

REYHANEH JABBARVAND

Assistant Professor of Computer Science
University of Illinois at Urbana-Champaign

INTERESTS

Software Engineering, Software Testing, Static Program Analysis, Mobile Apps Energy and Security Assessment, Search-Based Software Engineering, Applied Optimization, Applied Data Science and Deep Learning

EDUCATION

Doctor of Philosophy—University of California, Irvine May 2020
Advisor: Dr. Sam Malek
Master of Science—Sharif University of Technology March 2011
Bachelor of Science—Sharif University of Technology February 2008

HONORS AND AWARDS

Recognized as a Rising Stars in EECS 2019
Google PhD Fellowship in Programming Technology and Software Engineering 2018-2020
Facebook Testing and Verification Challenge finalist 2018

PUBLICATIONS

12 *Conference Papers*, 3 *Workshop Papers*, 1 *Book Chapter*, 2 *Technical Reports*

H-index: 10, Citations: 433

Conference Papers

- C1.** R. Jabbarvand, Forough Mehralian, and S. Malek, “Automated Construction of Energy Test Oracles for Android”, SIGSOFT Symposium on the Foundation of Software Engineering (**FSE**), Sacramento, USA, November 2020. (21% acceptance rate)
- C2.** J. W. Lin, R. Jabbarvand, and S. Malek, “Test Transfer Across Mobile Apps Through Semantic Mapping”, International Conference on Automated Software Engineering (**ASE**), San Diego, California, USA, November 2019. (20% acceptance rate)
- C3.** R. Jabbarvand, J.W. Lin, and S. Malek, “Search-Based Energy Testing of Android”, International Conference on Software Engineering (**ICSE**), Montreal, Canada, May 2019. (21% acceptance rate)
- C4.** J. W. Lin, R. Jabbarvand, J. Garcia, and S. Malek, “Nemo: Multi-Criteria Test-Suite Minimization with Integer Nonlinear Programming”, International Conference on Software Engineering (**ICSE**), Gothenburg, Sweden, May 2018. (21% acceptance rate)
- C5.** A. Sadeghi, R. Jabbarvand, N. Ghorbani, H. Bagheri, and S. Malek, “A Temporal Permission Analysis and Enforcement Framework for Android”, International Conference on Software Engineering (**ICSE**), Gothenburg, Sweden, May 2018. (21% acceptance rate)
- C6.** R. Jabbarvand and S. Malek, “ μ Droid: An Energy-Aware Mutation Testing Framework for Android”, SIGSOFT Symposium on the Foundation of Software Engineering (**FSE**), Paderborn, Germany, September 2017. (21% acceptance rate)
- C7.** A. Sadeghi, R. Jabbarvand, and S. Malek, “PATDroid: Permission-Aware GUI Testing of Android”, SIGSOFT Symposium on the Foundation of Software Engineering (**FSE**), Paderborn, Germany, September 2017. (21% acceptance rate)
- C8.** R. Jabbarvand, A. Sadeghi, H. Bagheri, and S. Malek, “Energy-Aware Test-Suite Minimization for Android Apps”, International Symposium on Software Testing and Analysis (**ISSTA**), Saarbrücken, Germany, July 2016. (25% acceptance rate)

- C9.** H. Bagheri, A. Sadeghi, **R. Jabbarvand**, and S. Malek “*Practical, Formal Synthesis and Automatic Enforcement of Security Policies for Android*”, International Conference on Dependable Systems and Networks (DSN), Toulouse, France, June 2016. (20% acceptance rate)
- C10.** M. Hajkazemi, M. Chorney, **R. Jabbarvand Behrouz**, M. Khavari Tavana, and H. Homayoun, “*Adaptive Bandwidth Management for Performance-Temperature Trade-offs in Heterogeneous HMD-DDRx Memory*”, ACM Great Leaks Symposium on VLSI (GLSVLSI), Pittsburgh, Pennsylvania, USA, May 2015.
- C11.** **R. Jabbarvand Behrouz**, and H. Homayoun, “*NVP: Non-uniform Voltage and Pulse Width Settings for Power Efficient Hybrid STT-RAM*”, International Green Computing Conference (IGCC), Dallas, Texas, USA, November 2014.
- C12.** M. Talebi, A. Khonsari, and **R. Jabbarvand**, “*Cost-Aware Reactive Monitoring in Resource Constrained Wireless Sensor Networks*”, IEEE Wireless Communications and Networking Conference (WCNC), Budapest, Hungary, April 2009.

Book Chapter

- B1.** **R. Jabbarvand**, M. Modarressi, and H. Sarbazi-Azad, *Fault Tolerant Routing Algorithms in Networks-on-chip*, Chapter 4 in Routing Algorithms in Networks-on-Chip, Springer, 2013. (Amazon) (Springer)

Workshop and Short Papers

- W1.** **R. Jabbarvand**, “*Advancing Energy Testing in Android Apps*”, International Conference on Software Engineering (ICSE), Doctoral Symposium, Buenos Aires, Argentina, May 2017.
- W2.** **R. Jabbarvand**, A. Sadeghi, J. Garcia, S. Malek, and P. Ammann, “*EcoDroid: An Approach for Energy-Based Ranking of Android Apps*”, International Workshop on Green and Sustainable Computing (GREENS) in Conjunction with ICSE, Florence, Italy, May 2015.
- W3.** **R. Jabbarvand**, M. Modarressi, and H. Sarbazi-Azad, “*Reconfigurable Fault-Tolerant Routing Algorithm to Optimize the Network-on-Chip Performance and Latency in Presence of Intermittent and Permanent Faults*”, IEEE International Conference on Computer Design (ICCD), Amherst, Massachusetts, USA, October 2011.

