SOFTWARE AND SYSTEM MODELING

SOFTWARE ENGINEERING

RESEARCH GROUP

HUMAN-CENTERED SOFTWARE ENGINEERING

EMPIRICAL SOFTWARE ENGINEERING AND MEASUREMENT

Annual Report 2016

Software Engineering Research Group Activity Highlights 2016-2017

Event/Activities

No.	Date	Event	Description	Contact Person
1	5th Smart City Workshop	Presentation on intruders detection device. Faculty of Engineering, UPM.	9 March 2017	Khaironi Yatim Sharif
2	4th Artificial Intelligence of Computer Science 3026	Present Fault Localization By Using Hybrid Genetic Algorithm paper at the conference. Adya Hotel, Langkawi	28th November 2016	
3	INNOHUB Pitching Session	Pembentangan Geran Validasi Pasaran (INNOHUB)	25th November 2016	
4	Project Demonstration / Closing	Quick Deployment Indoor Navigation System Projek 01-01-04-SF1876, Sciencefund, MOSTI	10 Mac 2017	
5	Invited Speaker. FAIS Symposium Kitakyushu Foundation For The Advancement of Industry, Science & Technology (FAIS), Kitakyushu, Japan	Quick Deployment Wi-Fi Based Indoor Navigation System.	26th Sept. 2016	
	International Workshop (certification)	Next-Generation Enterprise Modelling (NEMO2016) in the Age of Internet of Things (IoT), University of Vienna, Vienna, Austria.	18 July – 29 July 2016	Novia Indriaty Admodisastro
	SOFTEC Asia 2016	Software Testing Conference 2016	6-8 September 2016	Hazura Zulzalil
	Projek Writing Cells	Mentor & Mentee Untuk Projek Writing Cells Briefing	4 November 2016	
	CSTE'2016	Computer Science and Telecommunication Engineering International Conference 2016 (CSTE2016) in Kuala Lumpur, Malaysia	19-20 November 2016.	

Research Projects/ Grants/ Consultations

No.	Amount (RM)	Title/ Duration	Sponsor	Contact Person
	60,000.00	WiFi-Based Intruder Detection Device Skim Geran Kajian Validasi Pasaran (INNOHUB) (28 disember 2016-28 disember 2017)	Putra Science Park Universiti Putra Malaysia	Khaironi Yatim Sharif
	207,500.00	Quick Deployment Indoor Navigation System Projek 01-01-04-SF1876, Sciencefund, MOSTI (2.5 years)	MOSTI	
	98,000	Metamodel Critics to Enhance the Consistency of Model-Implementation Mapping in a Model-Driven Software Engineering	KPT	Norhayati Mohd. Ali
	10,000	Automated Errors Detection in UML Diagrams to Enhance Students' Learning in Object-Oriented Models	GIPP,CADE,UPM	
	20,000	A Computer-Based Learning Model Using Machine Learning for Dyslexia Student in Primary School, RM20,000, 1 Apr 2016 – 1 Apr 2018	GP-IPS, UPM	Novia Indriaty Admodisastro
	197,043.40	Advancing Youth-Led Social Entrepreneurship in Malaysia: Economic Sustainability, Development Impact and Potential for Community Well-Being, 01-APR-2016 01-APR-2018	GP-IPB, UPM	
	4,000	System Design Modelling Trainer, Agriculture Intelligence System (AIS), 2016.	Minister of Agriculture & Agro-Based Industry	
	72,000	An Analysis Approach for Specifying Innovative Elements in Improving Mobile Application Requirements (2 years/2015-2017)	KPT	Sa'adah Hassan
	85,500	Agile Transformation Framework for Successful Transition and Adoption of Agile Software Development Methodology, Dis 2013- May 2016	KPT	Hazura Zulzalil
	68,000	MVC Dynamic Web Services Composition Technique and Complexity Measurement Model to Improve the Productivity of SOA Development (1 August 2016 – 31 July 2018)	KPT	Koh Tieng Wei

