SENIOR LECTURER

DEPARTMENT/UNIT	Data Science and AI
FACULTY/DIVISION	Faculty of Information Technology
CLASSIFICATION	Level C
WORK 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.

The **Faculty of Information Technology** aims to lead global IT research and education. Our strong reputation and international profile attracts the best students worldwide and we offer a range of accredited courses that transform our graduates into highly skilled and sought after IT professionals, equipped to work globally. Our research is multi-disciplinary, multi-campus and multi-national, giving us a unique capacity to reach out further and deeper than any other institution in Australia. Our research priorities are both technically ambitious and embedded in everyday life. To learn more about the Faculty and the exciting work we do, please visit https://www.monash.edu/it.

In the information age, data are ubiquitous. Data science extracts value from data assets, helping us understand the past, better manage the present, and effectively plan for the future. It plays a critical role in advancing industry, commerce, governance and research. At Monash IT, we have an unsurpassed breadth and depth of expertise across the broad range of areas that underpin the fast-developing field of data science. Our Data Science Group has more than 40 permanent academic staff backed by a large cohort of project-based researchers and postgraduate students, and includes one of the leading optimisation groups in the world.

Our areas of research expertise include:

- Artificial Intelligence: Bayesian techniques, natural language processing, knowledge acquisition and processing
- Machine Learning: association discovery, causal models, classification, deep learning and forecasting
- Modelling: agent-based modelling and artificial life
- Optimisation: constraint and mixed-integer programming, metaheuristics, modelling languages, nondifferentiable optimisation, resource planning and scheduling, and path finding algorithms
- Visualisation: immersive analytics, interactive visualisation, and layout and presentation

The **Optimisation** research group is a world leading research group in discrete optimisation. Together with partners at the University of Melbourne and Data61, it has created and continues to develop MiniZinc, the leading modelling language for constraint programming; and lazy clause generation CP solving, which provides the state of the art CP solving technology. To learn more about the Optimisation research group and the work we do, please visit our website. To learn more about our work in the energy area, please visit https://www.monash.edu/memsi/grid-innovation-hub.

POSITION PURPOSE

A Level C academic is expected to make significant contributions to the teaching effort of a department, school, faculty or other organisational unit or an interdisciplinary area. An academic at this level is also expected to play a major role in scholarship, research and/or professional activities.

Reporting Line: The position reports to the Group Lead, Optimisation

Supervisory Responsibilities: Not applicable

Financial Delegation: Not applicable

Budget Responsibilities: Not applicable

KEY RESPONSIBILITIES

Specific duties required of a Level C academic may include:

1. Foster and conduct high quality research appropriate to the discipline including publications in world-leading conferences and journals

2. Supervision of research students and early career researchers

3. Establishing and participation in successful research teams, research units or centres and fostering interdisciplinary research

4. Preparation of research proposals to obtain competitive external research funding from governmental and non-governmental sources

5. Preparation and delivery of lectures and seminars, including the setting and marking of assessment material

6. Directing subject coordination overseeing and/or delivering tutorials, practical classes, demonstrations, workshops, and studio sessions

7. Supervision and mentoring of undergraduate and postgraduate students engaged in coursework and research projects

8. Active engagement in professional activities, both internally and externally, including program committees, engagement with industry, and outreach programmes, as appropriate

9. Execution of administrative functions, as required, to contribute to the successful operation of the Faculty

10. Attendance at departmental, school and/or faculty meetings, and/or membership of a number of committees

KEY SELECTION CRITERIA

Education/Qualifications

1. The appointee will have:

   - A doctoral or masters qualification in the relevant discipline area or equivalent accreditation and standing and/or recognised significant experience in the relevant discipline area

Knowledge and Skills

2. Possess a high level of interpersonal skills and demonstrated ability to work both independently and as part of a team, across both the education and service sectors

3. An excellent publication record in high-quality referred journals, conferences and equivalent textbooks or teaching resources

4. Proven record of obtaining significant external research funding

5. Demonstrated ability in undertaking outstanding research, along with leading a research team and project

6. Demonstrated record of successfully supervising postgraduate research students

7. Ability to work positively and cooperatively with students, internal and external teams and external organisations

8. Demonstrated strong record of teaching experience in a tertiary environment including course coordination

9. Demonstrated ability to motivate, actively engage and educate a given audience

10. Proven ability, commitment and passion for engaging in scholarly and research activities

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

12. Demonstrated research impact in any of the following areas: constraint programming, mixed integer programming, SAT and SAT modulo theories, combinatorial search, modelling languages and program analysis

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
- A current satisfactory Working With Children Check is required

LEGAL COMPLIANCE

Ensure you are aware of and adhere to legislation and University policy relevant to the duties undertaken, including: Equal Employment Opportunity, supporting equity and fairness; Occupational Health and Safety, supporting a safe workplace; Conflict of Interest (including Conflict of Interest in Research); Paid Outside Work; Privacy; Research Conduct; and Staff/Student Relationships.