Faezeh Siavashi

Åbo Akademi University
Information Technology
Vattenborgsvğen 3
FI-20500 Åbo, Finland

Homepages: Linkedin
            Academic profile
Email: faezeh.siavashi@abo.fi

Interest

My main research interest is on evaluating the quality of web services via automatic test generation. My work includes the following topics: – Combining model-based testing and mutation testing for evaluating the robustness and vulnerabilities of web services, – Developing test automation frameworks for generating mutants from models, – Conducting experiments on model-based test design, test generation and test execution for web services.

Education

Ph.D., Software Engineering, Åbo Akademi University   (2014 – 2020)

  Thesis: *Model-Based Verification and Testing of Web services: Functionality, Robustness and Vulnerability Analysis*

MSc. Embedded Computing, Åbo Akademi University   (2010 – 2012)

  Thesis: *Modelling Critical Systems with Time Constraints in Event-B*

BSc. Software Engineering, Azad University of Tehran   (2001 – 2006)

Work Experience

Startup project, Finland   (2020 – Present)

Software Automation Engineer, GE Healthcare, Finland   (2019-2020)

Researcher/PhD Student, Software Engineering, Åbo Akademi University, Finland   (2014 – 2020)

Research Assistant, Software Computing, Åbo Akademi University, Finland   (2013 – 2014)

IT Engineer/ Program Coordinator, Noshirvani University of Technology, Iran   (2008-2010)

Information Technology Engineer, Helikhodro Automaker Company, Iran   (2007)

Assistant Web Developer, Tehran Municipality, Iran   (2006)

Software Engineer Intern, Iran National Petrochemical (INP), Iran   (2005)

Research, Teaching and Supervision

MegaModelling at Runtime: An EU funding project on scalable model-based framework for continuous development and runtime validation of complex systems. (2018 – 2020)

PAM Project: Practical Applications of Model-based technologies to continuous integration & testing methodologies. (2012 – 2015)

Teaching assistant: Python programming language course at Åbo Akademi University, Computer Science Department. (2018)

Teaching assistant: Developing Web Application and Services course at Åbo Akademi University, Computer Science Department. (2017)

Master thesis co-supervision: thesis entitled : "GeM a generic tool for mutation testing" by Melvin Mathews at Åbo Akademi University, Computer Science Department. (2015) – Currently working as test developer at Sanoma Pro

Scholarships, Awards and Grants

Best Student Paper Award from Int. Conference on Software Engineering and Applications (2016)

Scholarship from Grace Hopper Celebration of Women in Computing (2016)

Research Grant Award from Ulla Tuominen Foundation (2015)

Reseach Mobility Grant from Harry Elvings Legat (2015)

Scholarship for doctoral degree from Åbo Akademi University (2015 – 2018)

Research Visits and International Courses

Research visit: XML Mutation-based testing with the EvoSuite tool, University of Saarland, Germany (Sep. - Dec. 2015)

TAROT, Training and research on testing, University of Cadiz Spain (Jun. 2015)

SFM, Formal Methods for the design of computer, communication and software, Italy (Jun. 2014)

SAT/SMT, Third International SAT/SMT Summer School, AAlto University, Helsinki (Jul. 2013)

Publications

Model-Based Verification and Testing of Web Services, Åbo Akademi University. PhD. Thesis, 2020. **F Siavashi**

Vulnerability Assessment of Web Services with Model-Based Mutation Testing, presented at QRS 2018. **F Siavashi**, D Truscan, J Vain.

Testing Web Services with Model-Based Mutation, CCIS, 2017. **F Siavashi**, D Truscan, J Iqbal, J Vain.

On Mutating UPPAAL Timed Automata to Assess Robustness of Web Services, ICST, 2016. **F siavashi**, D Truscan, J Vain.

Scenario-Based Design and Validation of REST Web Service Compositions, LNBIP LNCS, 2015. I Rauf, **Siavashi**, D Truscan, I Porres.

Environment Modeling in Model-Based Testing: Concepts, Prospects and Research Challenges. A Systematic Literature Review, EASE, 2015. **F Siavashi**, D Truscan.

A Practical Application of UPPAAL and DTRON for Runtime Verification, SER& IP 2015. D Truscan, T Ahmad, **F Siavashi**, P Tuuttila.

An Integrated Approach for Designing and Validating REST Web Service Compositions, WEBIST, 2014. I Rauf, **Siavashi**, D Truscan, I Porres.

Modelling Critical Systems with Time Constraints in Event-B, NWPT, 2013. **F Siavashi**, M Walden, L Tsiopoulos, J Vain.

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