



Position Description – Computer Science Research Fellow JIBE Project

Position Details

Position Title:	Computer Science Research Fellow JIBE Project
Position Number:	New
College/Portfolio:	College of Design and Social Context
School/Group:	School of Global, Urban and Social Studies
Campus Location:	Based at the City campus, but may be required to work and/or be based at other campuses of the University.
Classification:	Academic Level B
Employment Type:	Fixed Term - Research
Time Fraction:	1.0

RMIT University

RMIT is a leading multi-sector university of technology, design and enterprise with more than 91,000 students and 11,000 staff globally. We offer postgraduate, undergraduate, vocational education and online programs to provide students with a variety of work-relevant pathways.

Our purpose is to offer life-changing experiences for our students, and to help shape the world with research, innovation, teaching and industry engagement. With strong industry connections forged over 130 years, collaboration with industry remains integral to RMIT's leadership in education, applied and innovative research, and to the development of highly skilled, globally-focused graduates.

With three campuses in Melbourne (Central Business District, Brunswick and Bundoora), two in Vietnam (Hanoi and Ho Chi Minh City) and a centre in Barcelona, Spain, RMIT is a truly global university. RMIT also offers programs through partners in Singapore, Hong Kong, mainland China, Indonesia, Sri Lanka, Belgium, Germany, Austria and The Netherlands, and enjoys research and industry partnerships on every continent.

We are also committed to redefining our relationship in working with and supporting Aboriginal self-determination. Our goal is to achieve lasting transformation by maturing our values, culture, policy and structures in a way that embeds reconciliation in everything we do. We are changing our ways of knowing, working and being to support sustainable reconciliation and activate a relationship between Indigenous and non-Indigenous staff, students and community. Our three campuses in Melbourne (City, Brunswick and Bundoora campuses) are located on the unceded lands of the people of the Woi Wurrung and Boon Wurrung language groups of the eastern Kulin Nation

We're proud to share with you:

The launch of our second [Reconciliation Plan for Dhumbah Goorowa– a “commitment to share” - an important step in our reconciliation journey.](#)

- RMIT University is an **Athena SWAN** member with Bronze Award accreditation and the College of Science, Engineering and Health is central to driving improvements in gender equality, diversity and inclusion, particularly in the Science, Technology, Engineering, Mathematics and Medicine (STEMM) disciplines.
- RMIT was placed **10th in the 2019 Randstad Employer Brand Research Awards**, up five spots from 2018.
- We were named as an **Employer of Choice for Gender Equality** by the Workplace Gender Equality Agency three years in a row!
- We achieved **Gold Employer status for LGBTIQ** inclusion in the Australian Workplace Equality Index (AWEI) in 2018, 2019 and 2020.
- We were recognised as a **top five employer in 2018 for workplace accessibility** by the Australian Network on Disability, and awarded with **Disability Confident Recruiter Accreditation** in 2020.
- In 2020, RMIT University has become the first Australian institution to receive the **HR Excellence in Research Award**, recognized by the European Commission.

RMIT Standings in university rankings

We are ranked **#1 in the world** for our efforts to reduce inequality in the Times Higher Education (THE) Impact Rankings 2020.

RMIT has a deep commitment to innovation, research and teaching, we are a 5-Star university under the QS Stars international evaluation system and are **223rd globally in QS World University Rankings 2021** (moved up 15 places compared to 238th last year), being also 18th in the world among universities less than 50 years old (2014 QS Top 50 Under 50 index). Additionally:

- In the 2020 QS World University Rankings by Subject, RMIT was positioned 11th in the world (highest ranked in Australia) in Art and Design, 22nd in the world (fourth highest in Australia) in Architecture and the Built Environment, and 37th in Media and Communications. We are also among the world's top 100 universities in Engineering (Civil and Structural; Electrical and Electronic; and Mechanical, Mechanical, Aeronautical and Manufacturing); Accounting and Finance; and Business and Management Studies).
- In the 2020 QS Rankings by Subject, RMIT was ranked 11th in the world and number one in the Asia Pacific for Art and Design, and 26th in Architecture and the Built Environment. RMIT is also among the world's top 100 universities in Engineering (Civil and Structural; Electrical and Electronic; and Computer Science and Information Systems); Accounting and Finance; Business and Management Studies; and Communication and Media Studies. The 2018 Shanghai Ranking's Global Ranking of Academic Subjects highlighted RMIT's strength in Engineering and Technology in particular.
- In the specialised rankings, RMIT is ranked 77th in the QS Graduate Employability Rankings 2020 and 82nd in the inaugural Times Higher Education University Impact Rankings 2019.
- RMIT has moved up 51 places in the 2021 Times Higher Education World University Rankings, strengthening its reputation as a leading global university. The University has leapt more than 150 places since 2015 and is now ranked in the **top 301-350 band**.
- RMIT continued its strong performance in the 2020 CWTS Leiden Ranking, which ranks the world's top research-intensive universities, moving up 21 places to be ranked **293rd globally**

on proportion of international publications, and **ranking 225th** on proportion of top 5% publications, up 120 places from 2019.

