environments	Dr Darrin Verhagen Dr Jenny Robinson

Pg	Project	Discipline/s	Field of Research	Supervisors
18	Designing Sound Theory through cinematic practice	Digital	Sound design	Dr Darrin Verhagen Dr Shaun Wilson Dr Daniel Binns
19	Writing the Internets: Post Digital Folklore	Digital	Speculative critical design	Dr Nancy Mauro-Flude Dr Tom Penney
20	Playable City Melbourne	Digital	Interaction design	Dr Troy Innocent Dr Matthew Riley Dr Hugh Davies Dr Jaz Hee-Jeong Choi
21	Helping Australians understand and manage their pollen exposure indoors, outdoors and on the go	Digital	Interaction design	Dr Rohit Khot Dr Jaz Hee-Jeong Choi
22	Helping Australians understand gut health and dietary choices through Augmented Reality	Digital	Interaction design	Dr Rohit Khot Dr Jaz Hee-Jeong Choi
23	Supporting mindful eating in everyday practice through play	Digital	Interaction design	Dr Rohit Khot Dr Jaz Hee-Jeong Choi
24	Designing video games for mental health	Digital	Interaction design	Dr Jonathan Duckworth Dr Renata Kokanović
25	The art of experience: curating moments of play in Australian videogames of the 1990s	Digital	Interaction design / Design History	Dr Helen Stuckey Dr Greg Turner (ACMI)
26	Sonic Fields: rethinking listening environments for spatial sound composition and diffusion	Industrial	Sound design & composition	A/Prof Lawrence Harvey A/Prof Ross McLeod Mr Jeffrey Hannam
27	Grounding Sound: generative practice research in the representation and transformation of sound	Industrial	Sound design	Dr Jeffrey Hannam A/Prof Lawrence Harvey
28	Designing Urban Environments: sonic intervention and affective politics	Industrial	Sound design	Dr Jordan Lacey Dr Malte Wagenfeld A/Prof Lawrence Harvey
29	Design and Sexual Health Innovation	Industrial	Service Design / Product Design / Technical & Material Innovation	Dr Judith Glover Dr Areli Avendano
30	Collaborative design of multisensory stimulation experiences for dementia treatment	Industrial		Dr Juan Sanin Dr Scott Mitchell Dr Liam Fennessy Lisa Spong Francis McCormick

Pg	Project	Discipline/s	Field of Research	Supervisors
31	Design for Social Impact / Social Innovation	Industrial / Communication Digital	Design Innovation	Dr Areli Avendano Franco Prof Ian de Vere Dr Judith Glover A/Prof Ross McLeod Dr Scott Mitchell Prof Michael Trudgeon A/Prof Yoko Akama
32	More-than-Human Design for Food	Digital	Interaction design	Dr Rohit Khot Dr Jaz Hee-jeong Choi
33	Storytelling for Change	Digital	Interaction design	Dr Jaz Hee-jeong Choi Dr Alan Nguyen
34	Cute! Kawaii! Awww!: Humanising Technologies in the City	Digital	Interaction design	Dr Jaz Hee-jeong Choi D.Prof. Larissa Hjorth
35	Curating Australian media art of the 1990s	Digital	Interactive Media	Dr Helen Stuckey Dr Troy Innocent
36	Sensory Urbanism with Virtual and Augmented Reality	Digital	Interaction design	Prof Jules Moloney A/Prof Lawrence Harvey A/Prof Katrina Simon Dr Gina Moore
37	Immersive Analytics with Virtual Reality	Digital	Interaction design	Prof Jules Moloney A/Prof Lawrence Harvey A/Prof Fabio Zambetta Dr Gina Moore

School of Design PhD and Master by Research Places

Pg	HDR Place	Discipline/s
38	Reflective Industry Practice in Design	Communication, Digital, Industrial
39	Generative Practice Research in Design	Communication, Digital, Industrial
40	Research in Design (Thesis Mode)	Communication, Digital, Industrial

School of Design PhD and Master by Research Projects

Project Title

Co-creating publics for UNESCO Creative Cities: Design research in sustainable urban development

Project Description

Melbourne is unique in having two UNESCO Creative City designations which are part of the 200-member UNESCO Creative Cities Network – Design (2017 onwards) and Literature (2008 onwards). The creative city is recognised as important to economic and social development in the United Nations Development Programme's [Creative Economy 2013 Special Edition: Widening Local Development Pathways](#). This report describes the need to encourage creativity and innovation as “urgent” to meet the challenges of urban development and sustainable, liveable cities. Bokova and Clark state, “the next frontier of knowledge generation rests on understanding interactions, specificities and policies at local levels, and how the creative economy might be practically promoted in communities, cities and regions” (p.10). The report also identifies cultural and creative industry mapping as an essential tool to inform planning and decision-making and to address the knowledge gap at the local level, and states, “a participatory methodology for knowledge production is vital” (p.157).

This research could take the form of embedded research in Melbourne’s creative and cultural organisations, such as galleries, libraries and museums; generative research which facilitates the sustainment of creative practices through design; or historical thesis research on creative practices and communities in Melbourne. The project may embed measurement and evaluation of innovation and impact; explore models for conceptualising the value created for industry and society by design and creativity; and the impact of creativity on urban economics. The overarching research question is:

What pathways might be/have been developed to encourage creativity and innovation in the pursuit of inclusive, equitable and sustainable growth and development of Melbourne, and how might these contribute to the UNESCO Creative Cities Network?

Relevant Literature

- Clark, H. & Bokova, I. ‘Foreword’ in *Creative Economy Report: Widening Local Development Pathways*. New York: United Nations Development Programme (UNDP); Paris: United Nations Educational, Scientific and Cultural Organisation (UNESCO), 2013: 9-11.
- O’Gorman, S. ‘Creative Ecologies: Flying Nun Records 1981-1997, Xpressway 1988-1993’ in *The Design Collective: An Approach to Practice*. Eds. Harriet Edquist & Laurene Vaughan. Newcastle-upon-Tyne: Cambridge Scholars, 2012: 221-247.
- [UNESCO Creative Cities Network](#)
[Geelong City of Design](#)
[Melbourne City of Literature](#)
- Waite, N. ‘Layers of Care: Co-designing a global laboratory of inter-cultural dialogue and sustaining bio-cultural diversity’ in *Designing Cultures of Care*. Ed. Laurene Vaughan. Bloomsbury, forthcoming 2018.

Supervisory Team

Primary Supervisor Dr Noel Waite
Associate Supervisor/s Dr Marius Foley, Dr Toni Roberts

For Code

Design Mgt & Studio & Prof Practice 120303

Project Title***New materialities in Communication Design practice***

Project Description

The recorded history of human mark-making spans thousands of years, embracing new mediums and modes of inscription at each technological turn. Recent emerging technologies and digital tools present a timely opportunity for contemporary communication design practice to test the boundaries of making (and unmaking) meaning through materiality today.

Researchers are invited to extend their studio practice with emerging systems of production such as advanced additive and subtractive manufacturing, robotics, parametric and generative design, to explore and generate new materialities with potential to expand upon and move beyond traditional distinctions of the digital and physical. This research bridges emerging and innovative technologies with established communication design practice. Examples of hybridised “post-digital” methods include laser-cutting for publication design, 3D-printed typefaces for letterpress and other relief printing applications, or 3D modelling of typography for immersive digital environments in augmented and/or virtual realities. The research may explore how communication design may engage communities; the social and cultural consequences of digital and technological transformations and innovations; and the interface of new and established practices and technologies.

The candidate’s own practice will provide a departure point for speculative experimentation leading to the development of new hybrid methodologies, informed by contemporary design theory encompassing materiality, human-machine collaboration, distributed agency, networked systems, speculative design and sustainable futures. Disrupting the pervasive dichotomy of digital vs traditional communication design, these investigations actively engage with materiality across all mediums. Investigations orient through awareness of contemporary material politics and philosophy while maintaining a practice-led methodology incorporating print, publication design, screen, time-based and audio works. This project concerns the human, the post-human, social, economic and environmental sustainability, and the transitions required to propose speculative design futures for the planet.

The outcomes of this research comprise reflection of knowledge produced, engagement with contemporary discourse, and models for innovative communication design education.

Relevant Literature

- Seymour, A. (2011). Digital Materiality Digital Fabrication And Hybridity In Graphic Design. *Design Principles And Practices: An International Journal*. 5(3), 527-533.
- Bolt, B. (2007). Material Thinking and the Agency of Matter. *Studies in Material Thinking*. 1(1).
- Downton, P. (2003). *Design research*. Melbourne: RMIT Publishing.
- Ludovico Alessandro (2012). *Post-Digital Print: The Mutation of Publishing since 1894*. Eindhoven, NL: Onomatopée.

Supervisory Team

Primary Supervisor	Dr Neal Haslem
Associate Supervisor/s	Dr Andy Simionato

FoR Code

Visual Communication Design120307

Project Title

Strategic design and leadership for the health, cultural and NFP sectors and their publics

Project Description

Design research has an active role to play in how society changes the ways people access and experience services and engagements, from the organisational level through to the fuller economy and social-political implications. This project will research the way human centred design (HCD) research builds capacity within groups and organisations – specifically in the health, cultural and not-for-profit sectors – to implement and deliver services and experiences. The foci for this study is through the lenses of design leadership and strategic design. The project can explore the deployment of creative practice to reimagine health, resilience and care; to shape and engage communities; and to shape social and cultural opportunities.

The project will draw on generative and applied practice research approaches, mirroring the research and process within HCD. Human centred design puts emphasis on design research through ethnographic observation and interactions; attention to the manner in which people experience services and activities, as well as product and other outcomes; prototypes that generate iterative interrogation of the thing being designed; co-creative practices where possible; and critical reflection at all stages of the design.

The transdisciplinary nature of this type of design will warrant research into disciplinary/practice languages and assumptions to build common understanding within the project. The type of re-envisioning and redesign of engagement between organisations and their publics requires an ethical approach, contributing to the way industry practices are shaped. The inquiry will explore the synergies between the three sectors, as well as the novel ways they engage their publics.

Relevant Literature

- Gesmer, G., Calabretta, C., Karpan, I. 2016. *Strategic Design: 8 Essential Practices Every Strategic Designer Must Master*. Melbourne: RMIT Press.
- Hill, D. 2014. *Dark Matter and Trojan Horses: A Strategic Design Vocabular*. Moscow: Strelka Press.
- Ibarra, H. 2015. *Act Like a Leader, Think Like a Leader*. Boston: Harvard Business Press.
- Verganti, R. 2009. *Design-Driven Innovation*. Boston: Harvard Business Press.
- Verganti, R. 2017. *Overcrowded*. Boston: MIT Press.

