

# Position description

## Professor of Software Engineering

Department/Unit	Clayton School of Information Technology
Faculty/Division	Faculty of Information Technology
Classification	Level E
Work location	Clayton campus
Date document created or updated	05 January 2017

### Organisational context

Monash is a university of transformation, progress and optimism. Our people are our most valued asset, with our academics among the best in the world and our professional staff revolutionising the way we operate as an organisation. For more information about our University and our exciting future, please visit [www.monash.edu](http://www.monash.edu)

The **Faculty of Information Technology** is represented on two campuses in Australia – Caulfield and Clayton – and in Kuala Lumpur, Suzhou and Johannesburg. It undertakes teaching and research across a broad range of information technology disciplines: computer science, computational science, data science, intelligent systems, software engineering, network computing (including distributed, wireless and mobile computing), information systems (including enterprise systems), business intelligence and decision support, multimedia computing and applications, information management (including archival and library systems), and knowledge management.

We are one of the few faculties of information technology in the world and one of the largest academic information technology units within a tertiary institution in the world. Its research-intensive, multidisciplinary, international capabilities provide it with a set of exciting teaching, research, and engagement opportunities that position it uniquely within the tertiary sector.

The faculty has a strong commitment to providing the highest-quality learning opportunities for its students. It offers undergraduate, postgraduate coursework, and research degrees. At the undergraduate level, it offers 4 Bachelor degree programs. The Bachelor of Computer Science (with a specialization in Data Science), the Bachelor of Computer Science Advanced (Honours), the Bachelor of Information Technology (with majors in Business Information Systems, Computer Networks & Security, Games Development, Multimedia Development and Software Development), and the Bachelor of Software Engineering (Honours), a specialization within the Bachelor of Engineering (Honours). All four undergraduate degrees are accredited by the Australian Computer Society, while the BSE(Hons) is accredited by Engineers Australia. The appointee to this position will be expected to take a leadership role with the undergraduate Software Engineering program as well as the Software Development major in the Bachelor of Information Technology.

At the postgraduate level, the faculty offers degrees that provide for the needs of (a) students who have undergraduate degrees in disciplines other than information technology and are seeking to learn more about information technology, and (b) students who have undergraduate degrees in the information technology field and wish to deepen their knowledge and skills in particular areas of information technology. Our postgraduate coursework programs include, the Master of Information Technology, the Master of Business Information Systems, the Master of Networks and Security, and the Master of Data Science, together with an online Graduate Diploma in Data Science. Software Engineering is a core unit with the Master of IT, and other software engineering units are electives in this degree. The faculty's research degrees are designed to produce high-calibre scholars who are capable of cutting-edge pure or applied research in either academe or practice.

The faculty strives to undertake high-quality, high-impact research. This research is structured around two centres.

- Centre for Data Science (ADD URL)
- Centre for Organisational and Social Informatics (ADD URL)

Four Research Flagship programs.

- Computational Biology
- Machine Learning
- Modelling, Optimisation and Visualisation
- IT for Resilient Communities

As well as strategic research initiatives in

- Sensilab (ADD URL)
- Immersive Analytics (ADD URL)

Research engagement is conducted through the faculty's research centres and flagships, which provide staff and research students with opportunities to ground their work more firmly in the needs of industry, government, and the professions and to pursue commercialization possibilities. The faculty is now looking to build a much stronger research capacity in Software Engineering, with the successful applicant(s) leading this endeavor.

## Position purpose

The Professor of Software Engineering will lead the building of research capability in the discipline and establish and lead a high quality research team to work on systematic, disciplined, quantifiable approaches to the development, operation and maintenance that is, the application of software engineering.

The role will be expected to guide and oversee outstanding research programs with relevance for and linkages to industry-focused programs. Further, it will support and maintain the faculty's drive for outstanding teaching, curriculum design and architecture, professional activities and policy development that underpin the discipline of Information Technology as aligned with the faculty, University and the community.

The Professor of Software Engineering will also be active in the profession, have relevant industry engagement and be willing to assume senior administrative functions. The successful candidate will play a major role in forging stronger links with organisations developing or using large software systems requiring cutting edge of software engineering technologies and practices.

**Reporting Line:** The position reports to the Head of the Clayton Campus

**Supervisory responsibilities:** N/A

**Financial delegation and/or budget responsibilities:** N/A

## Key responsibilities

1. Actively engage in Software Engineering research in line with the faculty's research strategy, by maintaining a substantial active publications record (high-quality refereed journals) and supervising and mentoring early career researchers and research students
2. Foster research excellence through procuring competitive research grants, leading significant research projects and working with other staff to develop research links
3. Provide strong and committed leadership in teaching, curriculum development and research training by participating in the faculty's curriculum planning and development processes, academic committees, and relevant examination processes in addition to monitoring the quality of individual teaching in the relevant discipline
4. Provide innovative and effective leadership for the expansion of the faculty's HDR program by attracting high quality HDR students

5. Contribute to academic and administrative leadership within the faculty by participating in the development of policy and strategy
6. Maintain and broaden collaborative partnerships with relevant faculties and departments/schools within the University and community
7. Maintain and broaden collaborative partnerships with external agencies both nationally and internationally, making a significant contribution to the profession
8. Actively contribute to partnering with industry and diversifying funding avenues

## **Key selection criteria**

### **Education/Qualifications**

1. The incumbent should possess:
  - PhD in Software Engineering or a relevant field of Information Technology with significant relevant software engineering experience

### **Knowledge and Skills**

2. Evidence of outstanding scholarly activity of an international standard in Software Engineering and a demonstrated ongoing commitment to one or more programs of research
3. Demonstrated ability to generate research income, including from both traditional and more innovative sources of research funding
4. Record of successful supervision of postgraduate research students and the ability to make a significant contribution to postgraduate training programs in Software Engineering
5. Proven excellence in curriculum design, development and teaching at both undergraduate and postgraduate levels
6. Willingness and capacity to make a substantial contribution to all activities of the Faculty, including administration and planning
7. Proven professional leadership qualities and capacity for executive administrative responsibilities
8. Evidence of sustained relationships with industry, business, government agencies, professional bodies – as relevant to the particular position coupled with vision for the future needs and development of Software Engineering within Australia and internationally
9. Practical experience in information technology outside tertiary education including experience in the development of large software systems. Such systems might be commercial, open-source or research software

## **Other job related information**

- Travel (e.g. to other campuses of the University) may be 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.