

AKBAR SIAMI NAMIN

BUSINESS ADDRESS

Department of Computer Science

Texas Tech University

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HOME ADDRESS

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RESEARCH INTERESTS

Software Engineering

Software Testing and Program Analysis

Energy-aware Software Engineering

Cyber Security and Secure Programming

Empirical Software Engineering

ACADEMIC EMPLOYMENT HISTORY

01 / 09 - present Texas Tech University, Department of Computer Science

Jan 09 – present Assistant Professor

01 / 04 - 12 / 08 University of Western Ontario, Department of Computer Science

08 / 08 – 12 / 08 Postdoctoral Fellow

01 / 04 – 08 / 08 Graduate Research Assistant

05 / 05 - 05 / 06 National Research Council Canada (NRC)

05 / 05 – 05 / 06 Visiting Researcher

EDUCATION

01 / 04 - 12 / 08 University of Western Ontario, Department of Computer Science

Ph.D. in Computer Science

Dissertation Title: *Mutation Analysis in Software Testing*

09 / 02 - 05 / 04 Lakehead University, Department of Computer Science

Master of Science in Computer Science

Dissertation Title: *A Web Services / Agent-Based Model for Inter-Enterprise Collaboration*

FUNDED GRANTS

- Travel support for attending FSE 2012 and SEES (Software Engineering Educators Symposium) in Cary, NC, USA supported by NSF and ACM SIGSOFT (\$1600)
- SFS, Capacity Building: Collaborative Project: Cyber-Security Education for Community College Faculty in Texas, National Science Foundation. \$267,580 (PI, 50%)
- Travel support for attending FSE 2010 and SEES (Software Engineering Educators Symposium) in Santa Fe, NM, USA supported by NSF and ACM SIGSOFT (\$1000)

AWARDS

INTERNATIONAL

- 2nd place award and international recognition in the Industrial Challenge track at titled “Robots Should Never Explode”, at the International Conference on Program Analysis (ICPC), Kingston, Canada, 2011 (A team of my graduate students supervised by me)
- 2007, SIGSOFT CAPS Student Travel Grant for ICSE 2007 (\$350 US)

NATIONWIDE

- 2007, Robert and Ruth Lumsden Graduate Awards in Science (\$850 CDN)

SCHOOL-WIDE

- 2007, Graduate Thesis Research Award, The University of Western Ontario (\$750 CDN)
- 2006-2007, Western Graduate Research Scholarship, WGRS
- 2005-2006, Western Graduate Research Scholarship, WGRS
- 2006-2007, Special University Scholarship from The University of Western Ontario
- 2005-2006, Special University Scholarship from The University of Western Ontario
- 2005, 2006, 2007, Computer Science Publication Incentive Award, The University of Western Ontario (\$500, \$500, \$500 CDN)

SCIENTIFIC AND INTERNATIONAL ACTIVITIES

- Reviewer of International Journal on Software Verification, Testing, and Reliability
- Reviewer of International Conference on Machine Learning Application (ICMLA)
- Program Co-chair (Research Track) of the first International Workshop on Software Test Architect (InsTA) in conjunction with the IEEE International Symposium on Software Reliability Engineering (ISSRE), Hiroshima, Japan, 2011
- Reviewer of Journal of Software Maintenance and Evolution
- Reviewer of AAAI, 2011

- Reviewer of IEEE Journal of Transaction on Software Engineering (TSE), 2011
- Reviewer of International Journal of Science of Computer Programming (2011)
- Program Committee member for Mutation 2009, 2010, 2011, 2012, and 2013
- Reviewer of International Journal of Science of Computer Programming (2010)
- Reviewer of IEEE International Conference on e-Technology, e-Commerce and e-Service, EEE'05, 29 March - 1 April, Hong Kong, 2005

RESEARCH ACTIVITIES

FUNDED RESEARCH ACTIVITIES

- Funder of (AdVanced Empirical Software Testing and Analysis) AVESTA Research Group at Texas Tech University, 2009
- Texas Tech University – Startup Grant, TTU Internal, 2009 – 2010, \$50,000, Startup funds for conducting research and teaching on software engineering education
- Post-doctoral fellowship Research and Development (R & D) - National Research Council of Canada (NSERC), 2008 (declined), Funds for collaboration with Canadian industries to conduct research on software testing
- Post-doctoral fellowship Industrial Lab - National Research Council of Canada (NSERC), 2008 (declined), Funds for collaboration with Canadian National Labs to conduct research on software testing
- Ontario Graduate Scholarships in Science and Technology, OGSST, \$15,000, Funds for supporting research on mutation testing and analysis, 2007 - 2008
- Ontario Graduate Scholarships in Science and Technology, OGGST, \$15,000, Funds for supporting research on mutation testing and analysis, 2005 – 2006.