Supervisory Team

Primary Supervisor	Dr Neal Haslem
Associate Supervisor/s	Dr Marius Foley, Dr Leah Heiss

FoR Code

Design Mgt & Studio & Prof Practice 120303

Project Title

Material literacy: the significance of materials in design ideation

Project Description

The concept of 'Material literacy' encompasses all forms of correspondence that occur between a designer and the materials and tools used during design ideation. These incorporate a practitioner's capacity to negotiate the material information that is presented and interpret its potential for use. As a part of this literacy designers have been shown to perform a number of tacitly sought strategies, such as the seeking of certain technological conditions in which to invent, because they stimulate imagination and promote experimentation.

As we adapt to an increasingly digital environment and design discourse grapples with the extent to which digital tools have pervaded the design consciousness, research that exposes and re-invigorates interest in the particular contributions that physical, 'non-digital' tools make to a designer's process – whether or not these are explored in conjunction with digital tools – will help to ensure a future design discipline that is equipped with an expanding, rather than a reducing, suite of design tools.

The candidate can investigate how material literacy figures in their own design practice, or how it figures or can be taught to figure in the practice of other designers. The candidate may be a design practitioner, a design educator or both. The practice-based research will have a visual methodology but the design of the methodology will be decided by the candidate

This project contributes to design and creative practice industries, by ensuring material literacies will continue to be valued in an increasingly digital design environment; alleviating current anxiety around digital technologies; and encouraging material play and experimentation to facilitate invention.

Relevant Literature

- Margolis, E. & Pauwels, L. (2011). *The SAGE Handbook of Visual Research Methods*. Los Angeles: SAGE.
- Osiurak, F., Jarry, C. & Le Gall, D. (2010). Grasping the affordances, understanding the reasoning: Toward a dialectical theory of human tool use. *Psychological Review* 117(2), 517-540.
- Albers, A. (1982). In *Anni Albers: Selected Writings on Design*, edited by B. Danilowitz. USA: Wesleyan University Press.
- Grigg, J. (2018). Material literacy: the significance of materials in graphic design ideation, a practice-based enquiry. Doctoral dissertation, RMIT University, Melbourne.
<https://equella.rmit.edu.au/rmit/file/9479eba9-5d6d-4d0d-8a11-efc780f33bca/1/Grigg.pdf>

Supervisory Team

Primary Supervisor	Dr Neal Haslem
Associate Supervisor/s	Dr Jenny Grigg

FoR Code

Visual Communication Design 120307

Project Title***Embracing plurality in design***

Project Description

Heterogeneous design practices have always been active under other names, continually constituted by various blends of cultures, relationships, materials, histories, philosophies and worldviews that manifest in certain localities. When design is a decisive world-making practice, research explorations in Australia and beyond must be vigilant of displacing and omitting culturally-grounded practices when design from industrial and modernist roots in Europe is taken as a norm, due to its dominance. Recognising such politics of global hierarchies and critiques of colonialism is emerging in various discourses as special issues of prominent design journals such as *Design and the Global South* (Fry & Willis 2017), *Autonomia* (Botero et al. 2018), *Decolonizing Design* (Shultz et al. 2018) and *Embracing Plurality* (Akama & Yee, 2019).

Research candidates are invited to explore any design fields and practices with a heightened sensitivity to situated, political, relational, dynamic cultural conditions. Candidates may use any research modes under Practice Research or Thesis. Emphasis will be placed upon pursuing a methodology that is reflexive and transdisciplinary (e.g. incorporating anthropological, decolonial, feminist theories) blended with design, to consider what, why, when, where and how design interventions are occurring; and how design can be conceptualised as a critical value-creation industry. Such considerations can become a research fulcrum if the candidate is undertaking such design interventions themselves.

Relevant Literature

- Akama, Yoko and Joyce Yee. 2019. "Special Issue: Embracing Plurality in Designing Social Innovation Practices". *Design and Culture* 11(1):1-11.
- Botero, Andrea, Chiara Del Gaudio, Alfredo Gutiérrez Borrero. 2018. "Editorial: Special Issue: Autonomía | Design strategies for enabling design process." *Strategic Design Research Journal* 11 (2): 51-57.
- Fry, Tony, Anne-Marie Willis. 2017. "Design and the Global South". *Design Philosophy Papers*, 15(1): 1-2.
- Schultz, Tristan, Danah Abdulla, Ahmed Ansari, Ece Canlı, Mahmoud Keshavarz, Matthew Kiem, Luiza Prado de O. Martins & Pedro J.S. Vieira de Oliveira. 2018. "Editors' Introduction." *Design and Culture* 10(1): 1-6.

Supervisory Team

Primary Supervisor	A/Prof Yoko Akama
Associate Supervisor/s	Dr Jaz Hee-Jeong Choi, Dr Juan Diego Santamari, A/Prof Joyce Yee (Northumbria University)

FoR Code

Design innovation 120302

Project Title***Designing in the anthropocene***

Project Description

This research responds to pressing concerns arising from current rapid extinction of species, habitat loss and displacement of more-than-human communities and recognises the moral and practical crises in design that have contributed to such conditions. We invite candidates who are motivated to critique what 'human-centred design' might mean when challenging dominant narratives of human progress over fellow non-human beings and things.

The enquiry resonates with several transdisciplinary discourses in feminist science and technology studies, political ecology, new materialism, multi-species ethnography, artificial intelligence systems and Indigenous cosmopolitics that are spearheading related research enquiries through design and creative practice such as [multi-species storytelling conference series](#) and [more-than-human participatory research group](#).

The research has potential for broader design practice – including deliberately human-centred practices – through the investigation of 'beyond-human' concepts and practices; temporal, spatial and material, led by a hope that we might begin to address some challenges of the Anthropocene and design's alternative relation to it.

This project connects with themes of design and creative practice for societal equality, biodiversity and sustainability.

Relevant Literature

- Donna J Haraway. 2016. Staying with the trouble: *Making kin in the Chthulucene*. Duke University Press.
- Light, A., Powell, A., & Shklovski, I. (2017). Design for Existential Crisis in the Anthropocene Age. In *Proceedings of the 8th International Conference on Communities and Technologies - C&T '17*. <https://doi.org/10.1145/3083671.3083688>
- Sepie, A. J. (2017). More than Stories, More than Myths: Animal/Human/Nature(s) in Traditional Ecological Worldviews. *Humanities*, 6(78), 1–31. <https://doi.org/doi:10.3390/h6040078>
- Tsing, A. L. (2015). *The Mushroom at the End of the World: On the Possibility of Life in Capitalist Ruins*. Princeton and Oxford: Princeton University Press.

Supervisory Team

Primary Supervisor	A/Prof Yoko Akama
Associate Supervisor/s	Dr Pirjo Haikola, Dr Toni Roberts, Scott Mitchell, Mick Douglas, Dr Gina Moore

FoR Code

Design innovation 120302

Project Title**Care-full Design**

Project Description

Increasing urbanisation along with rising social, economic, and environmental precarity often renders a kind of “inevitable future” where design of cyberphysical systems, services, and cities tends to focus on adapting to and mitigating social and environmental damages. The current discourse surrounding smart everything (e.g. from homes to cities, and from wearables to vehicles) clearly exemplifies how “surveil-and-discipline” remains the dominant framing for our discussions and imagining of the future. As many emerging voices across disciplines and sectors highlight, it is a problematic one, further silencing the already underserved, including those with less socioeconomic means, ageing populations, women, gender-diverse groups, people of colour, children, and other-than-humans. This future is not inevitable; it is just one of many possible futures. Design does not, and should not, need to reify this vision.

We seek research candidates who are passionate about exploring transformational possibilities of care-full design through transdisciplinary research and practice in/across different fields of design – including but not limited to interaction/experience/service. Creative-Critical explorations with methods are highly encouraged.

Relevant Literature

- Choi, Jaz Hee-jeong. 2019. “Care-Full Design and Urban Futures”. HCID Open Day: Design for Good, City, University of London (hcidopenday.co.uk)
- Light, Ann, and Yoko Akama. 2014. "Structuring future social relations: the politics of care in participatory practice." In Proceedings of the 13th Participatory Design Conference: Research Papers - Volume 1, 151-60. Windhoek, Namibia: ACM.
- Vaughan, Laurene. 2019. Designing cultures of care (Bloomsbury Visual Arts: London New York, NY).
- Avram, Gabriela, Choi, Jaz Hee-jeong, De Paoli, Stefano, Light, Ann, Lyle, Peter, & Teli, Maurizio. In press, 2019. “Repositioning Co-Design in the Age of Platform Capitalism: From Sharing to Caring”. CoDesign: International Journal of CoCreation in Design and the Arts.

Supervisory Team

Primary Supervisor

Dr Jaz Hee-Jeong Choi, A/Prof Yoko Akama

Associate Supervisor/s

Prof Laurene Vaughan, Dr Jordan Lacey, A/Prof Ellie Rennie

FoR Code

120302 Design Innovation, 120304 Digital and Interaction Design

Project Title

Communication design history: archival research relating to Melbourne design from the twentieth century onwards

Project Description

The proposal formalises a design history HDR stream within the School of Design. The candidate will research material held at the RMIT Design Archives (RDA). The RDA actively collects material relating to Melbourne design from the twentieth century onwards, and is an integral part of a vibrant research centre in the heart of the city. Both digital and material, the collections represent historical and contemporary practices which tell the story of Melbourne as a design city, and provide the resources and support for research into Melbourne's designed environment, design professions and practices.

The objective of the research will be to contribute knowledge about contemporary and historical communication or graphic design practices associated with the City of Melbourne. Despite its rich history, this field of practice, particularly in relation to other design disciplines such as architecture and industrial design, is currently under-researched. Whilst the research will be practice-based, archival and employ a visual methodology, within this framework there is a diverse range of research possibilities. The candidate might make a comparative analysis of their own communication design practice with that of another practitioner's archive; compare aspects of Melbourne's design history with those of another city, generate new works that extend the candidate's practice; or explore a selection of case studies to compare aspects of historical and contemporary design practice and help to shape its future. Both historical and contemporary practices, colloquially referred to as 'living archives', are available for research at the RDA. Alternative proposals are welcome.

This project explores technological innovation through its analysis and re-interpretation of historical design concepts through contemporary technologies, providing a model for future design invention and a demonstration of the value-creation of design and creativity to industry.

