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Jeffrey Cheah
Foundation



Nurturing the Seeds of Wisdom



Sunway University is one of Malaysia's leading and most recognised institutions of higher learning backed by outstanding academic achievements, realised through quality education and continuous nurturing of our talents. We are an elite Tier 5 member of the 2009 MQA Rating System for Malaysian Higher Education Institutions (SETARA'09), in line with our goal of moving towards becoming a world-class tertiary institution providing superior teaching, learning and research experiences.

Our shared user amenities offer a wide range of computing facilities. Our Consultation, Collaboration & Commercialisation Lab, Mobile Systems Research Lab and Intelligent System Robotics Engineering Research Lab will provide candidates with state-of-the-art specialised resources to support Information Technology research activities.

Research is an integral part of a first-class institution of tertiary education, and at Sunway University we are committed to the proliferation of a culture of quality research. Through generous internal and external grants, academic members from the University have undertaken many Research Projects where findings have been beneficial to the community.



Overview



We are a hotbed of innovation and a recipient of numerous research grants with three research groups currently working on exciting projects:

- Intelligent and Visual Computing Research Group focuses on developing the next generation of intelligent computing environments with smart systems and human computing interfaces for everyone. Our research activities include artificial intelligence, machine learning, visual information processing, biometrics and applications for society such as for affective computing and business intelligence.
- Pervasive Computing Research Group focuses on developing the next generation of pervasive computing environments with information and communication technology everywhere, for everyone, at all times. Our research activities include distributed computing, embedded systems, sensors, wireless technologies and applications for society such as for assistive technology and educational systems.
- Management Information Systems Research Group focuses on managerial, behavioural, and social psychological issues of IT. It aims at creating new knowledge involving the application of Information Systems to build strategic and operational capabilities in organisations. It covers a number of different research areas, including Strategic Information Management and Decision Making, Social Networking, and Knowledge Management.

Our faculty has a reputation for facilitating collaborative research initiatives and for being a major contributor to the many publications released.

International Connection: University Partner

Success is a culmination of teamwork and strong partnerships. We have long been in alliance with some of the most accomplished institutions of higher learning to ensure that our students get the best in education.



photographed by Jill Jennings

Lancaster University

The partnership between Sunway University and Lancaster University would bring about significant contribution to the MSc programme, especially in merging latest developments in the computing world into a research programme in Malaysia. The MSc programme developed and conducted by us is validated by Lancaster University. Candidates who successfully complete this programme will be recognised as graduates of both Sunway University and Lancaster University, and will thus be awarded two parchments.

Consistently rated as one of the top 10 UK universities, Lancaster University is a research-intensive and student-centred university with a stimulating and innovative learning environment. The University is committed to the pursuit of innovative and cutting-edge research, and has a long and successful history of working with international ICT companies such as Microsoft, BT Labs, Orange, Cisco, Nokia and Ford; through its prestigious departments of Computing and Communication Systems.

The Computing Department at Lancaster University is an international centre of excellence in Computer Science research, ranked amongst the top ten Computer Science Departments in the UK Research Assessment Exercise (RAE) 2008. The department is housed in InfoLab21, which is the University's world-class research, development and business centre in Information and Communication Technologies (ICT). InfoLab21 has state-of-the-art research laboratories and facilities to support the University's world-class research activities, and its Knowledge Business Centre also works to bring industry and academic research closer together, by supporting technology transfer and research commercialisation.

MSc in Computer Science (by research)

LANCASTER
UNIVERSITY



About the Programme

The Master of Science in Computer Science (by research) is a research-focused postgraduate degree, offered in collaboration with Lancaster University. This Programme is specially designed for those wishing to enhance their knowledge and skills in the field of Computer Science and for career development in research-based organisations. Candidates may opt to pursue this programme either on a full-time or part-time basis, allowing the flexibility of combining work and study.

The Master of Science in Computer Science (by research) is accredited by the Malaysian Qualifications Agency.



The Modules

The MSc in Computer Science (by research) consists of two taught modules and one thesis. Candidates will be required to complete two taught modules, namely Research Methodology and Directed Readings, before they proceed to writing the thesis. By undergoing these two modules, candidates are expected to develop the necessary skills and knowledge to conduct research successfully towards the Master's degree.

The modules are:

- **Research Methodology**

Candidates will have an opportunity to examine research designs with methodology as well as basic data analysis techniques employed by researchers. At the end of this module, candidates will be expected to formulate and submit a proposal for research in an area of their own interest or specialisation.

- **Directed Readings**

This module will introduce candidates to key research papers in their chosen area and will help them identify a research question as the basis of their own thesis. Each paper will be read and discussed between candidate and supervisor as part of a tutorial exercise.