Publications

No.	Publisher	Title/ Category of Publication	Contact Person
1	Worldconferences.net	Fault Localization By Using Hybrid Genetic Algorithm	Khaironi Yatim Sharif
2	Inderscience Publication	Wi-Fi Received Signal Strength Based Hyperbolic Location Estimation for Indoor Positioning Systems - Citation-Indexed Journal - Scopus	
	Advanced Science Letters (ASL), American Scientific Publishers. ISSN:1936 6612	ClassDiagramCritic: A Design Critic Tool for UML Class Diagram	Soran Abdulkareem, Norhayati Mohd Ali, Novia Admodisastro and Abu Bakar Md Sultan
	Advanced Science Letters (ASL), American Scientific Publishers. ISSN:1936 6612	Inconsistency Detection of Model and Code via Critic-Based Approach	Osman Mohammed, Norhayati Mohd Ali, Novia Admodisastro and Jamilah Din
	ACM	Informing Design of an Adaptive Learning Model for student with Dyslexia: A Preliminary Study, in Proc. of the 3rd CHI UX Indonesia Conference 2017 (CHIuXiD 2017)/ Proceeding	S.S. Abdul Hamid, N. Admodisastro, A. Kamaruddin, N. Manshor, A. Abdul Ghani
	University Community Transformation Centre (UCTC), UPM	Design Metaphor to Improve Interface Usability for Paddy Farmers in Malaysia Using User-Centered Approach, in Proc. of the International Conference on Agricultural Extension (AGREX'17)/ Proceeding	S.N. Jamali, N. Admodisastro, A. Kamaruddin, S. Hassan and J. Din
	American Scientific Publishers	Dynamic Reconfiguration of Web Service in Service-Oriented Architecture, J. Advanced Science Letter (ASL), in press, 2016/ Scopus Indexed Journal	R. Ilahi, N. Admodisastro, N. Mohd. Ali, A.B. Md. Sultan
	Center of Excellence in Semantic Agents (COESA)	Dynamic Reconfiguration of Web Service in Service-Oriented Architecture, in Proc. of the Int. Conf. on Computational Science and Engineering (ICCSE), 2016/ Proceeding	R. Ilahi, N. Admodisastro, N. Mohd. Ali, A.B. Md. Sultan,
	Universiti Malaysia Pahang	Dynamic Reconfiguration of Web Service using Middleware-based Approach, Extended Abstract in Proc. of the Int. Competition & Exhibition on Computing Innovation (iCE-Inno), 2016/ Proceeding	R. Ilahi, N. Admodisastro, N. Mohd. Ali, A.B. Md. Sultan,

International Education Studies	Developing a Learning Outcome-Based Question Examination Paper Tool for Universiti Putra Malaysia	Sa'adah Hassan, Novia Admodisastro, Azrina Kamaruddin, Salmi Baharom and Noraini Che Pa
Indian Journal of Science and Technology	Gap Analysis in Specifying Porting Requirements for Mobile Application	Kesava Rajadorai, Sa'adah Hassan, Novia Admodisastro and Hazura Zulzalil
Aida Suraya Md. Yunus, Muta Harah Zakaria, Nor Azirawani Man (Eds): Extended Abstracts of GIPP, vol. 1, pp.69-75. ISBN 978-967-960-400-9	Developing a LOQET: Learning Outcome-Based Examination Paper Tool	Sa'adah Hassan, Novia Admodisastro, Azrina Kamaruddin, Salmi Baharom and Noraini Che Pa
2016 Advanced Research in Engineering and Information Technology International Conference (AREITIC) (will be published in Advance Science Letters)	Towards Improving Usability Requirements Elicitation and Specification using Ontology-Driven Approach	Too, C.W., Hassan, S., and Ghani, A.A., and Din, J
In *Proceedings of the 10th International Conference on Ubiquitous Information Management and Communication* (IMCOM '16). ACM	Actor in Multi Product Line	Azizah Rahmat, Suzana Kassim, Mohd Hasan Selamat, and Sa'adah Hassan
The International Conference on Agricultural Extension (AGREX17)	Livestock Management Information System	Wan Abdul Hafiz Wan Arif, Sa'adah Hassan, Novia Admodisastro, and Noraini Che Pa
ICAST International Conference on Applied Science and Technology 2017	Excessive and Addictive Gaming Control Using Counselling Agent in Online Game Design	Italumeh O. Ididi, Sa'adah Hassan, Abdul Azim Abd Ghani, Norhayati Mohd Ali