Relevant Literature

- Grigg, J. (2018). Material literacy: the significance of materials in graphic design ideation, a practice-based enquiry. Doctoral dissertation, RMIT University, Melbourne.
<https://equella.rmit.edu.au/rmit/file/9479eba9-5d6d-4d0d-8a11-efc780f33bca/1/Grigg.pdf>
- RDA Archive online: www.rmit.edu.au/about/our-locations-and-facilities/facilities/research-facilities/rmit-design-archives
- RDA Journal: www.rmit.edu.au/about/our-locations-and-facilities/facilities/research-facilities/rmit-design-archives/research/rmit-design-archives-journal
- Examples of non-academic research relevant to this project: <https://recollection.com.au>

Supervisory Team

Primary Supervisor	Prof Harriet Edquist, Dr Noel Waite
Associate Supervisor/s	Dr Jenny Grigg

FoR Code

Design History and Theory 120301, Visual Communication Design 120307

Project Title**Advertising Design Futures**

Project Description

If we think of design as the “ability to envision what we create” (Simon, 1969), advertising shifted ontologically into the area of design because today, its fundamental role is to act on the basis of prediction of our future behaviour. Working within the logic of “surveillance capitalism” (Zuboff, 2019) advertising is designed to address and alter our future behaviour on the basis of algorithmic conclusions taken from data gathered from surveillance processes embedded in our everyday life.

While in the past design was integrated into advertising as one of its elements, today advertising works under the logic of design- design as ontologically affecting our futures. In this sense design has unique capabilities to understand and map the current state of advertising and its influence on our lives as well as develop new advertising design practices not centred on exploitation of human lives through invasive data practices, but rather on human-centred design and humanist principles.

This project will critically examine the new trends, develop a mapping methodology based on principles of critical mapping (Paglen, 2002) of the surveillance based advertising principles and practices and through this understanding explore and develop innovative advertising design (Vodeb, 2008), which will contribute to social futures based on justice, sustainability and equality: design reclaiming the right to our futures. The project explores transformation in security and consequences of digital transformations on everyday life by exploring the harm of surveillance-based advertising and proposing design-informed alternatives.

This project will use digital ethnography, theoretical analysis and design sociology as primary research methods. The nature of the research calls for interdisciplinary collaboration between design, media and communication, sociology and visual arts The project will enable the candidate to operate with knowledge necessary to practice design in ways that will be utterly enabling for broader society to escape the condition of surveillance and invasive data practices. The opportunities to apply this knowledge are immense give the broad existing critique of surveillance practices.

Relevant Literature

- Zuboff, S. (2019). *The Age of Surveillance Capitalism*. London: Profile Books.
- Vodeb, O. (2008). *Družbeno odzivno komuniciranje*. Univerza v Ljubljani.
- Rushkoff, R. (2019). *Team Human*. New York: W. W. Norton & Company.
- Bauwens, M. (2005). The Political Economy of Peer Production, *CTheory*. <https://journals.uvic.ca/index.php/ctheory/article/view/14464/5306>>.

Supervisory Team

Primary Supervisor	Dr Oliver Vodeb
Associate Supervisor/s	A/Prof Brad Haylock, Dr Noel Waite

FoR Code

Design innovation 120302, Visual Communication Design 120307

Project Title**Communication Design Education for Social Change****Project Description**

The current states of radical uncertainties and environmental degradation and the role design plays in this processes urges us to rethink design education.

Designers, as cultural intermediaries, work mainly without a necessary reflection of their own impact on society, yet this impact is crucial in the ideological re-production of the communication design culture, which contributes to the colonisation of the public sphere by private interests (Habermas 1989). Caught in formal, aesthetic, technical discourses, many communication designers operate only as service providers for the market's interests. They contribute immensely to the aesthetic of the ephemeral, which Appadurai (1996, 2010) considers consumer capitalisms driving motor, and communication design "has become incorporated entirely into the radical transformation of social and cultural life by the public relations and sell-out of meaning by transnational corporations, the culture industry and neo-liberal politics" (van Toorn 2010, 48).

This project will research past and current communication design pedagogies, which implicitly or explicitly aim to educate students to become designers for social change. It will research the link between design pedagogies for social change and "do good" design practice done by students coming from these pedagogies in order to understand the relations between both. In what ways have these pedagogies influenced the "do good" design practices in the "real world" and how can we think about the social impact of these practices? Finally, the project will propose methodology to assist designing curricula for communication design for social change.

The project fills the gap in understanding the link between pedagogies for social change and the professional design practice in the real world done by students who have been part of these pedagogical processes. It will deliver crucial insight into conditions, practices and methods for knowledge generation aimed to educate designers acting in the professional world. The project is appropriate for a candidate interested in a teaching/academic career seeking to understand how design as knowledge is generated and how it impacts society. The scope of the research is ambitious and its global relevance and urgency highly contribute to the possibilities for the application of this research into academia or the professional world.

The project explores social change through design and design pedagogies. In a society determined by education and media, this research works towards strengthening society.

Relevant Literature

- Fry, T. (2010). *Design as Politics*. New York: Bloomsbury.
- Shor, I. (1992). *Empowering Education: Critical Teaching for Social Change*. University of Chicago Press.
- Vodeb, O. (2015). Social Innovation and Design Education: Towards a Socially Responsive Communication Design Pedagogy. *Design and Culture* 7(3), 423-431.
- Apple, M. (2018). *Ideology and Curriculum*, New York: Routledge.

Supervisory Team

Primary Supervisor	Dr Oliver Vodeb
Associate Supervisor/s	Dr Noel Waite

FoR Code

Visual Communication Design 120307

Project Title

Designing for experiences in museums (and other interpretative environments)

Project Description

This project examines design's contribution to creating experiences for visitors at museums, zoos, national parks and other interpretive contexts. The project seeks to better understand the methods and impact of designing material, digital, conceptual and communicative aspects of the visitor experience. This under-researched field of design practice is central to the multibillion dollar GLAM sector, at the heart of the experience economy. This project engages communities and business in a process of collaborative design to inform cultural business innovation.

Applicants from any design discipline, museum studies and social science may apply. Research modes include: Practice research (Reflective Industry Practice, Generative Practice, and Applied Practice); research by thesis; or a combination.

The project can be undertaken with a range of research partners, from larger institutions (Museums Victoria, ACMI, NGV, Zoos Victoria, Parks Victoria) to smaller museums.

Relevant Literature

- Lake-Hammond, A. & Waite, N. (2010). Exhibition Design: Bridging the Knowledge Gap. *The Design Journal*, 13(1), 77-98.
- McKenna-Cress, P. & Kamien, J. (2013). *Creating exhibitions: collaboration in the planning, development, and design of innovative experiences*. John Wiley & Sons.
- Roberts, T. (2014). Interpretation Design: an integrative, interdisciplinary practice. *Museum and Society*, 12, 191 - 209.
- Roberts, T. (2015). Factors affecting the role of designers in interpretation projects. *Museum Management and Curatorship*, 30, 379 - 393.

Supervisory Team

Primary Supervisor	Dr Toni Roberts
Associate Supervisor/s	Dr Noel Waite, Dr LiPing Thong

FoR Code

Visual Communication Design 120307

Project Title***Designing for conservation and environmental awareness***

Project Description

This project examines the methods and impacts of designing interpretation to promote environmental awareness and conservation actions in museums, zoos, aquariums and national parks. With millions of visitors to these institutions each year, this under-researched field of design practice is highly influential in shaping social attitudes and actions. The project draws on post-humanist perspectives on human/nature relations, the notion of the 'artificial' prevalent in design discourse, and current research on values-based interpretation (Ballantyne and Packer, in press). It seeks to understand how design can contribute to changing public attitudes and behaviours in relation to conservation and environmental sustainability without perpetuating the conceptual human/nature division. These questions have particular urgency in the current era of climate change and entanglement between human actions and environmental impacts. The project engages community and business to explore pathways to a sustainable future; and takes a collaborative design approach to potential innovation in business and promotion practices.

Applicants from a wide range of design and related disciplines may apply. Research modes include: Practice research (Reflective Industry Practice, Generative Practice, and Applied Practice); research by thesis; or a combination.

Research partners may include Museums Victoria, Zoos Victoria and Parks Victoria, Queenscliff Marine Education Centre, Ricketts Point Marine Care, CoastCare, St Kilda Ecocentre, Ceres and others.

Relevant Literature

- Ballantyne, R. & Packer, J. (2011). Using Tourism Free-choice Learning Experiences to Promote Environmentally Sustainable Behaviour: The role of post-visit "action resources". *Environmental Education Research*, 17:2(June), 201-215.
- Morton, T. (2011). Zero Landscapes in the Time of Hyperobjects. *Graz Architectural Magazine*, 7, 78-87.
- Roberts, T. (2013). *Interpretation design: building knowledge from practice*. Doctoral thesis.
- Smith, J.K. (2014). *The museum effect: How museums, libraries, and cultural institutions educate and civilize society*. Rowman & Littlefield.

Supervisory Team

Primary Supervisor	Dr Toni Roberts
Associate Supervisor/s	Prof David Carlin

FoR Code

Visual Communication Design 120307

Project Title***Audiokinetic Lab: audio experiences for entertainment and health*****Project Description**

As consumption of media continues to morph towards more embodied experiences (AR, VR, XR, 4D, vibrotactile music) the need for a more sophisticated understanding of sound within inhabited multisensory environments deepens.

This project brings together established sound theory from cinema, music psychology, perceptual studies and sound art as a means of better describing and understanding the subtle experiences of audio and how it interacts with and can modulate other senses. Informed by these principles, but ultimately driven by empirical evidence, this research will generate stimuli through creative practice and assess responses with a range of measures including self-report and biometric data. Stimuli will include sound, vibration, movement and light and will explore how these modalities can be creatively integrated. As well as in art, design and entertainment, this exploration has potential application in wellness and therapy fields, fostering health and wellbeing through creative practice with implications for a growing, ageing and stressed population.

Some of the research outputs would be covered by Field of Research Codes 1904 (music composition), 190408 (music therapy) and 1902 (digital media), with clear alignments to 1701 (psychology) and 1702 (cognitive science) as well.

Ideal candidates for this position would be supported by a significant sonic practice (whether soundtrack, sound design, composition or installation), and a deep curiosity about the role of sound in the psychophysiology of aesthetic experience. This would require an interest in a wide variety of media and an openness to scientific as well as philosophical enquiry.

Relevant Literature

- Augoyard, J.F. & Torgue, H. (2014) *Sonic Experience: A Guide to Everyday Sounds*. McGill-Queen's Press.
- Chion, M. (1994) *Audiovision*. Columbia University.
- Huron, D. (2006) *Sweet Anticipation: Music and the Psychology of Expectation*. MIT Press.
- Levitin, D. (2006) *This is Your Brain on Music*. Penguin Publishing.
- Starr, G. (2013). *Feeling Beauty: The neuroscience of Aesthetic Experience*. MIT Press.

