RESEARCH FELLOW

DEPARTMENT/UNIT
Department of human Centred Computing/Department of Data Science/Department of Architecture

FACULTY/DIVISION
Faculty of Information Technology/MADA

CLASSIFICATION
Level B

DESIGNATED CAMPUS OR LOCATION
Caulfield campus

ORGANISATIONAL CONTEXT
Everyone needs a platform to launch a satisfying career. At Monash, we give you the space and support to take your career in all kinds of exciting new directions. You’ll have access to quality research, infrastructure and learning facilities, opportunities to collaborate internationally, as well as the grants you’ll need to publish your work. We’re a university full of energetic and enthusiastic minds, driven to challenge what’s expected, expand what we know, and learn from other inspiring, empowering thinkers. Discover more at www.monash.edu.

SensiLab is a dynamic, interdisciplinary research space established to address the contemporary research challenges of the Internet age. A joint initiative between the Faculty of Information Technology and Faculty of Art, Design and Architecture (MADA), the lab collaborates with researchers across the University and builds productive partnerships with leading industry, academic and cultural institutions. SensiLab aims to lead state-of-the-art research in generative design, digital music, Creative Artificial Intelligence and digital. Combining emerging and state-of-the-art technologies with creative vision, SensiLab imagines and builds future technologies and seeks to inspire the next generation of interdisciplinary researchers. You can find out more about the lab on our website: sensilab.monash.edu.

POSITION PURPOSE
A Level B research-only academic is expected to carry out independent and/or team research within the field in which they are appointed and to carry out activities to develop their research expertise relevant to the particular field of research.

The successful appointee for this position will contribute to research as part of a Building 4.0 CRC project on computational tools for architectural design. Combining computational generative systems with advanced techniques in machine learning (ML) and artificial intelligence (AI), this project seeks to effectively and efficiently augment designers’ creative capabilities by integrating domain knowledge and digital processes. The aim of the project is to create and develop new methods for computer-aided architectural design.
Reporting Line: The position reports to a Senior Academic

Supervisory Responsibilities: Not applicable

Financial Delegation: Not applicable

Budgetary Responsibilities: Not applicable

KEY RESPONSIBILITIES

Specific duties required of a Level B research-only academic may include:

1. The conduct of research either as a member of a team or independently and the production of conference and seminar papers and publications from that research

2. Supervision of research-support staff involved in the staff member’s research

3. Guidance in the research effort of junior members of research-only Academic staff in their research area

4. Contribution to the preparation or, where appropriate, individual preparation of research proposal submissions to external funding bodies

5. Involvement in professional activities including, subject to availability of funds, attendance at conferences and seminars in the field of expertise

6. Administrative functions primarily connected with their area of research

7. Occasional contributions to the teaching program within the field of the staff member’s research

8. Co-supervision or, where appropriate, supervision of major honours or postgraduate research projects within the field of the staff member's area of research

9. Attendance at meetings associated with research or the work of the organisational unit to which the research is connected and/or at departmental, school and/or faculty meetings and/or membership of a limited number of committees

10. Other duties as directed from time to time

KEY SELECTION CRITERIA

Education/Qualifications

1. The appointee will have:
   - A doctoral qualification in the relevant discipline or a closely related field.

Knowledge and Skills

2. Demonstrated experience in the implementation and development of AI models for image and 3D model analysis (e.g. building analysis, reconstruction of 3D models, or procedural generation of 3D environments), with a track record of refereed research publications

3. Well-developed general understanding of advanced ML/AI techniques

4. Ability to work as part of a research team in an interdisciplinary research environment, as well as independently

5. Ability to creatively solve complex problems by using discretion, innovation and the exercise diagnostic skills and/or expertise

6. An interest in aesthetic, creative and cultural issues related to the application of technology to creative practises
7. Demonstrated analytical and manuscript preparation skills, including a track record of refereed research publications

8. Well-developed planning and organisational skills, with the ability to prioritise multiple tasks and set and meet deadlines

9. Excellent written communication and verbal communication skills with proven ability to produce clear, succinct reports and documents

10. A demonstrated awareness of the principles of confidentiality, privacy and information handling

11. A demonstrated capacity to work in a collegiate manner with other staff in the workplace

12. Demonstrated computer literacy and proficiency in the production of high level work using software such as Microsoft Office applications and specified University software programs, with the capability and willingness to learn new packages as appropriate

OTHER JOB RELATED INFORMATION

- Travel to other campuses of the University may be required
- There may be a requirement to work additional hours from time to time
- There may be peak periods of work during which taking of leave may be restricted

GOVERNANCE

Monash University expects staff to appropriately balance risk and reward in a manner that is sustainable to its long-term future, contribute to a culture of honesty and integrity, and provide an environment that is safe, secure and inclusive. Ensure you are aware of and adhere to University policies relevant to the duties undertaken and the values of the University. This is a standard which the University sees as the benchmark for all of its activities in Australia and internationally.