Technical Reports

- T1.** **R. Jabbarvand**, S. Malek, “An Energy-Aware Mutation Testing Framework for Android,” Tech. Rep. UCI-ISR-17-1, ICS2 221, Institute of Software Research, University of California, Irvine, CA 92697-3455.
- T2.** H. Bagheri, A. Sadeghi, **R. Jabbarvand**, S. Malek, “Automated Dynamic Enforcement of Synthesized Security Policies in Android,” Tech. Rep. GMU-CS-TR-2015-5, Department of Computer Science, George Mason University, 4400 University Drive MSN 4A5, Fairfax, VA 22030-4444 USA.

EMPLOYMENT HISTORY

Assistant Professor University of Illinois, Urbana-Champaign	January 2021-now Urbana, IL
Adjunct Assistant Professor University of Illinois, Urbana-Champaign	July 2020-January 2021 Urbana, IL
Research Assistant University of California, Irvine	September 2015-May 2020 Irvine, CA
Graduate Technical Intern Intel Corporation-Data Center Group	June 2015-September 2015 Edina, MN
Research Assistant George Mason University	May 2013-May 2015 Fairfax, VA
Web Developer Farabi Eye Hospital	January 2010-August 2012 Tehran, Iran

Graduate Research Assistant Sharif University of Technology	September 2008-March 2011 Tehran, Iran
Researcher Institute for Research in Fundamental Sciences, Iran	March 2007-September 2008 Tehran, Iran
Web Developer AICTC Corporation	May 2003-September 2005 Tehran, Iran

TEACHING

University of Illinois, Urbana-Champaign <i>Instructor</i>	Urbana, IL
<ul style="list-style-type: none"> • CS598RJ - ML for Software Engineering • CS591SE - Software Engineering Seminar 	Spring 2021 Spring 2021
Sharif University of Technology <i>Teaching Assistant</i>	Tehran, Iran
<ul style="list-style-type: none"> • Advanced Computer Security • Advanced Communication Networks • Operating System Concepts • Signals and Systems • Multimedia Systems 	Fall 2010 Spring 2009 Fall 2008 Fall 2007 Spring 2007
AICTC Corporation <i>Instructor</i>	Tehran, Iran
<ul style="list-style-type: none"> • Introduction to Content Management Systems 	Fall 2010

SUPERVISED STUDENTS AND RESEARCHERS

University of Illinois, Urbana-Champaign	Urbana, IL
<ul style="list-style-type: none"> • Swathi Ram (Undergrad student) 	
University of California, Irvine	Irvine, CA
<ul style="list-style-type: none"> • Jun-Wei Lin (PhD student) • Negar Ghorbani (PhD student) • Forough Mehralian (PhD student) • Nargess Safa (Undergrad student) 	

SERVICE AND MEMBERSHIP

Conference

C1. Reviewer —European Conference on Software Architecture (ECSA)	2019
C2. Reviewer —Great Leaks Symposium on VLSI (GLSVLSI)	2014
C3. Reviewer —International Conference on Quality Electronic Design (ISQED)	2014
C4. Reviewer —International Green and Sustainable Computing Conference (IGSC)	2013

Journal

J1. IEEE Transaction of Software Engineering and Methodology (TOSEM) Board of Distinguished Reviewers	2021
J2. ACM Transactions on Software Engineering (TSE)	2021
J3. Science of Computing Programming	2021
J4. IEEE Transaction of Software Engineering and Methodology (TOSEM) Board of Distinguished Reviewers	2020

J5. ACM Transactions on Software Engineering (TSE)	2020
J6. Journal of Systems and Software (JSS)	2020
J7. ACM Transactions on Software Engineering (TSE)	2017
J8. IEEE Transaction on Reliability	2017
J9. IEEE Transactions on Computers	2014

Artifact Evaluation

AE1. PC—International Conference on Software Engineering (ICSE)	2019
AE2. PC—Foundations of Software Engineering (FSE)	2018
AE3. PC—International Symposium on Software Testing and Analysis (ISSTA)	2018
AE4. PC—Foundations of Software Engineering (FSE)	2017
AE5. PC—International Symposium on Software Testing and Analysis (ISSTA)	2017

Workshop

W1. PC—International Workshop on Automated Program Repair (APR@ICSE)	2021
W2. PC—International Workshop on Green and Sustainable Software (GREENS@ICSE)	2018

Membership

ACM, ACM SIGSOFT, IEEE, IEEE TCSE, UCI Institute for Software Research

GRANTS

Travel Grants

SIGSOFT CAPS travel grant to attend ASE Conference	2019
NSF travel grant to attend ICSE Conference	2019
SIGSOFT CAPS travel grant to attend ESEC/FSE conference	2017
NSF travel grant to attend ICSE Conference	2017
Anita Borg scholarship recipient to attend Grace Hopper Conference	2016
Travel grant to attend CRA-Women Grad Cohort Workshop	2016
SIGSOFT CAPS travel grant to attend ICSE conference	2015
UCI BRAID award to attend Grace Hopper Conference	2015
Travel grant to attend CRA-Women Grad Cohort Workshop	2015
Travel grant to attend CRAW Discipline Specific Workshop on Diversity in Design Automation	2014
Anita Borg scholarship recipient to attend Grace Hopper Conference	2014
A. Richard Newton Young Student Fellow Award at DAC	2014