Supervisory Team

Primary Supervisor	Dr Darrin Verhagen
Associate Supervisor/s	Dr Jenny Robinson

FoR Code

Digital & Interaction Design 120304

Project Title***Designing Sound Theory through cinematic practice***

Project Description

While sound is said to be half a film experience (George Lucas), there has been limited exploration in cinematic literature of the subtle mechanics of how particular sound practices generate specific perceptual effects. Film sound theory has remained largely static, both in the face of technological advances (recording fidelity, 3D sound, surround, ATMOS) as well as more recent experimental approaches from practitioners in industry. In the light of contemporary practice, there is a need for a more sophisticated understanding of the narrative potential of film sound, and how particular design elements operate, integrate and resonate.

This project brings together established sound theory from cinema with perceptual studies and sound art as a means of better describing and understanding the subtle craft of sonic design and how it interacts with text and cinematography to generate particular experiences. Informed by such principles and driven by empirical evidence, this research will generate stimuli through creative practice and assess responses with a range of measures including observational analysis, audience self-reporting and the collection of biometric data. Stimuli will include sound design, music and dialogue, and will explore how these creatively integrate with video.

Ideal candidates would be supported by a significant film sound practice, and a deep curiosity about the role of sound in the psychophysiology of aesthetic experience. This would require interest in a wide variety of media and openness to scientific as well as philosophical enquiry. The project is an opportunity to generate new knowledge by drawing on diverse fields of research in order to map the mechanics of a process which is currently poorly (or at best, only intuitively) understood. The project will contribute to knowledge about the value of design and creative practice to industry.

Relevant Literature

- Chion, M. (1994). *Audiovision*. New York: Columbia University Press.
- Voegelin, S. (2010). *Listening to Noise and Silence: Towards a Philosophy of Sound Art*. New York: Continuum.
- Blesser, B. (2009). *Spaces Speak, Are You Listening?: Experiencing Aural Architecture*. Boston: MIT Press.
- Weis, E. (1985). *Film Sound, Theory and Practice*. New York: Columbia University Press.

Supervisory Team

Primary Supervisor	Dr Darrin Verhagen
Associate Supervisor/s	Dr Shaun Wilson, Dr Daniel Binns

FoR Code

Digital & Interaction Design 120304, Cinema Studies 190201

Project Title***Writing the Internets: Post Digital Folklore*****Project Description**

The internet is dead, long live the internets! In 2025, the internet will consist of either gated communities or decentralised independent instances. For those who want to be connected while choosing their own dependencies, there is no option but to draw up new networks and experiment with both historical and innovative protocols. By encouraging software literacy through modes of experimental pedagogy, an alternative body of empirical knowledge can be obtained and Internet sovereignty can be rewritten.

Before an explication of what writing the internet or post Internet folklore means, an acknowledgement of the apparatus, the servers upon which the Internet is built, must be made. There is a relative absence of technical savvy in digital humanities and communications departments, precisely when daily encounter with obscured technologies becomes standard. By drawing further attention to the apparatus, new models of engagement are advocated in order to provide a deeper understanding of connections between policy and algorithmic industry in the arrangement of cultural concerns and apprehensions. This also envisions a more hopeful future trajectory of an alternative, more autonomous version of the Internet. Holistic development of a user-centred, participatory approach to the design of interactive systems which can be facilitated by access to such infrastructures. The potential to greatly advance our thinking about how we experience a repository of knowledge. Overhauling the current role of the data centre and highlighting the need to look differently at how such research could be shared, assessed, and stored or archived. This underlines our ability to re-think the mechanism. By encouraging alternative ways of performing with and experiencing the Internet, these efforts would accentuate our ability to re-think the mechanism, to be able to partially understand, control and rewrite the technology of the Internet as bespoke apparatus.

This is an opportunity for a PhD candidate with a digital culture, digital design or art practice looking to submit by project and dissertation using a practice-based design mode of research. The project connects with themes of transformations in digital society and economy; and automation and intelligence.

Relevant Literature

- de Seta, G. (2018). Digital folklore. In Hunsinger, J., Klastrup, L., Allen, M.M. (Eds.), *Second International Handbook of Internet Research*. Netherlands: Springer.
- Goriunova, O. (2013). *Art Platforms and Cultural Production on the Internet*. London: Routledge.
- Mauro-Flude, N. (2019). 'Performing the Internet: Post Digital Folklore,' in R. Shun-han, L. Haipeng, C. Min (Eds.), *Digital Humanities and Scholarly Research Trends in the Asia-Pacific*, Pennsylvania: IGI Global.
- Ricci, D. et al. (2015). Clues. Anomalies. Understanding. Detecting underlying assumptions and expected practices in the Digital Humanities through the AIME project. *Visible Language*, 49(3), 35-61.

Supervisory Team

Primary Supervisor	Dr Nancy Mauro-Flude
Associate Supervisor/s	Dr Tom Penney

FoR Code

Digital & Interaction Design 120304

Project Title***Playable City Melbourne***

Project Description

Urban play has changed our relationship with the city. Playable Cities now have opportunity to make Melbourne a playable city via social frameworks that connect people, place, technology and code. Exploring the city as a platform for play, this practice-led research is situated across public art, augmented reality, game development, urban design and creative technologies.

Playable cities can lead to civic conversations that are democratic and inclusive – and that connect people in that conversation across different layers of the city, reimagining what it was, what it is now, and what it could be. Melbourne is already a playful city, what would happen if it became playable? The Playable City Melbourne conversation talks to its multi-layered identity – as a creative city, technological city, a diverse and multicultural city, a sustainable city, a liveable city that is growing fast. It looks at what playable cities are now in response to our particular social, cultural and environmental context.

How does this connect to broader discussion on the cultural value of games and play? What are the opportunities for artist gamemakers situating play in public space? What topics are relevant now in civic conversations? How can play be used as a lens or practice to address material and civic challenges?

Research candidates working on this project may have the opportunity to engage with industry partners such as the City of Melbourne, the Australian Centre for the Moving Image, and State Library Victoria, and international partners Watershed (Bristol, UK) and Institute for Advanced Architecture Catalonia (Barcelona, Spain). The project is supported by Creative Victoria and British Council.

Relevant Literature

- Glas, R., Lammes, S., de Lange, M., Raessens, J., de Vries, I. (Eds.) (2019). *The Playful Citizen: Civic Engagement in a Mediatized Culture*. Amsterdam, Amsterdam University Press.
- Leorke, D. (2019). *Location-Based Gaming: Play in Public Space*. Palgrave Macmillan.
- Nijholt, A. (Ed.) (2017). *Playable Cities: The City as a Digital Playground*. Singapore, Springer.
- Sicart, M. (2014). *Play Matters*. USA, The MIT Press.

Supervisory Team

Primary Supervisor	Dr Troy Innocent
Associate Supervisor/s	Dr Matthew Riley, Dr Hugh Davies, Dr Jaz Choi

FoR Code

Digital & Interaction Design 120304

Project Title

Helping Australians understand and manage their pollen exposure indoors, outdoors and on the go

Project Description

Located within the Human Computer Interaction tradition, this research explores the design, development, and evaluation of an innovative pollen monitoring and feedback system. The aim is to understand how individuals experience, understand and reflect on their daily pollen exposure, and how the gained understanding leads to effective management of possible pollen allergies (i.e. hayfever and thunderstorm asthma). This research fits within the domain of persuasive health technologies and self-monitoring systems that have shown significant benefits in raising awareness and in supporting self-management of different conditions. It draws on game design principles that bring elements of exploration, curiosity and play together to offer rich perspectives on individuals' relationship with environmental pollen exposure.

Asthma and pollen allergies are significant health burden in Australia with over 3 million sufferers and costing Australian community over \$700 million annually. This research aims to reduce the burden on health economy by actively engaging individuals in monitoring and managing their daily pollen exposure with an innovative personal pollen monitoring system. This research will contribute to improved population health and health promotion practice by improving the decision-making abilities of Australian citizens in managing their conditions effectively, which in turn, will also ease the demand on hospital services and address Victorian government's priority goal of "safe and well" community.

Relevant Literature

- Hew, M., Sutherland, M., Thien, F. and O'hehir, R., 2017. The Melbourne thunderstorm asthma event: can we avert another strike? *Internal medicine journal*, 47(5), pp.485-487.
- Khot, R.A., Aggarwal, D., Pennings, R., Hjorth, L. and Mueller, F.F., 2017, May. Edipulse: investigating a playful approach to self-monitoring through 3D printed chocolate treats. In *Proceedings of the 2017 CHI Conference on Human Factors in Computing Systems*, pp. 6593-6607. ACM.
- Silver, J.D., Sutherland, M.F., Johnston, F.H., Lampugnani, E.R., McCarthy, M.A., Jacobs, S.J., Pezza, A.B. and Newbigin, E.J., 2018. Seasonal asthma in Melbourne, Australia, and some observations on the occurrence of thunderstorm asthma and its predictability. *PLoS one*, 13(4), p.e0194929.
- Vedanthan, R., Bansilal, S., Soto, A.V., Kovacic, J.C., Latina, J., Jaslow, R., Santana, M., Gorga, E., Kasarskis, A., Hajjar, R. and Schadt, E.E., 2016. Family-based approaches to cardiovascular health promotion. *Journal of the American College of Cardiology*, 67(14), pp.1725-1737.

Supervisory Team

Primary Supervisor	Dr Rohit Ashok Khot
Associate Supervisor/s	Dr Jaz Hee-Jeong Choi

FoR Code

Digital & Interaction Design 120304

Project Title

Helping Australians understand gut health and dietary choices through Augmented Reality

Project Description

Obesity and auto-immune diseases are on the rise each year. According to the Australian Bureau of Statistics' National Health Survey, two thirds (67.0%, 12.5 million people) were overweight or obese in 2017-2018, an increase from 63.4% in 2014-15. To stem this upward trajectory, efforts must be taken at a multidisciplinary level across all sectors to support individuals' transition to a healthier and appropriate diet. But this change also needs to start at an individual level by making people aware of what and how they are eating.

Existing literature has identified and studied different ways of promoting healthy food choices, for example, through calorie information and health star rating on food items and through dedicated apps and campaigns for healthy eating. An investigation is missing, however, into the topic of healthy eating through the lens of the gut as a means to support dietary decision-making.

Located within the HCI tradition and using participatory design-led approaches, this research explores the following questions. How well do Australian consumers understand their gut and its influences on food and their health? How can we increase the level of awareness and understanding of gut using emerging technologies such as Augmented Reality?

This research explores the use of design to reimagine health and care, and fits well into the domain of technology-based health promotion, an increasingly popular mode of personalised care helping people self-manage and track their dietary decisions. Our aim is to contribute to dietary decision-making abilities of Australian consumers through emerging technologies and empower them to self-manage their overall well-being, thereby reducing the burden on medical systems and government bodies.