- **Thesis**

The thesis topic may be chosen from any related areas in Computer Science and must be decided in consultation with an assigned supervisor. The thesis demonstrates that the candidates have mastered a research area, identified a research problem, and developed a research solution which makes a contribution to the area. The thesis will communicate this knowledge in the form of a written report of sufficient publication quality, to enable possible publication in an international workshop or conference.

Areas of Research

Subject to our expertise, the areas of research include, but are not limited to, the following:

- Ubiquitous and Pervasive Computing
- Networking
- Database Systems
- Image Processing and Computer Vision
- Artificial Intelligence
- Data Mining
- Affective Computing
- Biometrics

Preliminary discussions are usually made between the prospective candidates and a potential supervisor to ascertain the suitable area of research before registering for this programme.

Entry Requirements

A good degree in Computer Science or in a related discipline or technical field from a recognised institution of higher learning.

Duration of the Programme

Full-time – 1 year minimum; 4 years maximum
Part-time – 2 years minimum; 6 years maximum

Intakes

January, March, June and August

Employability

Graduates from all our postgraduate programmes will find themselves well equipped for a career either in industry or academia. Our courses are highly respected for their content and quality. The experience gained from completing the Masters programme would be a great asset for those seeking a challenging career in the areas of ICT and computer science.

Doctor of Philosophy (Computing)

Highlights of the programme

- Offers a relevant doctoral degree in specific areas of interest
- Prepares candidates for a rewarding career in the ever-growing IT industry with Fortune 500 companies such as IBM, Hewlett-Packard, Accenture, KPMG, MDeC and BT
- Opens up exciting and challenging opportunities that offer greater mobility internationally
- Equips candidates with versatility in the commercialised IT and Education industries

About the programme

The Doctor of Philosophy (Computing) programme aims to develop leaders and innovators in the area of computing and ICT. The programme will steel graduates with the ability to apply advanced knowledge and skills, to deal with the computing and ICT needs of organisations and society in a professional and ethical manner.

Ultimately, candidates will be equipped with the ability and skills to create, develop and extend the frontiers of knowledge in the field of computing or ICT.

The programme requires extensive and independent research under the supervision of a qualified academic. The programme requires candidates to complete two taught modules, namely Research Methodology and Directed Readings before proceeding to undertake the thesis research.

The Modules

• Research Methodology

This module will examine research designs with methodology, as well as basic data analysis techniques employed by researchers. Candidates will gain a sound understanding of the research process, draw conclusions based on study results and literature reviewed, and finally put forward a proposal for research in an area of their own interest.

• Directed Readings

This module aims to provide candidates with an understanding of the main research topics within their chosen areas. The module will introduce candidates to key research papers in their chosen area and will help them identify a research study as the basis of their own thesis. Each paper will be read and discussed between candidate and supervisor as part of a tutorial exercise.

• Thesis

As a requirement for obtaining the doctoral degree, candidates are required to submit a thesis which demonstrates the mastery of a subject area in a specific field of research. Candidates will be guided by their supervisors throughout the various research activities. We have academics undertaking and working extensively in research areas such as Intelligent and Visual Computing, Pervasive Computing, and Management Information Systems.

The processes involved in the preparation of the thesis are as follows:

- Finalisation of research proposal and its successful defense.
- Implementation of the proposal.
- Analysing the data and writing the thesis.
- Submission of the thesis for examination and finally the viva voce.
- Presentation of research study in conferences.
- Publication in a peer-reviewed journal.

Areas of Research

Subject to our expertise, the areas of research include, but are not limited to, the following:

- Ubiquitous and Pervasive Computing
- Networking
- Mobile Computing
- Database Systems
- Image Processing and Computer Vision
- Artificial Intelligence
- Data Mining
- Affective Computing
- Biometrics
- Management Information Systems

Preliminary discussions are usually made between the prospective candidate and the potential supervisor to ascertain the suitable area of research before registering for this programme.

Intakes

January, March, June and August

Duration of the Programme

Full-time – 3 years minimum; 6 years maximum

Part-time – 4 years minimum; 8 years maximum

Entry Requirements

A Masters degree or equivalent and completed at least one (1) of the earlier degrees (Masters or Bachelors) in Computing.