INTERNATIONAL TUTORIALS

1. Akbar Siami Namin, “Effective Experimental Design and Statistical Analysis of Software Engineering Data,” International Conference on Software Engineering (ICSE 2012), Zurich, Switzerland, June, 2012
2. Akbar Siami Namin, Mohan Sridharan, “Bayesian Methods for Software Engineering Data”, International Conference on Software Engineering (ICSE 2010), Cape Town, South Africa, May 2010

REFEREED JOURNAL PUBLICATIONS

3. James H. Andrews, Lionel C. Briand, Yvan Labiche, Akbar Siami Namin, Using Mutation Analysis for Assessing and Comparing Testing Coverage Criteria, IEEE Transactions on Software Engineering, vol. 32, no. 8, pp. 608-624, Aug., 2006.

REFEREED BOOK CHAPTERS

4. Akbar Siami Namin, A., Shen, W., Ghenniwa, H. Implementing Enterprise Collaboration Using Web Services and Software Agents, International Journal of Networking and Virtual Organizations: Special issue on Organizing Collaborative Supply Chains and Networks, 2006 – Vol3, No.2 pp. 185 – 201. ISSN (Online): 1741-5225 – ISSN (Print): 1470-9503

SELECTED REFEREED CONFERENCE PUBLICATIONS

5. D. Bonner and A. Siami Namin, “An energy model for applications running on multicore systems,” International Conference on Cloud and Green Computing (CGC 2012), Xiangtan, China, 2012
6. A. Siami Namin and S. Kakarla, “The use of mutation in testing experiments and its sensitivity to external threats”, International Symposium on Software Testing and Analysis (ISSTA), Toronto, Canada, 2011.
7. S. Kakarla, S. Momotaz, and A. Siami Namin, "An Evaluation of Mutation and Data-flow Testing: A Meta-Analysis", the 6th International Workshop on Mutation Analysis (Mutation 2011), in conjunction with the International conference on Software Testing (ICST 2011)
8. P. Madiraju and A. Siami Namin, "*ParaMu* - A Partial and Higher-Order Mutation Tool with Concurrency Operators", the 6th International Workshop on Mutation Analysis (Mutation 2011), in conjunction with the International conference on Software Testing (ICST 2011)
9. M. Sridharan and A. Siami Namin, "Prioritizing Mutation Operators Using Probabilistic Sampling", 21th International Symposium on Software Reliability Engineering (ISSRE 2010) November 2010

10. A. Siami Namin and M. Sridharan, "Position Paper: Bayesian Reasoning for Software Reasoning", International Workshop on Future of Software Engineering (FoSER) in conjunction with the International Conference on Foundation of Software Engineering (FSE 2010)
11. A. Siami Namin, B. Millet, M. Sridharan, "Stochastic Model-based Testing for Human-Robot Interaction", 21th International Symposium on Software Reliability Engineering (ISSRE 2010) November 2010
12. K. Rathod and A. Siami Namin, "A Framework for Testing Multithreaded Applications with Interleaving Faults", 21th International Symposium on Software Reliability Engineering (ISSRE 2010) November 2010
13. Akbar Siami Namin, Mohan Sridharan, Pulkrit Tomar, "Predicting Multicore Performance: A Case Study Using Solaris Container", Third International workshop on Multicore Software Engineering, In conjunction with the International Conference On Software Engineering (ICSE) 2010, Cape Town, South Africa.
14. Sahitya Kakarla, Akbar Siami Namin, "The Influence of Environmental Parameters on Concurrency Fault Exposures", the 4th International Symposium on Empirical Software Engineering and Measurement (ESEM 2010), Bolazano-Bozen, Italy
15. Akbar Siami Namin, J. Andrews, "The Influence of Size and Coverage on Effectiveness of Test Suites", International Conference on Software Testing and Analysis (ISSTA09), Chicago, USA, July 2009
16. Akbar Siami Namin, J. Andrews, D. Murdoch, "Mutation Analysis for Assessing Software Testing Techniques", 30th International Conference on Software Engineering (ICSE 2008), Leipzig, Germany, May 2008
17. Akbar Siami Namin, J. Andrews, "On Sufficiency of Mutants", Doctoral Symposium being held in conjunction with the 29th International Conference on Software Engineering (ICSE 2007 Champion), pp. 73 – 74, Minneapolis, MN, USA, May 2007.
18. Akbar Siami Namin, J. Andrews, Finding Sufficient Mutation Operators via Variable Reduction, Second Workshop on Mutation Analysis (Mutation 2006) in conjunction

with the 17th IEEE International Symposium on Software Reliability Engineering (ISSRE 2006), November, Raleigh, North Carolina, USA.

SUPERVISION

CURRENT PH.D. STUDENTS SUPERVISION:

- Xiaozhen Xue
- Alaa Debraseh

MSC STUDENTS SUPERVISION:

- Sahyitia Kakarla
- Selina Momotaz
- Kunjal Rathod
- Pratyusha Madiraju
- Mohammad Siddique
- Pulkit Tomar
- Pankaj Sharma
- Omar Rosas
- Delbert Bonner

TEACHING

UNDERGRADUATE TEACHING

- Concepts of Database Systems, Fall 2012, Spring 2012
- Software Engineering, Fall 2012, Fall 2011, Fall 2010

GRADUATE TEACHING

- Software Project Management
- Software Reliability engineering
- Software Verification and Validation
- Automated Software Testing