Relevant Literature

- Samir Chatterjee and Alan Price. 2009. Healthy living with persuasive technologies: framework, issues, and challenges. *Journal of the American Medical Informatics Association: JAMIA* 16, 2: 171–178. <https://doi.org/10.1197/jamia.M2859>
- C. Milani, C. Ferrario, F. Turroni, S. Duranti, M. Mangifesta, D. van Sinderen, and M. Ventura. 2016. The human gut microbiota and its interactive connections to diet. *Journal of human nutrition and dietetics: the official journal of the British Dietetic Association* 29, 5: 539–546. <https://doi.org/10.1111/jhn.12371>
- Baohong Wang, Mingfei Yao, Longxian Lv, Zongxin Ling, and Lanjuan Li. 2017. The Human Microbiota in Health and Disease. *Proceedings of the Estonian Academy of Sciences: Engineering* 3, 1: 71–82. <https://doi.org/10.1016/J.ENG.2017.01.008>
- Ellen P. Williams, Marie Mesidor, Karen Winters, Patricia M. Dubbert, and Sharon B. Wyatt. 2015. Overweight and Obesity: Prevalence, Consequences, and Causes of a Growing Public Health Problem. *Current obesity reports* 4, 3: 363–370. <https://doi.org/10.1007/s13679-015-0169-4>

Supervisory Team

Primary Supervisor	Dr Rohit Ashok Khot
Associate Supervisor/s	Dr. Jaz Hee-Jeong Choi

FoR Code

Digital & Interaction Design 120304

Project Title**Supporting mindful eating in everyday practice through play****Project Description**

This project aims to develop and test augmented eating interfaces that address the apparent contradiction between the concept of mindful eating (no distractions) and the realities of everyday dining and prevalence of screen culture (eating with screens). This project expects to generate new knowledge in the field of Human-Food Interaction by presenting the first socio-technological studies of the lived experiences of the proposed interfaces in Australian households. By proposing an innovative approach of augmented eating, this project will contribute new knowledge on the potential of interactive technology to support mindful eating in everyday eating practices to address the pressing global concern of overeating and unhealthy eating behaviours. The technical merits and expected outcomes of the project include: (1) development and evaluation of unobtrusive sensing technology for monitoring eating behaviour; (2) insights into how people eat while consuming screen-based media; (3) a design framework to guide further development of interactive technologies that encourage mindful eating without compromising the pleasures of screen-based media; and (4) a greater understanding of how to support mindful eating in everyday practice.

Relevant Literature

- Keesman, M., Aarts, H., Häfner, M., & Papies, E.K. 2017. Mindfulness Reduces Reactivity to Food Cues: Underlying Mechanisms and Applications in Daily Life. *Current addiction reports* 4, 2: 151–157.
- Khot, R.A., Aggarwal, D., Pennings, R., Hjorth, L. & Mueller, F. 2017. EdiPulse: Investigating a Playful Approach to Self-monitoring Through 3D Printed Chocolate Treats. In *Proc. (CHI '17)*, ACM, 6593–6607.
- Khot, R.A, Lupton, D., Dolejšová, M. & Mueller, F. 2017. Future of Food in the Digital Realm. In *Proceedings of the 2017 CHI Conference Extended Abstracts on Human Factors in Computing Systems (CHI EA'17)*. ACM, New York, NY, USA, 1342-1345. DOI: <https://doi.org/10.1145/3027063.3049283>
- Spence, C. 2017. *Gastrophysics: The New Science of Eating*. Viking.

Supervisory Team

Primary Supervisor	Dr Rohit Ashok Khot
Associate Supervisor/s	Dr Jaz Hee-Jeong Choi

FoR Code

Digital & Interaction Design 120304

Project Title***Designing video games for mental health*****Project Description**

Designing Video Games for Mental Health is a generative practice based project proposal that will explore how video games can be designed to foster player empathy for mental health illness such as depression and anxiety. According to the World Health Organisation, more than 450 million people suffer from mental illness, with more than half remaining undiagnosed and untreated due to stigma and discrimination. This project will focus on the development of serious games that aim to raise awareness of mental health and de-stigmatize mental illness. Serious games are a type of video game developed for purposes other than entertainment, such as for education, skills development or training for high-risk situations in a safe environment. They are particularly suited to supporting educational programs that foster empathy as a key method and goal.

This project will include an investigation into the characteristics of existing video games that are designed to improve wellbeing, and apply those concepts in the design of a video game that may benefit people suffering from mental illness. The proposed project will draw upon theoretical approaches from game design thinking, agile methods of prototyping, co-creation through community participation (interviews and field studies), and consider mental health treatments, such as Cognitive Behavioral Therapy to develop frameworks for game design. The candidate will experiment with a range of interactive media and software tools as a means to develop engaging game experiences that promote mental health, well-being and resilience. The outcomes may be implemented as additional educational and therapeutic interventions within allied-health disciplines.

Relevant Literature

- Kharrazi, H., Lu, A. S., Gharghabi, F. & Coleman, W. (2012). A scoping review of health game research: past, present, and future. *Games Health J*, 1(2).
- Belman, J. & Flanagan, M. (2010). Designing games to foster empathy. *International Journal of Cognitive Technology*.
- Turner, W., Thomas, B. & Casey, L. (2016). Developing Games for Mental Health: A Primer. *Professional Psychology: Research and Practice*. 47.
- Fleming, T., Bavin, L., Stasiak, K., Hermansson-Webb, E., Merry, S., Cheek, C., Lucassen, M., Lau, H., Pollmuller, B. & Hetrick, S. (2017). Serious Games and Gamification for Mental Health: Current Status and Promising Directions. *Front. Psychiatry*, 7:215

Supervisory Team

Primary Supervisor	Dr Jonathan Duckworth
Associate Supervisor/s	Dr Renata Kokanvić

FoR Code

Digital & Interaction Design 120304

Project Title

The art of experience: curating moments of play in Australian videogames of the 1990s

Project Description

In this project, the Candidate will research the curation of moments from selected Australian videogames of the 1990s as part of the ARC project *Play It Again: Preserving Australian videogame history of the 1990s*, in partnership with the Australian Centre for the Moving Image (ACMI). In documenting game history and directing themselves to a research question acknowledging games as experience/experienced, the candidate will develop techniques for curating moments from games. Using existing tools such as Rhizome's Webrecorder.io and the GameCIP's citation tool, this will effectively make it possible to create a personal memory archive that will be searchable and citable (Kaltman 2016).

This digital heritage project begins from the premise that videogames are not just software or hardware artefacts; digital games are understood as a set of played experiences embedded in wider cultures and communities of use (e.g. Newman 2012). Working with a tightly focused set of 51 significant Australian digital game titles plus other related artefacts including Melbourne company Beam Software's digital magazine and real-time interactive multipath movies by Sydney's Brilliant Digital Entertainment. This HDR research will address the emerging area of videogame discovering, exploring means to identify significant moments and matters and enhance their discoverability in collections for curators, researchers and users. Many of the identified games contain unique Australian content, while others are significant to understanding how global forces have shaped the local production industry. Significant are player practices around games, including experiments in networked community and what players made and did with these products.

This project offers a candidate the opportunity to work with a strong interdisciplinary research team and an established research partnership within the structure of an ARC grant. The PhD researchers will be imbedded at ACMI and will work on recent Australian videogames history. The project embeds user-focused design and collaboration with end-user communities. The design and development of digital heritage practice offers a value contribution to the GLAM sector and games industry.

Relevant Literature

- Kaltman, E. (2016). Cite Tool Evaluation Demo, www.youtube.com/watch?v=eY88Z1oHD3E&feature=youtu.be.
- Newman, J. (2012). *Best Before: Videogames, Supersession and Obsolescence*. London and New York: Routledge.
- Ryan, J. et al. (2016). GameNet and GameSage : Videogame Discovery as Design Insight. In Proceedings of 1st International Joint Conference of DiGRA and FDG. Dundee.
- Stuckey, H. et al., (2015). What Retrogamers can teach the Museum. In MWA2015: Museums and the Web Asia. Melbourne.

Supervisory Team

Primary Supervisor	Dr Helen Stuckey
Associate Supervisor/s	Dr Greg Turner (ACMI)

FoR Code

Design History and Theory 120301, Digital & Interaction Design 120304

Project Title

Sonic Fields: rethinking listening environments for spatial sound composition and diffusion

Project Description

Developments in spatial sound technology from the mid-to-late 20th Century enabled the creation, delivery and research of complex acoustic environments. Never before in history could sounds be composed into space in complex spatial arrangements. Whereas music and concert halls were once the privileged location of advanced human auditory experience, digital technology has greatly expanded the potential for new types of auditory experiences beyond traditional sites. Human aural experience is continuous, which means the milieu where sound design might be practiced via digital technology is extensive.

In the spaces of lived daily life we are continually surrounded by sounds. Marshall McLuhan acknowledged this immersive character of the soundscape, saying, "Auditory space has no point of favoured focus. It's a sphere without fixed boundaries, space made by the thing itself, not space containing the thing...always in flux, creating its own dimensions moment to moment" (Carpenter & McLuhan, 1970). In most traditional listening settings, such as concerts or media in the home, we are presented not with a surrounding of sounds, but with something more visually influenced. Something in front and static. We usually only experience music through loudspeakers placed before us or musicians on a stage. Alternative approaches exist, usually for cinema or visual media, but require significant expertise to meet the demands of live performance.

Using SIAL Sound Studios' speaker orchestra, the PhD candidate will research and design a range of listener-technology relationships for non-visual listening. The candidate will have access to the RMIT Sonic Arts Collection, opportunities to design new audience settings for concerts, installations and other events produced by the Studio, and collaboration with students in the Master of Design Innovation and Technology.

Relevant Literature

- McLeod, R. 2011, *Between field and form*, Doctor of Philosophy (PhD), Architecture and Design, RMIT University.
- Harvey, L. 2008, *The auditory centre : research and design of acoustic environments and spatial sound projects*, Doctor of Philosophy (PhD), Architecture and Design, RMIT University.
- Leitner, B. 1998 *Sound:Space*, published by Cantz Verlag, Germany.
- See other speaker orchestra systems via online searching: BEAST (Uni of Birmingham) Acousmoniam (GRM, Paris), MOTUS (Paris), HYDRA (Harvard).

