

Iftekhar Ahmed

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Department of Informatics
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RESERACH INTERESTS

- Software Engineering
- Software Testing and Analysis
- Software Architecture and Design

EDUCATION

June 2018 *Ph.D.*, Computer Science, Oregon State University, Corvallis, OR

April 2007 *B.S.*, Computer Science and Engineering, Shah Jalal University of Science and Technology, Bangladesh

EMPLOYMENT HISTORY

Assistant Professor 7/2018-Ongoing
Department of Informatics
Donald Bren School of Information and Computer Sciences
University of California, Irvine

Faculty Member 7/2018-Ongoing
Institute for Software Research
University of California, Irvine

Senior Executive 05/2008-08/2011
Operations/Technology,
Grameenphone Ltd.
Dhaka, Bangladesh

System Engineer, 06/2007-05/2008
IT Operations,
Grameenphone Ltd.
Dhaka, Bangladesh

INTERNATIONAL AWARDS AND HONORS

Fellowship IBM Ph.D. Fellowship 2016-2017
IBM Ph.D. Fellowship 2017-2018

CONFERENCE PAPERS

- [C.15] **Iftekhar Ahmed**, Caius Brindescu, Umme Ayda Mannan, Anita Sarma and Carlos Jensen, "An Empirical Examination of Code Smells and Their Impact on Collaborative Work." In *11th ACM/IEEE International Symposium on Empirical Software Engineering and Measurement*. [ESEM 2017]. [Acceptance rate: 19%]
- [C.14] **Iftekhar Ahmed**, Darren Forrest and Carlos Jensen. "A Case Study of Motivations for Corporate Contribution to FOSS." In *IEEE Symposium on Visual Languages and Human-Centric Computing*. [VL/HCC 2017]. [Acceptance rate: 29%]
- [C.13] **Iftekhar Ahmed**, Rahul Gopinath, Caius Brindescu, Alex Groce and Carlos Jensen. "Can Testedness be Effectively Measured?" In *24th ACM SIGSOFT International Symposium on the Foundations of Software Engineering* (pp. 547-558). [FSE 2016]. [Acceptance rate: 20%]

- [C.12] Rahul Gopinath, Mohammad Amin Alipour, **Iftekhar Ahmed**, Carlos Jensen and Alex Groce. “On the limits of mutation reduction strategies.” In *38th ACM/IEEE International Conference on Software Engineering* (pp. 511-522). [ICSE 2016]. [Acceptance rate: 19%]
- [C.11] Umme Ayda Mannan, **Iftekhar Ahmed**, Rana Almurshed, Danny Dig and Carlos Jensen. “Understanding Code Smells in Android Applications.” In *IEEE/ACM International Conference on Mobile Software Engineering and Systems* (pp. 225-234). [MOBILESOFT 2016]. [Acceptance rate: 33%]
- [C.10] **Iftekhar Ahmed**, Umme Ayda Mannan, Rahul Gopinath, and Carlos Jensen. “An Empirical Study of Design Degradation: How Software Projects Get Worse Over Time.” In *9th ACM/IEEE International Symposium on Empirical Software Engineering and Measurement* (pp. 1-10). [ESEM 2015]. [Acceptance rate: 25%]
- [C.9] Alex Groce, **Iftekhar Ahmed**, Carlos Jensen and Paul E. McKenney. “How Verified is My Code? Falsification-Driven Verification.” In *30th ACM/IEEE International Conference on Automated Software Engineering* (pp. 737-748). [ASE 2015]. [Acceptance rate: 19%]
- [C.8] Rahul Gopinath, Mohammad Amin Alipour, **Iftekhar Ahmed**, Carlos Jensen and Alex Groce. “How Hard Does Mutation Analysis Have to Be, Anyway?” In *26th IEEE International Symposium on Software Reliability Engineering* (pp. 216-227). [ISSRE 2015]. [Acceptance rate: 19%]
- [C.7] **Iftekhar Ahmed**, Nitin Mohan and Carlos Jensen. “The Impact of Automatic Crash Reports on Bug Triaging and Development in Mozilla.” In *ACM International Symposium on Open Collaboration* (pp. 1-8). [OPENSYM 2014]. [Acceptance rate: 45%]
- [C.6] **Iftekhar Ahmed**, Soroush Ghorashi and Carlos Jensen. “An Exploration of Code Quality in FOSS Projects.” In *10th IFIP WG 2.13 International Conference on Open Source Systems* (pp. 181-190). Springer Berlin Heidelberg. [OSS 2014]. [Acceptance rate: 25%]