Indian Journal of Science and Technology	Enhanced Pushdown Automaton based Static Analysis for Detection of SQL Injection Hotspots in Web Application	K Umar, ABM Sultan, H Zulzalil, N Admodisastro, MT Abdullah
Indian Journal of Science and Technology	SQL Injection Attack Roadmap and Fusion	K Umar, ABM Sultan, H Zulzalil, N Admodisastro, MT Abdullah
American Scientist Publisher	Use of Security Patterns for Development of Secure Healthcare Information System / Journal of Medical Imaging and Health Informatics Vol. 6, 1541–1547, 2016	Zulfikar Ahmed Maher, Nor Fazlida Mohd Sani, Jamilah Din, and Marzanah A. Jabar
IEEE	Automatic Generation of Content Security Policy to Mitigate Cross Site Scripting / 2nd International Conference on Science in Information Technology (ICSITech), pg 324-328	Samer Attallah Mhana, Jamilah Binti Din, Rodziah Binti Atan
International Journal of Advanced Computer Science and Applications (IJACSA)	"Impact Propagation of Human Errors on Requirement Volatility in Software Requirement Gathering", Vol. 8, No. 2, 2017, pp. 227-237.	Zahra Askarinejadamiri, Abdul Azim Abd Ghani, Koh Tieng Wei, Hazura Zulzalil
Proceedings of the Future Technologies Conference (FTC 2016), San Francisco, United States ISBN (IEEE Xplore): 978-1-5090-4171-8	"*Systematic Literature Review on Effort Estimation for Open Sources (OSS) Web Application Development*", pp. 1158-1167, 6-7 Dec 2016	Tseu Kwan Lee, Koh Tieng Wei, Abdul Azim Abd. Ghani
Proceedings of the International Conference on Computer and Network Applications (2017), 1Borneo, Kota Kinabalu, Sabah Malaysia, pp.65-74, 5-6 September 2017	Evolutionary algorithm to enhance effectiveness of multiple-fault of software localization	Muhammad Luqman Mohamad Zakaria, Khaironi Yatim Sharif, Koh Tieng Wei, Abdul Azim Abd. Ghani, Hazura Zulzalil

Innovations

No.	Status	Description	Members
1	Experiment	Fault localization framework that will detect root cause of a fault in an object oriented source code. This framework consist of genetic algorithm and local search approach to detect the fault.	Muhammad Luqman Bin Mahamad Zakaria, Khaironi Yatim Sharif, Abdul Azim Abd. Ghani, Koh Tieng Wei, Hazura Zulzalil
2	Market Validation	WiFi-Based Intruder Detection Device Skim Geran Kajian Validasi Pasaran (INNOHUB) (28 disember 2016-28 disember 2017)	Muhammad Luqman Bin Mahamad Zakaria, Khaironi Yatim Sharif, Koh Tieng Wei
	Trademark	LoQET: Learning Outcome Based Examination Tool	Sa'adah Hassan, Novia Admodisastro, Azrina Kamaruddin, Salmi Baharom and Noraini Che Pa

Achiements/ Awards

No.	Level	Description	Members
	International	International Competition & Exhibition on Computing Innovation (iCE-Inno2016)/ Bronze Medal	R. Ilahi, N. Admodisastro, N. Mohd. Ali, A.B. Md. Sultan
	Faculty	Hari Kualiti 2016 – Anugerah Geran Penyelidikan Cemerlang (Best Research Grant Award)	Kumpulan Penyelidikan SE
	Faculty	Hari Kualiti 2016 – Anugerah Penerbitan Cemerlang (Best Publication Award)	Kumpulan Penyelidikan SE