Supervisory Team

Primary Supervisor	A/Prof Lawrence Harvey
Associate Supervisor/s	A/Prof Ross McLeod Mr Jeffrey Hannam

FoR Code

Digital & Interaction Design 120304, Industrial Design 120305

Project Title

Grounding Sound: generative practice research in the representation and transformation of sound

Project Description

This HDR project will investigate the intersection of Sound and Astronomy, and the design of sound-based morphological processes for describing complex systems. This project is highly suited for candidates looking to establish mastery and expand their creative practice by engaging with sound as a multidimensional material – shaping how we perceive our physical environment, but also, how sound is intertwined with many other systems relating to human activity; social, behavioral and cultural. Today, the turn to Sound is becoming more evident in the expanding fields of Science and Social sciences and this is due to the potential for sound to be mapped to more than one parameter, or meaning, revealing temporal and movement-based qualities where more traditional, visual techniques are limited.

Grounding Sound explores the role of sound design technologies for facilitating the turn towards sound, in particular, as an emerging field of study within Astronomy, but also for questioning the very nature of representation for developing new perspectives, techniques and innovative approaches for designing sound morphologies. In this research the candidate will undertake generative creative practice research, contributing to our understanding of sound representation and the techniques that lead to its transformation using spatial sound production and reproduction techniques.

Applicants from a wide range of design and related disciplines may apply, and, even though this particular project is situated within Astronomy, other systems of representation may be used.

Relevant Literature

- Dubus, G. & Bresin, R. (2013). A systematic review of mapping strategies for the sonification of physical quantities. *PloS one*, 8(12), e82491.
- Edwards, A., Hunt, A., Hines, G., Jackson, V., Podvoiskis, A., Roseblade, R. & Stammers, J. (2010). *Sonification strategies for examination of biological cells*. Georgia Institute of Technology.
- Hannam, J. & Harvey, L. (2018). *Walk with me* (forthcoming).
- Strauss, A. & Corbin, J. M. (1997). *Grounded theory in practice*. Sage.

Supervisory Team

Primary Supervisor	Dr Jeffrey Hannam
Associate Supervisor/s	A/Prof Lawrence Harvey

FoR Code

Digital & Interaction Design 120304, Industrial Design 120305

Project Title

Designing Urban Environments: sonic intervention and affective politics

Project Description

Environmental sound design is a burgeoning field of study that considers the effects and affects of everyday urban environments on human wellbeing. It draws from a wide field of studies rooted in R. Murray Schafer's 'soundscape' and Francois Augoyard's 'sonic effect' concepts. These have since morphed into multiple approaches for understanding and shaping urban sound including creative arts, environmental design and spatial politics. Sonic intervention is considered more than just the introduction of sound – it also considers the medium of sound propagation (air/materials) and multisensory approaches that integrate sound with other experiential phenomenon.

This project focuses on the capacity of sonic interventions to create new environments with a focus on improving urban liveability. Sonic intervention is understood broadly as any permanent/temporary action/event – including performative acts, installations, choreography and sounding sculpture – that reconfigures habitual urban expressions. As sites-of-encounter, sonic interventions are considered acts of affective politics that seek new bodily and imaginative responses for the becoming-other of individual and social bodies.

As generative research, the candidates own practice is the launching point for this practice-led research project. The School of Design's diverse sound creation environments, and the city itself, are laboratories for experimentation. Industry partnership is encouraged, particularly with local governments and infrastructure groups working in the public realm. The project will suit candidates wishing to develop creative practices and respond to the issue of urban liveability. The project is closely connected with Urban Futures and the question of shaping future cities for liveability using design and creative practice.

The candidate will have access to resources associated with the DECRA grant awarded to Primary Supervisor Dr Jordan Lacey.

Relevant Literature

- Lacey, J. (2016). *Sonic Rupture: concepts, tools and methods for urban soundscape design*. USA: Bloomsbury.
- Augoyard, J. & Torgue, H. (2005). *Sonic Experience: A Guide to Everyday Sounds*. Trans. A. McCartney & D. Paquette. Canada: McGill-Queen's University Press.
- Schafer, R. M. (1977). *The Soundscape: Our Sonic Environment and the Tuning of the World*. Canada: Destiny Books.
- Lefebvre, H. (1991). *The Production of Space*. Trans. D. Nicholson-Smith. Malden, Oxford & Carlton: Blackwell.
- Ouzounian, G. (2008). *Sound Art and Spatial Practices: Situating Sound Installation Art Since 1958*. PhD Thesis, University of California, San Diego.

Supervisory Team

Primary Supervisor	Dr Jordan Lacey
Associate Supervisor/s	Dr Malte Wagenfeld and A/Prof Lawrence Harvey

FoR Code

Digital & Interaction Design 120304, Industrial Design 120305

Project Title***Design and Sexual Health Innovation***

Project Description

Sexual health is increasingly seen as a right, part of healthy ageing and life-long wellbeing. Sexual health and practice is a life-long journey with many stages and many ways that people become affected by changes to life circumstances and physical health. Solutions to major sexual health issues have been affected by the same socio-sexual taboos as the sex toy industry. Historically there has been a lack of research and innovation around these issues and a lack of solutions to common problems. This sub-field of Industrial Design looks at Sexual Health and Wellbeing issues as an adjunct to the research and design capabilities Industrial Design offers in the health, disability and ageing sector. Research questions maybe approached through design thinking and intervention, playful interactions, citizen engagement, service design and product design.

DaSHI supervisors are interested in projects involving Sex and (Dis)ability, Sex and Ageing, Vaginismus, Prostrate Cancer (and sexual rehabilitation from cancer in general), Pelvic Pain, Pre and Post natal, Erectile Dysfunction and innovative new forms of sexual arousal. DaSHI supervisors advocate for rigorous analysis and research into these problems and the application of the full scope of creative and technical design research methods. Approaches could range from Service Design and Social Innovation through to Product Design, Technical or Material Innovation. DaSHI supervisors advocate for designers and researchers to collaborate with medical, health professionals and clinicians in cross disciplinary projects targeting issues affecting men's and women's sexual health.

Relevant Literature

- Glover, J. (2013). Taboo to mainstream: an industrial design solution to sex toy production. PHD Thesis.
- Hinchliff, S, et al. (2018). "Older adults' experiences of sexual difficulties: Qualitative findings from the English Longitudinal Study on Ageing (ELSA)." *The Journal of Sex Research* 55.2: 152-163.
- Fileborn, B, et al. (2018). "Safer sex in later life: Qualitative interviews with older Australians on their understandings and practices of safer sex." *The Journal of Sex Research* 55.2: 164-177.
- Design and Sexual Health Innovation Website (2018). Lists current and past research projects and HDR students, <http://dashi.rmitidsites.net.au/>

Supervisory Team

Primary Supervisor	Dr Judith Glover
Associate Supervisor/s	Dr Areli Avendano

FoR Code

Design innovation 120302, Industrial Design 120305

Project Title

Collaborative design of multisensory stimulation experiences for dementia treatment

Project Description

This project is part of an ongoing partnership between RMIT University and Bendigo Health aimed at improving quality of life of people living with dementia through design interventions based on multisensory stimulation principles. The project responds to increasing numbers of people affected by dementia and the need for innovative and personalised forms of treatment, based on rehabilitation and occupational therapy (rather than cognition-enhancing medications) and involving relatives and carers. Multisensory stimulation is an effective non-pharmacological treatment based on the stimulation of the senses through ludic activities and the use of sensory tools.

HDR places (Masters and PhD) within this project are expected to be informed by theoretical frameworks from fields of design for health and mental healthcare, and to be developed through design interventions based on methodological frameworks from Participatory Design, Design Anthropology and other collaborative and future-oriented approaches to the design process. HDR projects will combine these theoretical and methodological frameworks to design, prototype and implement product-service systems that will assist the delivery of multisensory stimulation therapies in Bendigo Health Psychiatric Services. The projects are expected to challenge traditional preconceptions of dementia treatment and reimagine a personalised and participatory form of mental health care through design interventions in one of these areas: virtual experiences, interactive objects, and sensory games, building on the notion of 'the playful' and play therapy for adults.

Candidates will be hosted at Bendigo Health, where they are expected to run their projects as living-labs and to embed their design research practice in the everyday routines of Psychiatric Services. Ethics applications and approval process will be assisted by the supervisory team.

Relevant Literature

- Vaughan, L. (Ed.), 2017, *Practice Based Design Research*, Bloomsbury, United Kingdom.
- Simonsen, J. and T. Robertson (2013). *Routledge international handbook of participatory design*. New York, Routledge.
- Hendriks, N., et al. (2015). "Codesign with people living with cognitive or sensory impairments: a case for method stories and uniqueness." *CoDesign*: 70-82.
- Jakob, A. and L. Collier. "Sensory enrichment for people living with dementia: increasing the benefits of multisensory environments in dementia care through design." *Design for Health* 1(1): 115-133.

Supervisory Team

Primary Supervisor	Dr Juan Sanin
Associate Supervisor/s	Dr Scott Mitchell, Dr Liam Fennessy Lisa Spong and Francis McCormick (Bendigo Health)

FoR Code

Industrial Design 120305, Design Mgt & Studio & Prof Practice 120303

Project Title***Design for Social Impact / Social Innovation*****Project Description**

Social impact relates to the capacity to create positive social change on communities and individuals. Designers and engineers have a responsibility to “envision and give form on material and immaterial products that can address human problems on broad scale and contribute to social well-being” (Margolin 2002). In recent years designers have been moving beyond engaging with consumer culture, instead exploring new forms of practice, for example social innovation. “The sustainable development agendas are providing an opportunity to ask fundamental questions of design itself” (Chick 2012).

In response to these informed narratives, it is evident designers and engineers must realise the potential of design as an agent of change to make a broader contribution to society, rather than to enhance marketability by influencing consumer behaviour. Product design should be seen as a value adding activity extending far beyond aesthetics, usability and manufacturability, towards a model where social impacts and design intervention are key agendas. “Designers can play a significant role as ‘shapers’ of society” (Tromp et al 2011) through design interventions that encourage behaviour change, and social impact.

Fuad-Luke (2009) identified ‘design activism’, an emerging practice where designers are using “the power of design for the greater good.” He defined a practice of ‘design thinking, imagination and practice applied knowingly or unknowingly to create a counter-narrative aimed at generating and balancing positive social, institutional, environmental and/or economic change’ (Fuad-Luke 2009). In this, he is both advocating a reform of design practice, and the pursuit of social change through the practice of design. Design for Social Impact necessitates new definitions of practice, placing the designer at the centre of a new paradigm where design is an enabler of societal change.