JOURNAL ARTICLES

- [J.5] Alex Groce, **Iftekhar Ahmed**, Carlos Jensen, Paul E. McKenney, Josie Holmes “How Verified is My Code? Falsification-Driven Verification.” In *Springer Journal of Automated Software Engineering*, July 2018. [JASE 2018].
- [J.4] Rahul Gopinath, **Iftekhar Ahmed**, Mohammad Amin Alipour, Carlos Jensen and Alex Groce. “Mutation Reduction Strategies Considered Harmful” In *IEEE Transactions on Reliability*, May 2017. [TS 2017].
- [J.3] Rahul Gopinath, **Iftekhar Ahmed**, Mohammad Amin Alipour, Carlos Jensen and Alex Groce. “Does Choice of Mutation Tool Matter?” In *Software Quality Journal*, 1-50, May 2016. [SQJ 2016].

PEER REVIEWED WORKSHOP PAPERS

- [W.2] **Iftekhar Ahmed**, Carlos Jensen, Alex Groce and Paul E. McKenney. “Applying Mutation Analysis On Kernel Test Suites: An Experience Report.” In *International Conference on Software Testing, Verification and Validation Workshop on Mutation Analysis (ICSTW)*. [MUTATION 2017]
- [W.1] Rahul Gopinath, Mohammad Amin Alipour, **Iftekhar Ahmed**, Carlos Jensen, and Alex Groce. “Measuring Effectiveness of Mutant Sets.” In *International Conference on Software Testing, Verification and Validation Workshop on Mutation Analysis (ICSTW)*. [MUTATION 2016]

DISSERTATION

Iftekhar Ahmed “Improving the Quality of Software Using Mutation Testing and Fault Prediction” PhD thesis. School of Engineering and Computer Science, Oregon State University, May 2018.

TECHNICAL REPORTS

- [TR.2] Rahul Gopinath, **Iftekhar Ahmed**, Mohammad Amin Alipour, Carlos Jensen, Alex Groce. “Does Choice of Mutation Tool Matter?” *Technical Report, School of Engineering and Computer Science, Oregon State University*, October 2015.
- [TR.1] Rahul Gopinath, Mohammad Amin Alipour, **Iftekhar Ahmed**, Carlos Jensen, Alex Groce. “An Empirical Comparison of Mutant Selection Approaches.” *Technical Report, School of Engineering and Computer Science, Oregon State University*, April 2014.

TEACHING

- Instructor
Oregon State
University
- CS 275- Introduction to Databases (Summer-2012).
 - CS 361- Software Engineering (Winter-2014 to Spring-2016).
 - CS 362- Applied Software Engineering (Summer 2015).
- Teaching
Assistant
Oregon State
University
- CS 440- Database Management Systems.
 - CS 275- Introduction to Databases.
 - CS 361- Software Engineering.
 - CS 362- Applied Software Engineering.

STUDENT MENTORING (EXTERNAL)

- Anthong Zhou, Jiayi Lu
Undergraduate at University of Tulsa.
Project: Identifying the effect of learning on code and response quality by examining cross platform activity
- Fall 2016 to ongoing

PROFESSIONAL SERVICE

- Reviewer, Software Testing, Verification and Reliability Journal 2018
- Reviewer, IEEE/ACM International Conference on Automated Software Engineering (ASE) 2018
- Reviewer, IEEE Transactions on Reliability 2017
- Reviewer, Software Testing, Verification and Reliability Journal 2017
- Reviewer, IEEE/ACM International Conference on Automated Software Engineering (ASE) 2017
- Reviewer, IEEE Symposium on Visual Languages and Human-Centric Computing (VL/HCC) 2017

INVITED TALKS

- Improving the quality of software using testing and fault prediction.
University of Nebraska–Lincoln. February 2018
- Improving the quality of software using testing and fault prediction.
DePaul University January 2018
- Improving the quality of software using testing and fault prediction.
Utah State University November 2017
- How to apply mutation testing to the RCU for fun and profit: A progress report.
Linux plumbers conference. Flagship conference of Linux kernel developers with more than 500 attendees. November 2016
- How to apply mutation testing to the RCU for fun and profit.
Linux plumbers conference. Flagship conference of Linux kernel developers with more than 500 attendees. September 2015

PROFESSIONAL ASSOCIATIONS

- Association for Computing Machinery (ACM)
- ACM Special Interest Group on Software Engineering (SIGSOFT)