For more information, visit www.rmit.edu.au/about

The College of Design and Social Context (DSC)

The College of Design and Social Context encompasses RMIT University's renowned art, architecture, design, built environment, communication, and social science disciplines. The college has 24,500 students and over 1,000 staff located in 8 schools.

The College's academic programs are generally market leaders and in high demand. Based on a strong foundation of practise led, industry partnered teaching and research, we aim to deliver skilled graduates with a deep sense of purpose, and high impact research and innovation.

For more information see www.rmit.edu.au/dsc

School of Global, Urban and Social Studies (GUSS)

Located in the heart of Melbourne on RMIT's City Campus, the School of Global, Urban and Social Studies is one of RMIT's largest schools. The School's vision is to contribute to a just and sustainable world, and to deliver education, training and research in four areas of focus:

- Criminology, legal and justice studies
- Global studies, languages, translating and interpreting
- Social work, youth work and social policy
- Sustainability and urban planning

We provide academic programs in Higher Education in these four main areas. We are a strongly research active school with research centres of national and international reputation - the Centre for Urban Research and the Social and Global Studies Centre.

With outstanding industry links, strong pathways and excellent research records, most of the School's academic programs are leaders in the market and in high demand. We aim to ensure every student has a transformative experience to prepare them for life and work in the growing professional areas of the future.

For more information, see <http://www.rmit.edu.au/socialhumanities>

Position Summary

An exciting opportunity to join the dynamic, interdisciplinary Healthy Liveable Cities Research Group located within RMIT's Centre for Urban Research. This is a unique and exciting opportunity for a Computer Scientist with experience in spatial analysis and Agent-based Modelling to join a large international multidisciplinary team as part of the NHMRC/UKRI project "Joining Impact models of transport to spatial measures of the Built Environment," (JIBE), led by RMIT University and Cambridge University. The team is studying the impact of the built environment on transport behaviours and health using a range of methods, tools and data. The role sits within a multidisciplinary team and there is the expectation the successful applicant will develop strong collaborative relationships within and beyond the research group, as well as being responsive to key academic and government stakeholder requirements.

The role will involve developing a spatially represented synthetic population for Australian and UK cities and regions, with detailed demographics and routed trips and testing the effects of built environment scenarios. This involves three major tasks: (i) using geospatial analysis undertaken by

JIBE collaborators to match population demographics to built environment measures associated with people's travel behaviours and choices; (ii) developing and implementing built environment interventions identified by external stakeholders and studying effects on the travel behaviours of the synthetic populations; and (iii) disseminating research findings through publications, reports, algorithms and tools. Through thought leadership and effective use of resources and collaborations, the successful applicant will be a part of a team advancing the state-of-the-art in the use of spatial information to design healthier, liveable cities.

Reporting Line

Reports to: Director, Healthy Liveable Cities Group

Organisational Accountabilities

RMIT University is committed to the health, safety and wellbeing of its staff. RMIT and its staff must comply with a range of statutory requirements, including equal opportunity, occupational health and safety, privacy and trade practice. RMIT also expects staff to comply with its policy and procedures, which relate to statutory requirements and our ways of working.

Appointees are accountable for completing training on these matters and ensuring their knowledge and the knowledge of their staff is up to date.

Key Accountabilities

1. Development of a synthetic population in UK and Australian cities that can be used to assess implementation of built environment interventions
2. Applying geospatial analysis in urban contexts to assist in the design of built environment interventions that will improve the health and wellbeing of city residents
3. Upgrading and developing exposure and health impact models for Australian and UK cities and regions to assess health and environmental impacts of built environment interventions
4. Managing data and software repositories
5. Publishing on spatial analysis methods, and contribute to publications resulting from the work of the team
6. Providing technical support and leadership to modelers within the team
7. Publishing on methods, and contribute to publications resulting from the work of the team
8. Presenting at seminars/conferences/guest lectures
9. Supervising and supporting postgraduate research students
10. Building and maintaining relationships with other members of the JIBE and Healthy Liveable Cities including:
 - Providing advice on the application of spatial methods
 - Participating in writing grant and other funding applications
 - Developing and maintaining relationships with external stakeholders, data providers, custodians, and collaborators

Key Selection Criteria

1. Demonstrated experience in the use of spatial analysis in an applied field, including expertise with GIS software and spatial databases
2. Demonstrated experience with design and use of agent-based models including activity-based transport models
3. Experienced with software development, including use of open source technologies and version control.
4. Skilled with statistical analysis packages, including data analysis and prototyping in R.
5. Excellent interpersonal and communication skills appropriate for interacting with academics, industry, higher degree by research candidates, together with a strong commitment to teamwork and interdisciplinary collaboration.
6. Emerging nationally recognised research track record including record of high-quality research outputs.

7. Strong presentation skills, including the ability to present technical content to non-technical audiences.

Qualifications

Mandatory: PhD in computer or geospatial science or equivalent in relevant field

Appointment to this position is subject to passing a Working with Children check

Desirable

- Experience in supervising students
- Experience in grant writing
- Web mapping and/or web development
- Visualisation and cartography
- Machine and deep learning

Endorsed:	Signature: Name: Professor Robin Goodman Title: Dean of School, GUSS Date:	Approved:	Signature: Name: Professor Tania Broadley Title: DVC & Vice President, DSC Date:
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