Relevant Literature

- Brown, B.T. & Wyatt, J. 2010. ‘Design thinking for social innovation’. Stanford Social Innovation Review, Winter: 30–5.
- Chick, A. 2012. ‘Design for social innovation: emerging principles and approaches’. Iridescent: IcoGrada pp.52-64. ISSN 1923-5003.
- Kimbell, L., & Julier, J. 2012. *The social design methods menu*. Fieldstudio.
- Tromp, N., Hekkert, P., Verbeek, P-P. 2011. ‘Design for Socially Responsible Behaviour: A Classification of Influence Based on Intended User Experience’. Design Issues, 27(3) pp.3-19.

Supervisors**Primary Supervisors**

Dr Areli Avendano Franco
Prof Ian de Vere
Dr Judith Glover
A/Prof Ross McLeod
Dr Scott Mitchell
Prof Michael Trudgeon
A/Prof Yoko Akama

Associate Supervisors

Dr Juliette Anich
Dr Juan Diego Santamari
Dr Frank Feltham

FoR Codes

Design innovation 120302, Industrial Design 120305

Project Title***More-than-Human Design for Food***

Project Description

Modern society is inundated with dietary-related diseases and disorders, which could largely be attributed to disconnections and disruptions in how beings and systems are interconnected within complex ecologies. Encouraging people to consume food mindfully can nurture strong and healthy connections with(in) these ecologies.

This transdisciplinary Ph.D. project takes More-than-Human (MtH) approaches to design to explore how people might consume food more mindfully. The project aims to reorient our attention from an anthropocentric diet agenda to a multispecies worldview on food (Tsing et al. 2017). Having an MtH approach to designing around food – including, for example, cyberphysical systems, interaction, and experience – will not only help in addressing significant issues like environmental crises but will also help explore new and sustainable avenues for designing with and for care.

Relevant Literature

- Rohit Ashok Khot and Florian Mueller (2019) "Human-Food Interaction", *Foundations and Trends® Human-Computer Interaction*: Vol. 12: No. 4, pp 238-415.
- Tsing, Anna Lowenhaupt, Swanson, Heather Anne, Gan, Elaine & Bubandt Nils (2017) *Arts of Living on a Damaged Planet Ghosts and Monsters of the Anthropocene*. University of Minnesota Press, Minnesota.
- Choi, Jaz Hee-jeong, Foth, Marcus, & Hearn, Gregory N. (Eds.) (2014) *Eat Cook Grow: Mixing Human-Computer Interactions with Human-Food Interactions*. MIT Press, Cambridge, MA.

SupervisorsPrimary Supervisors

Dr Rohit Khot

Dr Jaz Hee-jeong Choi

FoR Codes

120302 Design Innovation, 120304 Digital and Interaction Design

Project Title***Storytelling for Change***

Project Description

Storytelling can be a powerful way to move towards transforming circumstances of beings (humans and other-than-humans) and/or environments. This project coalesces the long and rich history of storytelling across different cultures and nascent ways of storytelling using digital and networked technologies. The project explores how care-full storytelling or storysharing can be designed taking advantage of emerging technologies (e.g. extended reality (XR) technologies, including VR and AR) and existing media (e.g. film and theatre).

We seek research candidates who are passionate about exploring impactful, transformational possibilities of design through transdisciplinary work in and across different fields of creative practices – including but not limited to interaction design, experience design and the arts.

Relevant Literature

- Choi, Jaz Hee-jeong. 2019. "Care-Full Design and Urban Futures". HCID Open Day: Design for Good, City, University of London (hcidopenday.co.uk)
- Tarnoff, Ben. 2017. "Empathy – the latest gadget Silicon Valley wants to sell you". Available online: <https://www.theguardian.com/technology/2017/oct/25/empathy-virtual-reality-facebook-mark-zuckerberg-puerto-rico>
- Rao, Seema and Middleton, Margaret. 2019. "Illuminating Colonization Through Augmented Reality." MW19: MW 2019. Published January 28, 2019. Consulted December 9, 2019. <https://mw19.mwconf.org/paper/illuminating-colonization-through-augmented-reality/>

SupervisorsPrimary Supervisors

Dr Jaz Hee-jeong Choi

Associate Supervisors

Dr Alan Nguyen

FoR Codes

120302 Design Innovation, 120304 Digital and Interaction Design

Project Title***Cute! Kawaii! Awww!: Humanising Technologies in the City*****Project Description**

Digital technologies are increasingly embedded in the everyday lives of people living in urban environments. Active discussions and design of robots and artificial intelligence question how they are perceived to care for and be cared for by those living in cities. As importantly, they raise questions around particular anthropocentric design choices, one of which is how 'cuteness' is used to make them feel more approachable, acceptable or even loveable. In this project, we study – i.e. explore, question, problematise, experiment, etc. – the current cute-scape of smart and robotic technologies designed for 'caring' in different cultural settings and speculate its possible futures.

We seek research candidates who are passionate about exploring transformational possibilities of care-full design through transdisciplinary work in and across different fields of design – including but not limited to interaction design, experience design, visual design, multisensory design and service design. Experience and/or interest in co-creative methods and Asian contexts is highly valued.

Relevant Literature

- Choi, Jaz Hee-jeong. 2017. "We are living alone together in today's cities – and that calls for smart and 'bolshie' moves". The Conversation. Available online: <http://theconversation.com/we-are-living-alone-together-in-todays-cities-and-that-calls-for-smart-and-bolshie-moves-85318>
- Hjorth, Larissa Hjorth. 2003. "Kawaii@keitai" in Japanese Cybercultures" (eds) N. Gottlieb and M. McLelland (New York: Routledge), pp. 50-59.
- UNESCO. 2019. "I'd Blush if I Could: Closing Gender Divides in Digital Skills through Education." Available online: <https://unesdoc.unesco.org/ark:/48223/pf0000367416.page=1>

Supervisors

Primary Supervisor

Dr Jaz Hee-jeong Choi

Associate Supervisor

D.Prof. Larissa Hjorth

FoR Codes

120302 Design Innovation, 120304 Digital and Interaction Design

Project Title***Curating Australian media art of the 1990s*****Project Description**

This project forms part of the ARC Linkage: 'Archiving Australian Media Arts: Towards a method and national collection'. The early years of Australian digital media arts heritage are at risk. Australians were significant contributors to the development of media arts internationally, as well as making and exhibiting work nationally, yet only a tiny portion of the digital artwork by Australian artists has made it into institutional collections. Deteriorating disks and reliance on obsolete hardware and software mean that innovative digital preservation and access solutions are needed if these artworks are to be saved. Working with key cultural institutions, this project will conserve key media art case studies from the archives of media arts organisations, and develop a best practice method for the preservation of our digital media arts heritage.

Candidates are invited to explore agendas on the curation of 1990s Australian Media Art History. Areas of focus may include: the contemporary exhibition and re-display of historical media artworks, including but not limited to restaging the artwork; methods for documenting/archiving historical interactive media art, the examination of creative communities; software and platform studies; and other relevant areas of curation and conservation. Candidates may undertake fieldwork with ACMI, AGNSW and other partner organisations.

Relevant Literature

- Cubbitt, S. and Thomas, P. (eds) (2013) *Relive: Media art histories*. Cambridge: MIT Press.
- Ippolito, J. and Rinehart, R. (2014) *Re-Collection: Art, New Media, and Social Memory*. Cambridge: MIT Press.
- Jones, S. (2003) 'Synthetics: A History of the Electronically Generated Image in Australia', *Leonardo*, 36(3), pp. 187–195.
- Nash, A. and Vaughan, L. (2017) 'Documenting Digital Performance Artworks', in Saint, T. (ed.) *Documenting Performance: The context and processes of digital curation and archiving*. London: Bloomsbury, pp. 149–59.
- Tofts, D. (2005) *Interzone: Media Arts in Australia*. Fisherman's Bend, VIC: Thames & Hudson.

SupervisorsPrimary Supervisors

Dr Helen Stuckey

Dr Troy Innocent

FoR Codes

190205 – Interactive Media

Project Title***Sensory Urbanism with Virtual and Augmented Reality*****Project Description**

How can the sensorial and intangible aspects of place be incorporated into decision making on the future of cities? Research into what makes a city a great place in which to live, work and relax has developed sophisticated metrics on the component parts such as patterns of use, transport infrastructure and climate. These and a wide range of other data underpin our understanding of liveability. Such indices can be supplemented with text or photography to illustrate some qualitative aspects of place, but many of the intangible and sensory aspects of place are very difficult to communicate.

The increasing ubiquity of virtual and augmented reality provide new opportunities to explore the multi-sensory and temporal aspects of urban place. This may involve mixed media approaches that have been developed via a pilot study: 360 degree video taken on site at different locations and times provides a dynamic backdrop for the 3D modelling of the urban scene and proposals for design interventions; complimented with audio recording taken on site placed as spatially distinct sound emitters that combine to generate a dynamic soundscape as the user moves through the scene; with the temporal character of urban place explored via interfaces that swap in and out different times of the daily and seasonal cycles of site activity and environmental conditions.

Candidates are invited to explore the agenda of sensory urbanism with virtual and augmented reality. Methods include: prototype development and testing via agile methods; case studies at differing scale and cultural contexts; and quantitative and qualitative evaluation of human computer interfaces. The multi-disciplinary supervisory team includes experts in design computing, landscape architecture, virtual reality, animation and spatial sound.

Relevant Literature

- Globa, Anastasia, Wang, Rui and Beza, Beau B. Sensory Urbanism and Placemaking: Exploring Virtual Reality and the Creation of Place; Proceedings of the 24th CAADRIA Conference - Volume 2, Victoria University of Wellington, Wellington, New Zealand, 15-18 April 2019, pp. 737-746.
- Andreani, Stefano; Sayegh, Allen. Augmented Urban Experiences. Proceedings of the 37th Annual Conference of the Association for Computer Aided Design in Architecture (ACADIA) ISBN 978-0-692-96506-1] Cambridge, MA 2-4 November, 2017), pp. 82-91
- Zardinin, Mirka. Towards a Sensorial Urbanism in Sensing the City: A Companion to Urban Anthropology. Berlin, Birkhauser, pp 141-153.

Supervisors

Primary Supervisors

Prof Jules Moloney

A/Prof Lawrence Harvey

Associate Supervisor

A/Prof Katrina Simon

Dr Gina Moore

FoR Codes

120304 Digital and Interaction Design

Project Title***Immersive Analytics with Virtual Reality*****Project Description**

Extremely large data sets, known as Big Data, are now commonly harvested via online social sites, financial networks and interactions with the Internet of Things. These are used to inform decision making across all aspects of society, culture and the economy. Understanding emergent trends in Big Data, and locating significant outliers, is undertaken algorithmically. Typically, this involves aggregation of data types, computational analysis of relationships between variables and their graphic display as graphs and charts. While there has been some experimentation with displaying data using virtual reality (VR), the potential for a spatial approach to data analysis is yet to be fully realised. The use of VR in the space of Big Data has become known as Immersive Analytics. While it might seem counter-intuitive, information-dense virtual environments are theoretically easier to process than simplified graphic encoding — if there is alignment with human ecological perception of natural environments. Potentially, VR affords insight into patterns and anomalies through dynamic experience of data representations within interactive, kinesthetic, audio-visual virtual environments.

