Senior Lecturer, IT for Energy

Department/Unit	Clayton School of Information Technology
Faculty/Division	Faculty of Information Technology
Classification	Level C
Work location	Clayton campus
Date document created or updated	01 September 2017

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 www.infotech.monash.edu.au/

About MEMSI

Over a century ago, Sir John Monash set in motion Victoria's first energy transformation during his tenure as the General Manager of the State Electricity Commission of Victoria. MEMSI harnesses this strength and brings together leading researchers from across Monash University to solve global energy problems.

With energy availability underpinning the growth and supply of food, transport, communication and education, transforming how we generate, transmit and consume energy is one of the most imminent global problems that needs to be addressed.

Research and development into new materials, efficient technologies and processes, and their implementation within optimised smart energy systems are required to enable this transition to a low-carbon economy and a sustainable energy future.

In particular the following expertise and disciplines are needed to support our research agenda:

- Data Science, Machine Learning, Forecasting (electricity demand and renewable energy)
- Systems engineering, complex systems and Smart Grids
- Electricity system optimisation (optimal power flow and long-term investment planning)
- Cybersecurity and privacy
- Optimisation, discrete, combinatorial, and mixed integer

- Stochastic and robust optimisation
- Visualisation and immersive analytics
- High performance and Cloud Computing for modelling and smart-grid data management

MEMSI has access to a range of energy systems related facilities and platforms including:

1. *The MEMSI Future Control Room* – A purpose-built research and industry collaboration facility designed to allow researchers to collaborate with the electricity network companies and other utilities in the analysis and visualisation of electricity, natural gas and water networks to support the global energy technology revolution.

2. *The Monash Campus Microgrid Program* – As part of our commitment to net zero emissions by the end of the next decade, Monash has established a novel initiative based on the use of the Clayton campus as a living energy research and teaching laboratory. This Research into the way new and renewable energy technologies can be integrated into existing urban and peri-urban settings.

Position purpose

The Senior Lecturer makes outstanding contributions to all activities of the Faculty. The appointee has responsibility for providing and fostering excellence in research, teaching, professional activities and policy development in their specific field of expertise across the Faculty, Monash and the broader community.
An academic at this level plays a major role in scholarship, research and/or professional activities.
The appointee strengthens the existing capability of Monash University and further enhances its reputation as a leader in research and teaching.

This position has a strong focus on energy applications of IT and Computer Science and interacts with a cross disciplinary range of researchers across Monash working under the umbrella of the Monash Energy Materials and Systems Institute (http://memsi.monash.edu).

Reporting Line: The position reports to the most relevant Group Lead

Supervisory responsibilities: This position may supervise Postgraduate/PhD research students

Financial delegation and/or budget responsibilities: Not applicable

Key responsibilities

Specific duties required of a Level C academic include:

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

2. Directing subject coordination overseeing and/or delivery of tutorials, practical classes, demonstrations, workshops, and studio sessions

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

4. Fostering and conducting high quality research appropriate to the discipline including publications in world-leading conferences and journals

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

6. Contribution to building the reputation and recognition of research excellence of the faculty

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

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

Qualifications/Education

1. A Level C academic shall have qualifications and/or experience recognised by the university as appropriate for the relevant discipline area. A position at this level will require:

    - a doctoral or masters qualification or equivalent accreditation and standing in a relevant Information Technology discipline

    - relevant teaching experience, experience in research, experience outside tertiary education, creative achievement, professional contributions and/or contributions to technical achievement

Knowledge and skills

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

3. The proven ability to work positively and cooperatively with students, internal and external teams and agencies

4. Have demonstrated a strong record of teaching experience in a tertiary environment

5. Possess an ability to stimulate, actively engage and educate a given audience

6. Have the proven ability, commitment and passion for engaging in scholarly and research activities

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

8. Have a solid track record of refereed research publications

Other job related information

- Travel (e.g. to other campuses of the University) may be required
- There may be peak periods of work during which the taking of leave may be restricted

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.