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Interactive scalable condensation of reverse engineered UML class diagrams for software comprehension

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List of Publications

Below is the list of publications, which were (main) authored during this Phd research:

1. Hafeez Osman and Michel R.V. Chaudron (2011) **An Assessment of Reverse Engineering Capabilities of UML Case Tools**. In *Proceedings of the 2nd Annual International Conference on Software Engineering and Applications (SEA 2011)*, pages 7-12, Singapore [Chapter 4]
2. Hafeez Osman and Michel R.V. Chaudron (2012) **Correctness and Completeness of CASE tools in Reverse Engineering Source Code into UML Model**. *GSTF Journal on Computing* vol.2, num.1, pages 193-201 [Chapter 4]
3. Hafeez Osman, Michel R.V. Chaudron and Peter van der Putten (2012) **Classify- ing Presence of Classes in UML Design using Software Metrics**. In *Proceedings of the 21st Belgian-Dutch Conference on Machine Learning (BENELEARN 2012)*, page 76, Ghent, Belgium
4. Hafeez Osman, Arjan van Zadelhoff, Dave R. Stikkolorum and Michel R.V. Chaudron (2012) **UML Class Diagram Simplification: What is in the Developer's Mind?** In *Proceedings of the 2nd International Workshop on Experience and Empirical Studies in Software Modelling (EESSMod 2012)*, pages 31-36, Innsbruck, Austria [Chapter 5]
5. Hafeez Osman, Arjan van Zadelhoff and Michel R.V. Chaudron (2012) **UML Class Diagram Simplification - A Survey for Improving Reverse Engineered Class Diagram Comprehension**. In *Proceedings of the 1st International Conference on Model-Driven Engineering and Software Development (MODELSWARD 2013)*, pages 291-296, Barcelona, Spain [Chapter 6]
6. Hafeez Osman, Michel R.V. Chaudron and Peter van der Putten (2013) **An Analysis of Machine Learning Algorithms for Condensing Reverse Engineered Class Diagrams**. In *Proceedings of the 29th International Conference on Software Maintenance (ICSM 2013)*, Eindhoven, the Netherlands [Chapter 7]

7. Hafeez Osman and Michel R.V. Chaudron (2013) **UML Usage in Open Source Software Development : A Field Study**. In *Proceedings of the 3rd International Workshop on Experience and Empirical Studies in Software Modelling (EESSMod 2013)*, pages 23-32, Miami, USA [Chapter 3]
8. Hafeez Osman, Michel R.V. Chaudron and Peter van der Putten (2014) **Interactive Scalable Abstraction of Reverse Engineered UML Class Diagrams**. In *Proceedings of the 21st Asia-Pacific Software Engineering Conference (APSEC 2014)*, Jeju, Korea [Chapter 9 and 10]
9. Hafeez Osman, Michel R.V. Chaudron and Peter van der Putten (2014) **Condensing Reverse Engineered Class Diagrams through Class Name Based Abstraction**. In *Proceedings of the 2014 World Congress on Information and Communication Technologies (WICT)*, Malacca, Malaysia [Chapter 8]

The following is the publication which were co-authored and are related to this thesis. However, these works are not included (in this thesis) due to secondary contribution.

10. Ferdian Thung, David Lo, Hafeez Osman and Michel R. V. Chaudron (2014) **Condensing Class Diagrams by Analyzing Design and Network Metrics using Optimistic Classification**. In *Proceedings of the 22nd International Conference on Program Comprehension (ICPC 2014)*, Hyderabad, India
11. Truong Ho Quang, Michel R.V. Chaudron, Ingimar Samúelsson, Jól Hjalton, Bilal Karasneh and Hafeez Osman (2014) **Automatic classification of UML Class diagrams from images**. In *Proceedings of the 21st Asia-Pacific Software Engineering Conference (APSEC 2014)*, Jeju, Korea

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Mohd Hafeez Osman
Leiden, March 2015

About the Author

Mohd Hafeez Osman was born on April 20, 1979 in Ipoh, Malaysia. He graduated his B.Sc. (hons) in Computer Science (major: computer system) from the University Teknologi Malaysia (UTM) in 2001. Then, he immediately continues his study and graduated his M.Sc. in Computer Science – Real Time Software Engineering in 2003 from the same university.

His first employment was in August 2002 as a software engineer for a software company. After working for several companies, in 2004, he started working as the Information Technology (I.T.) Officer for the government of Malaysia. After being working for eight years in the I.T. industry, he received a Malaysian Government Federal Training Award (HLP). This award allows him to take a four years study leave with a full Ph.D scholarship. On September 2010, he started his Ph.D journey at Leiden Institute of Advanced Computer Science (LIACS), under the supervision of Prof. Dr. Michel R.V. Chaudron and Dr. Peter van der Putten.

After finishing his Ph.D study, Hafeez will resume his job as the I.T. officer for the Malaysia government and continue his interest in Software Engineering, Artificial Intelligence and Computer Networks.