Candidates are invited to explore the agenda of immersive analytics with virtual reality, building on [existing theoretical work](#) (Moloney et al, 2018) and a [prototype VR platform](#). Methods include: prototype development and testing via agile methods; case studies of application within domains such as urban design, health and economics; and quantitative and qualitative evaluation of human computer interfaces. The multi-disciplinary supervisory team includes experts in design computing, three-dimensional design, virtual reality, animation and spatial sound.

Relevant Literature

- Chandler T, Cordeil M, Czauderna T, et al. Immersive analytics. In: Big Data Vis. Anal. 2015. p. 1–8.
- Gaver WW. Technology affordances. In: Proc. SIGCHI Conf. Hum. factors Comput. Syst. Reach. through Technol. NY: ACM Press; 1991. p. 79–84
- Moloney J, Spehar B, Globa A, Wang R. The affordance of virtual reality to enable the sensory representation of multi-dimensional data for immersive analytics: from experience to insight. J Big Data. 2018; 5:1: 1-18.
- Olshannikova E, Ometov A, Koucheryavy Y, Olsson T. Visualizing big data with augmented and virtual reality: challenges and research agenda. J Big Data. 2015;2:1–27

SupervisorsPrimary Supervisor

Prof Jules Moloney

A/Prof Lawrence Harvey

Associate Supervisor

A/Prof Fabio Zambetta

Dr Gina Moore

FoR Codes

120304 Digital and Interaction Design

School of Design PhD Places

HDR Place Title

Reflective Industry Practice in Design

Project Description

A Reflective Industry Practice mode of research involves practitioners operating in a professional or commercial context, with an esteemed and substantive body of work developed over 10+ years and/or design leadership activities critical to the realisation of innovations in the expanded field of Design. Making claim of a mastery of practice in their field, candidates in this mode reflect upon the nature of that mastery within a critical framework, review the nature of their mastery, define its enabling structures, its knowledge bases, and the implications of the nexus between these for emerging forms of research-led practice. Undertaken through combinations of reflective action research, design research and critical modes of representation, candidates arrive at a contribution of praxis to their field and identify future paths for their practice. They demonstrate their finding publicly, through an exhibit, a presentation to the examiners, and a written dissertation.

Two kinds of knowledge are created by the research. One concerns the ways in which designers marshal their intelligence, to construct the mental space within which they practice design. The other reveals how public behaviours are invented and used to support design practice. This mode of research extends and develops the knowledge base of their profession, and thus its ability to serve society.

Research proposals are encouraged to explicitly address the research priorities of [RMIT's Enabling Capability Platforms](#).

Relevant Literature

- Vaughan, L. (Ed.), 2017, *Practice Based Design Research*, Bloomsbury, United Kingdom.
- Van Schaik, L. 2011, *Architecture and Design by Practice, by Invitation Design Practice Research at RMIT*, Six Point Six One, Australia.
- Koskinen, I., Zimmerman, J., Binder, T., Redstrom, J., & Wensveen, S., 2011, *Design research through practice: From the lab, field, and showroom*, Elsevier, Waltham USA.

Supervisors

Communication Design

A/Prof Yoko Akama
 Dr Neal Haslem
 A/Prof Bradley Haylock
 Dr Toni Roberts
 Prof Laurene Vaughan
 Dr Noel Waite
 Dr Marius Foley
 Dr Stephen Banham
 Dr Andy Simionato

Digital Design

Dr Darrin Verhagen
 Dr Jonathan Duckworth
 Dr Emma Witkowski
 Dr Shaun Wilson
 Dr Douglas Wilson
 Dr James Manning
 Prof Jules Moloney
 Dr Li Ping Thong
 Dr Rohit Ashok Khot
 Dr Dan Torre
 Dr Christopher Barker
 Dr Helen Stuckey
 Dr Gina Moore
 Mark Lycette

Industrial Design

Dr Areli Avendano Franco
 Prof Ian de Vere
 A/Prof Mick Douglas
 Dr Liam Fennessy
 Dr Judith Glover
 A/Prof Lawrence Harvey
 Dr Scott Mayson
 A/Prof Ross McLeod
 Dr Scott Mitchell
 Prof Michael Trudgeon
 A/Prof Soumitri Varadarajan
 A/Prof Karli Verghese
 Dr Malte Wagenfeld
 Dr Juliette Anich
 Dr Joshua Batty
 Dr Juan Diego Santamari
 Dr Frank Feltham
 Simon Lockrey
 Dr Jordan Lacey
 Jeff Hannam

FoR Codes

120303, 120304, 120305,
 120307

HDR Place Title

Generative Practice Research in Design

Project Description

A Generative Practice mode of creative research blurs the lines between creative professional practice and academic research approaches, and often crosses boundaries between disciplines. This practice research approach enables the practitioner-researcher to generate new knowledge to augment or transform codified disciplinary practice, or indeed to generate new kinds of practice in response to challenges and concerns emerging in a changing world.

Undertaken through, and for, design practice, candidates might be early career, seeking to enter a period of deep enquiry that transforms a set of practice-based interests into a more developed practice with a well-articulated emphasis, set of agendas and approaches. They might equally be mid- or later-career practitioners seeking to generate a new practice trajectory through a transformation of their established mastery. They demonstrate their findings publicly in ways most appropriate to the particularities of their practice research. This is often through the multiple means of an exhibit, a written dissertation, and a presentation to examiners, but may also be conveyed through only a thesis.

This mode of research seeks to make cogent emergent fields of design knowledge that respond to societal, technological and methodological challenges; and offers new knowledge in the form of previously unarticulated approaches to practice. Charged to both reveal and tackle socio-technical and environmental concerns, this mode positions design practice as a particular form of critical and creative citizenry key to the production of new and useful knowledge. Candidates are invited to contribute to the broad and expanding fields of Communication, Digital and Industrial Design, to our research clusters/laboratories, or to emerging communities of design and creative practice.

Research proposals are encouraged to explicitly address the research priorities of [RMIT's Enabling Capability Platforms](#).

Relevant Literature

- Vaughan, L. (Ed.), 2017, *Practice Based Design Research*, Bloomsbury, United Kingdom.
- Koskinen, I., Zimmerman, J., Binder, T., Redstrom, J., & Wensveen, S., 2011, *Design research through practice: From the lab, field, and showroom*, Elsevier, Waltham USA.
- Nelson, R., 2014, *Practice as Research in the Arts: Principles, Protocols, Pedagogies, Resistances*, Palgrave, Basingstoke and New York.

Supervisors

Communication Design

A/Prof Yoko Akama
 Dr Neal Haslem
 A/Prof Bradley Haylock
 Dr Toni Roberts
 Prof Laurene Vaughan
 Dr Noel Waite
 Dr Marius Foley
 Dr Stephen Banham
 Dr Andy Simionato
 Dr Oliver Vodeb
 Dr Jenny Grigg
 Dr Leah Heiss

Digital Design

Dr Darrin Verhagen
 Dr Jonathan Duckworth
 Dr Emma Witkowski
 Dr Shaun Wilson
 Dr Douglas Wilson
 Dr James Manning
 Prof Jules Moloney
 Dr Rohit Ashok Khot
 Dr Dan Torre
 Dr Christopher Barker
 Dr Helen Stuckey
 Dr Gina Moore
 Dr Troy Innocent
 Dr Nancy Mauro-Flude
 Mark Lycette

Industrial Design

Dr Areli Avendano Franco
 Prof Ian de Vere
 A/Prof Mick Douglas
 Dr Liam Fennessy
 Dr Judith Glover
 A/Prof Lawrence Harvey
 Dr Scott Mayson
 A/Prof Ross McLeod
 Dr Scott Mitchell
 Prof Michael Trudgeon
 A/Prof Soumitri Varadarajan
 A/Prof Karli Verghese
 Dr Malte Wagenfeld
 Dr Juliette Anich
 Dr Joshua Batty
 Dr Juan Diego Santamari
 Dr Frank Feltham
 Dr Simon Lockrey
 Dr Jordan Lacey
 Jeff Hannam

FoR Codes

120303, 120304, 120305,
 120307

HDR Place Title***Research in Design (Thesis mode)***

Project Description

This generic project provides an opportunity for those wishing to undertake research in thesis mode. Thesis Research is based upon the critical analysis of a question, issue or problem within or across a field of design knowledge and seeks to make new and original contributions to ways in which design may be understood. This may include a degree of creative practice, but is distinguished from reflective and generative practice modes by the expectation that the substantial contribution to knowledge will reside in the text, independent of the creative work.

Candidates wishing to undertake research by thesis are invited to contribute to the broad and expanding fields of Communication, Digital and Industrial Design, to our research clusters/laboratories, or to emerging communities of design and creative practice.

Research proposals are encouraged to explicitly address the research priorities of [RMIT's Enabling Capability Platforms](#).

Supervisors**Communication Design**

A/Prof Yoko Akama
Dr Neal Haslem
A/Prof Bradley Haylock
Dr Toni Roberts
Prof Laurene Vaughan
Dr Noel Waite
Dr Marius Foley
Dr Stephen Banham
Dr Andy Simionato
Dr Oliver Vodeb
Dr Jenny Grigg
Dr Leah Heiss

Digital Design

Dr Darrin Verhagen
Dr Jonathan Duckworth
Dr Emma Witkowski
Dr Shaun Wilson
Dr Douglas Wilson
Dr James Manning
Prof Jules Moloney
Dr Rohit Ashok Khot
Dr Dan Torre
Dr Christopher Barker
Dr Helen Stuckey
Dr Gina Moore
Dr Troy Innocent
Dr Nancy Mauro-Flude
Mark Lycette

Industrial Design

Dr Areli Avendano Franco
Prof Ian de Vere
A/Prof Mick Douglas
Dr Liam Fennessy
Dr Judith Glover
A/Prof Lawrence Harvey
Dr Scott Mayson
A/Prof Ross McLeod
Dr Scott Mitchell
Prof Michael Trudgeon
A/Prof Soumitri Varadarajan
A/Prof Karli Verghese
Dr Malte Wagenfeld
Dr Juliette Anich
Dr Joshua Batty
Dr Juan Diego Santamari
Dr Frank Feltham
Dr Simon Lockrey
Dr Jordan Lacey
Jeff Hannam

FoR Codes

120303, 120304, 120305,
120307
