**JOB DESCRIPTION**

The School of Information Systems (SIS) at the Singapore Management University (SMU) has several positions for tenure track faculty, at all ranks, in the disciplines of Computer Science & Engineering.

We strategically hire to build critical mass and innovative capability in our core research areas and integrative research domains. We are particularly looking to augment our Artificial Intelligence & Data Science faculty in the following areas:

* Cognitive Science
* Computational Neuroscience
* Brain Science and Computation

**CORE RESEARCH AREAS OF OUR SCHOOL**

**Artificial Intelligence & Data Science**

* **Data Management & Analytics**, including natural language processing; data mining; data visualisation and analytics; recommender systems; social sensing and activation.
* **Intelligent Systems & Optimization**, including large-scale optimisation and meta-heuristics; economic paradigms (game theory, mechanism design, electronic markets); agent modeling and simulation; agent planning, scheduling and decision support; agent learning and adaptation.
* **Machine Learning & Intelligence**, including machine intelligence; machine learning and adaptation; deep learning; explainable AI; cognitive/brain-inspired computing; intelligent assistants; intelligence augmentation; human-in-the-loop AI.

**Human-Machine Collaborative Systems**

* **Pervasive Sensing & Systems**, including sensing & sensor information processing; IoT and embedded systems; mobile and pervasive systems; context-aware & edge computing platforms.
* **Human-Machine Interaction**, including human-computer interaction; human-robot interaction; remote collaboration and wearable interfaces.
* **Multimedia**, including computer vision; multimedia search; augmented reality; virtual reality.

**Information Systems & Technology**

* **Software Engineering & Systems**, including software mining, testing & analysis; IoT and mobile OS; low-power OS; cloud computing; autonomous systems; multi-robot collaboration.
* **Cybersecurity**, including decentralised/distributed trusted systems; biometrics; computer forensics; data, media content and related applications security and privacy; software and system security; information security and usability; information security economics and risk analysis, modeling & metrics.
* **Information Systems Management**, including economics of IT and management science; empirical methods, econometrics, and policy analytics; sharing economy and IT platforms; digitalisation and process transformation; fintech; marketing and healthcare IT; information security, technology innovation and IT impacts; interdisciplinary studies across the core areas.

**OUR INTEGRATIVE RESEARCH DOMAINS**

* Urban Systems & Operations
* Active Citizenry & Communities
* Safety & Security
* Learning & Pedagogy

While we encourage and nurture applied research addressing real-world problems, we simultaneously cultivate and value big ideas, and research that is intellectually deep and thought provoking. Our faculty target their academic output primarily in the most-selective, academically prestigious venues. We want our faculty striving to create research outputs that advance thinking and scholarship in the core research areas, and also seeking real-world impact in the integrative research domains in “the world of business”.

We offer extremely attractive salary and benefits that are usually superior to international competitive benchmarks.

**QUALIFICATIONS**

We are on the lookout for outstanding faculty candidates at all levels:

* **Fresh Ph.D. graduates**
* **Postdocs looking for a faculty position**
* **Ph.D. holders who are currently in industry but want to return to faculty and research work**
* **Mid-career or senior faculty**

Tenure track faculty must have Ph.D. qualification in a relevant discipline (such as Computer Science, Computer Engineering, Information Technology and Information Systems) along with an outstanding research record. Interested candidates are invited to submit a cover letter (indicating your research interest), curriculum vitae, research and teaching statements, three recommendation letters, and three samples of published work to

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**ABOUT THE SMU SCHOOL OF INFORMATION SYSTEMS**

A premier university in Asia, the [Singapore Management University](https://www.smu.edu.sg/) (SMU) is internationally recognised for its world-class research and distinguished teaching. Established in 2000, SMU’s mission is to generate leading-edge research with global impact and produce broad-based, creative and entrepreneurial leaders for the knowledge-based economy. SMU education is known for its highly interactive, collaborative and project-based approach to learning, and for its technologically enabled pedagogy of seminar-style teaching in small class sizes.

The [School of Information Systems](https://sis.smu.edu.sg/#/) (SIS) offers an exceptionally supportive and inspirational environment for academic scholarship and research, applied R&D projects, and innovative education initiatives. We currently have more than 40 tenure-track faculty members working across research areas in computer science & engineering, and information systems management. They are complemented by over 20 practice & education faculty members who focus on teaching as well as translation and pedagogical research.

**Our Research.** We are passionate about our [**research**](https://sis.smu.edu.sg/research). We aim for excellence both in fundamental contribution to academic knowledge, as well as in creating technology with practical impact. Real-world industry sectors provide SIS with a testbed and laboratory for experimentation, as well as a fertile breeding ground for new ideas. Our faculty and students apply their research results to solve real problems in a variety of industry settings and to create IT applications and systems. At the same time, our faculty actively publish in top-quality Computer Science and Management Science conferences and journals. On our faculty are several world-class scholars and rising stars in their respective disciplines.

We are committed to supporting the development of our faculty. Besides start-up support and career mentoring for junior faculty, their Ph.D. students are funded by the school rather than paid from their research grants. SIS faculty members are encouraged to collaborate on innovative research projects and also on integrative and interdisciplinary projects. SMU as well as Singapore government agencies, such as the National Research Foundation, provide generous support for high-quality research proposals.

A noteworthy example of our funded research is the [Living Analytics Research Centre](https://larc.smu.edu.sg/) (LARC), operated jointly with Carnegie Mellon University; LARC focuses on building technologies for Social Media Sensing and Analytics, and applying them in Singapore’s Smart Nation initiatives. In addition, SIS is the academic lead in the [Fujtsu-SMU Urban Computing and Engineering Corporate Lab](https://unicen.smu.edu.sg/) (UNICEN), which focuses on urban mobility, logistics, and traffic management. In the area of Cybersecurity, SIS has a [Secure Mobile Centre](https://smc.smu.edu.sg/) that conducts research into mobile device, cloud, and platform security.

**Our Education.** SIS has more than 70 students enrolled in the [Ph.D. in Information Systems](https://sis.smu.edu.sg/programmes/PhD/overview) and Ph.D. in Computer Science programmes. Ph.D. students can concentrate in any of our computer science oriented research areas, or in our management science oriented Information Systems & Management research area.

SIS recently launched a new Professional Doctoral Degree, Doctor of Engineering (EngD). The programme aims to train students to become IT leaders with deep technical expertise for innovating, designing and managing complex IT systems.

SIS also offers [Master of IT in Business](https://sis.smu.edu.sg/master-it-business/programme-info/programme-info) (MITB), a professionally oriented coursework programme, which has more than 400 students. The programme supports a Financial Technology & Analytics track focusing on FinTech and the integration of Technology & Operations in Banking, an Analytics track focusing on applied analytics for business, consumer and social insights, as well as an Artificial Intelligence (AI) track that emphasises building AI-enabled business applications.

Additionally, we have over 1,800 undergraduate students in our [B.Sc. (Computer Science)](https://sis.smu.edu.sg/bsc-computer-science), [B.Sc. (Information Systems)](https://sis.smu.edu.sg/bsc-information-systems) and [B.Sc. (Computing & Law)](https://sis.smu.edu.sg/bsc-computing-law) programmes. The programmes have been remarkably successful in demonstrating educational innovations and creating a culture of learning, establishing external linkages and partnerships with industry, government and the social sector, and with job placement. We have an entrepreneurial student body, and many SIS undergraduates have gone on to create or participate in start-ups.