

Faculty of Computer Science and Information Technology

# Software Engineering Research Group (SERG)



## Overview

**Software Engineering (SE)** is an essential engineering discipline that deals with every aspect of software production, from the early stages of software requirements to the maintenance of the software once it is deployed. This area encompasses systematic, disciplined, and techniques and methods for designing, developing, implementing, and maintaining high-quality software.

### About us

The **Software Engineering Research Group (SERG)** is a proactive team of researchers who actively collaborate with colleagues, as well as researchers from other institutions and industries, to share their innovative ideas. SERG brings together passionate academics and research students with similar interests to work on specific SE research areas, develop projects, engage in research activities, and share their expertise.



### **OUR TEAM**





## **RESEARCH DIRECTION**







### **RECENT AND RELATED PUBLICATIONS**

- YZ Bala, PA Samat, KY Sharif, N Manshor. 2023. Improving Cross-Project Software Defect Prediction Method Through Transformation and Feature Selection Approach, IEEE ACCESS, Digital Object Identifier 10.1109/ACCESS.2022.3231456
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- Hassan, S., Admodisastro, N.I., Zulzalil, H., Osman, M.H., 2023. The Perspectives on Developing a Conceptual Model for Exploring Emergent Behaviors in Complex Systems. In: Kang, DK., Alfred, R., Ismail, Z.I.B.A., Baharum, A., Thiruchelvam, V. (eds) Proceedings of the 9th International Conference on Computational Science and Technology. ICCST 2022. Lecture Notes in Electrical Engineering, vol 983. Springer, Singapore, pp 501–515. https://doi.org/10.1007/978-981-19-8406-8\_40
- Nur Farrahin Maidin Sa'adah Hassan, Salmi Baharom, Abu Bakar Md. Sultan, 2023. A Comparative Study on Testing Optimization Techniques with Combinatorial Interaction Testing for Optimizing Software Product Line TestingJournal of Advanced Research in Applied Sciences and Engineering Technology (to be published).
- L. Subramanium, S. Hassan, H. Zulzalil and M. H. Osman, "Identification of Emergent Properties Occurrences Factors in System-of-Systems," 2023 IEEE International Conference on Computing (ICOCO), Langkawi, Malaysia, 2023, pp. 71-76, doi: 10.1109/ICOCO59262.2023.10397923.
- Yi, G. K., Baharom, S. B. & Din, J. (2022). Improving the Exploration Strategy of an Automated Android GUI Testing Tool based on the Q-Learning Algorithm by Selecting Potential Actions. Journal of Computer Science, 18(2), 90-102. https://doi.org/10.3844/jcssp.2022.90.102
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- Sara Qahtan, KhaironiYatim, AA Zaidan, HA Alsattar, OS Albahri, BB Zaidan, AH Alamoodi, H Zulzalil, MH Osman, RT Mohammed, 2022. Novel Multi Security and Privacy Benchmarking Framework for Blockchain-Based IoT Healthcare Industry 4.0 Systems, IEEE Transactions on Industrial Informatics, 18(9), pp. 6415-6423.
- M Dashti, TJ Gandomani, DH Adeh, H Zulzalil, ABM Sultan, 2022. LEMABE: a novel framework to improve analogy-based software cost estimation using learnable evolution model, PeerJ Computer Science, vol. 7, e800.
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- KA Dawood, KY Sharif, A., AA Ghani, H zulzalil, AA Zaidan, BB Zaidan, 2021. Towards a unified criteria model for usability evaluation in the context of open source software based on a fuzzy Delphi method, Information and software technology, 106453, pp. 1-15.
- S. Hassan, R. Shuib, 2021. Collaborative Feedback Approach for Improving Customer Engagement and Product Increment in Agile Software Development, IT in Industry, 9(1), pp.16-23.
- Saadoon, M., and N. Admodisastro, Self-Configured Workflow Platform for MapReduce Job Execution In Cloud Environment, in the Proc. of the Applied Informatics International Conference (AilC), IEEE, 2022.
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