Academic & Research Profiles

Research Profile

Assoc. Prof. Dr. Lim Tong Ming

BSc Computer Science (Mississippi State)
MSc Computer Science (Mississippi State)
PhD Computer Science (UM)

P2P and Object-Oriented Database Computing
Social Networking

Assoc. Prof. Dr. Leow Soo Kar

BSc (Hons) Mathematics (UM), MSc (LSE, UK)
PhD Operations Research (North Carolina)

Mathematical Programming
Evolutionary Algorithms

Professor Dr. Jasmine Seng Kah Phooi

BEng (1st Hons) (UTas, Australia)
PhD Engineering (UTas, Australia)

Visual Information Processing
Artificial Intelligence
Multi-biometrics
Wireless Sensor Network

Dr. Adelina Tang Lai Toh

B. App.Sc. Electrical Eng (Hons) (Ottawa)
MSc Comp. (UM), M.B.A. (Finance) (UM)
PhD Computer Science (Queensland)

Machine Learning
Ontologies
Bayesian Networks

Dr. Grace Lim Soo Yong

B. Eng (Hons) Electronics majoring in
Telecommunications (MMU)
PhD Electrical Engineering (University of Hawaii)

Electromagnetics Field and Waves
Radio Propagation Theory and Measurements
High Frequency Method/Ray Tracing

Dr. Lee Yun Li

BIT (Hons) Software Engineering (MMU)
M. Engineering (Software) (DSU, S. Korea)
PhD Engineering (Digital Media) (SSU, S. Korea)

Computer Vision and Image Processing
Human-Computer Interaction
Pattern Recognition

Dr. Lim Say Ying

B. Business Systems (Monash)
M. Business Systems (Monash)
PhD Computing (Monash)

E-Business
Database

Dr. Pu Chuan Chin

B. EE Eng. (Hons) (KBU)
M. Engineering Telecommunications (MMU)
PhD Ubiquitous IT (DSU, S. Korea)

Wireless Sensor Network Systems
Indoor Positioning and Navigation

Dr. Wong Siew Fan

BBA Management Information System (Oklahoma)
PhD Management Information Systems (Houston)

IT Outsourcing
IT Management
Social Networking

Dr. Yap Kian Meng

MSc Telecommunications (QUB, N. Ireland)
PhD EE Eng. (Telecommunications/Adv. Network)
(QUB, N. Ireland)

Distributed Haptics
Virtual Engineering
Telecommunications
Advanced Networks

Dr. Yau Kok Lim

B. Eng. (Hons) (Electrical and Electronics) (UTP)
MSc (Electrical Eng.) (NUS)
PhD (Network Eng.) (Victoria Uni., NZ)

Wireless Networks
Network Security
Green Technology
Applied Artificial Intelligence
Technology Forecasting

Contacts

We invite suitable candidates to apply, please contact:

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sunway.edu.my/university

SUNWAY UNIVERSITY (KPT/JPT/DFT/US/B15)

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SUNWAY UNIVERSITY

Programmes offered

DIPLOMA & DEGREE PROGRAMMES

- Diploma in Business Administration
- Diploma in Culinary Arts
- Diploma in Events Management
- Diploma in Fine Art
- Diploma in Graphic & Multimedia Design
- Diploma in Hotel Management
- Diploma in Information Technology
- Diploma in Interior Design
- Diploma in Performing Arts
- Diploma in Tourism Management
- BSc (Hons) Accounting & Finance
- BSc (Hons) Business Management
- BSc (Hons) Business Studies
- BA (Hons) in Communication
- BSc (Hons) in Computer Science
- BSc (Hons) Information Systems
- BSc (Hons) Information Technology
- BSc (Hons) in International Hospitality Management
- BSc (Hons) Psychology

AMERICAN DEGREE TRANSFER PROGRAM (ARTS)

AMERICAN DEGREE TRANSFER PROGRAM (SCIENCE/ENGINEERING)

(Majors in Actuarial Science, Architecture, Aviation, Biomedical Science, Business, Communication, Computer Science, Engineering, Forensic Science, Psychology)

POSTGRADUATE PROGRAMMES

- Doctor of Philosophy (Computing)
- MSc in Computer Science (by research)
- MSc in Psychology (Organisational)

ENGLISH LANGUAGE PROGRAMMES

- Intensive English Programme (IEP)
- International English Language Testing Systems (IELTS)
- Vacation English School (VES)

SUNWAY COLLEGE

Programmes offered

PRE-UNIVERSITY STUDIES

- Australian Matriculation
- Cambridge GCE A Level
- Canadian International Matriculation Programme
- Monash University Foundation Year
- Sunway Foundation in Arts

AUSTRALIAN BUSINESS PROGRAMMES

(Victoria University, Melbourne, Australia)

- Bachelor of Business (Twinning Programme/3+0)
(Accounting, Banking & Finance, Financial Risk Management,
International Trade and Marketing)
- Master of Business Administration (MBA)

PROFESSIONAL ACCOUNTING PROGRAMMES

- Association of Chartered Certified Accountants (ACCA)
- Certified Accounting Technician (CAT)
- Certificate in Finance, Accounting & Business (CFAB)
- The Institute of Chartered Accountants in England & Wales (ICAEW)