

MEMBERS

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UNIVERSITI PUTRA MALAYSIA
BERILMU BERBAKTI

FACULTY OF COMPUTER SCIENCE AND INFORMATION TECHNOLOGY

SOFTWARE ENGINEERING RESEARCH GROUP (SERG@UPM)

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OVERVIEW

Software engineering is an engineering discipline that is concerned with every aspect of software production from early stages of software requirement through maintenance.

In Universiti Putra Malaysia (UPM), software engineering related research activities are conducted by the Software Engineering Research Group (SERG@UPM).

SERG@UPM is one of the most prolific research groups under the Department of Software Engineering and Information Systems, Faculty of Computer Science and Information Technology. Our research cover systematic, disciplined, quantifiable techniques and methods to design, develop, implement and maintain industrial strength software.

Because we have :

- ✓ well trained experts in several areas of software engineering.
- ✓ comprehensive and well-established software engineering specializations.
- ✓ high number of successful Ph.D. and Master holders.
- ✓ high number of research grants.
- ✓ well-equipped IT facilities and conducive environment.
- ✓ consistent scientific publications in international journals and conference proceedings.

Current Active Students

Ph. D. Research Programme - 30 students
Master Research Programme - 16 students

Cumulative Graduated Students

Ph. D. & Master Research Programme - 45 students

RESEARCH AREAS

- Software requirements engineering
- Software design and modeling
- Software testing
- Software quality
- Software maintenance
- Software measurement and estimation
- Software development methodology
- Software engineering management
- Enterprise software engineering
- Green software engineering
- Embedded software engineering
- Search-based software engineering
- Component-based software engineering
- Theoretical and formal aspect of software engineering
- Big Data Software Engineering

Current Research Projects/Grants

- Enhanced Genetic Algorithms for Detecting and Removing Cross-Site Scripting Vulnerabilities in Java Web Applications
Principle investigator: Prof. Dr. Abu Bakar Md Sultan
FRGS, RM 73 500, Dis 2013 - Nov 2016
- Agile Transformation Framework for Successful Transition and Adoption of Agile Software Development Methodology
Principle investigator: Assoc. Prof. Dr. Hazura Zuzalli
FRGS, RM 85 500, Dis 2013 - May 2016
- Software Behavioral I-based Energy Consumption Model for Developing Energy Efficient Mobile Applications
Principle investigator: Dr. Koh Tieng Wei
FRGS, RM 84 400, Dis 2013 - May 2016
- The Evolutionary Programming Approach for Automatic SQL Injection Vulnerabilities Fixing in Web Application
Principle investigator: Prof. Dr. Abu Bakar Md Sultan
FRGS, RM 92 200, Dis 2015 - Nov 2017
- SDPM to support management decisions in optimizing performance of safety critical system development.
Principle investigator: Dr. Jamilah Din
FRGS, RM 87 300, Dis 2015 - Nov 2017
- Genetic algorithm approach to enhance the effectiveness of State-Sensitivity Partitioning in generating test cases
Principle investigator: Dr. Salimi Baharom
FRGS, RM 89 800, Dis 2015 - Nov 2017
- Enhanced Error Inheritance Prevention Technique based on Incremental Component Composition
Principle investigator: Dr. Ng Keng Yap
FRGS, RM 98 350, Dis 2015 - Nov 2017
- A Self-Adaptation Framework to Enhance Dynamic Service Reconfiguration in Service-Oriented Architecture
Principle investigator: Dr. Novia Indriaty Admudisastro
FRGS, RM 86 100, Dis 2015 - Nov 2017

- An Analysis Approach for Specifying Innovative Elements in Improving Mobile Application Requirements
Principle investigator: Dr. Sa'adah Hassan
FRGS, RM 72 000, Dis 2015 - Nov 2017
- Metamodel Critics to Enhance the Consistency of Model-Implementation Mapping in a Model-Driven Software Engineering
Principle investigator: Dr. Norhayati Mohd Ali
FRGS, RM 91 800, Dis 2015 - Nov 2017

Research Publications (Last 3 years)

- 3 Books
- 5 Chapters in Books
- 12 ISI Indexed Journals
- 45 Citation Indexed Journals
- 23 Non-citation Indexed Journals

Achievements

- GOLD Medal (PRPI 2014), RAMBUTANS : An Automatic Randomized Test Generation Tool for Aspect-oriented Software (Prof. Dr. Abdull Azim Abd Ghani)
- GOLD Medal (I-PHEX2014), A Collaborative Software Design Critiquing Tool (Dr. Norhayati Mohd Ali).
- SILVER Medal (I-PHEX2014), LoQET: Learning Outcome Based Question Examination Tool (Dr. Sa'adah Hassan).
- SILVER Medal (PRPI 2014), Software Architectural Analysis in Component-Based Software Development (Dr. Novia Indriaty Admudisastro).
- BRONZE Medal PEPIPTA 2015 - Learning Outcome-based Examination Paper Tool Shortlisted Project (Reimagine Education Awards 2015) - Learning Outcome-based Examination Paper Tool (Dr. Sa'adah Hassan).
- and more....

ENTRY Requirements

Doctor of Philosophy Programme

The applicant should possess:

- (a) a Master Degree (with coursework) in a relevant field with a minimum grade average of B, or
- (b) a Master Degree with thesis in a relevant field, or
- (c) an outstanding Bachelor's degree with a minimum CGPA of 3.750 (such an applicant may apply direct admission even without a Master Degree).

Master's Programme With Thesis

An applicant should have a Bachelor Degree in Computer Science or its equivalent with a CGPA of at least 3.00 from UPM or other universities recognised by UPM, or Applicants with a CGPA between 2.75 to 2.99 (2.75 <= PNGK < 3.00), may be considered if they have at least one(1) year of working experience in the related field.

Master of Science

An applicant should have a Bachelor Degree in Computer Science or its equivalent with a CGPA of at least 3.00 from UPM or other universities recognised by UPM, or Applicants with a CGPA between 2.75 to 2.99 (2.75 <= PNGK < 3.00), may be considered if they have at least one(1) year of working experience in the related field.

HOW TO APPLY ?

Access the Online Application via sportal.upm.edu.my
Application is open throughout the year, with two intakes in February and September



Why study Software Engineering
at
UPM ?