

Naeem Esfahani

Ph.D. Candidate

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EDUCATION

- **George Mason University**
 - *Ph.D. in Computer Science (Emphasis in Software Engineering)* 2008 - now
 - Thesis: Managing Uncertainty in Making Software Adaptation Decisions
 - Advisor: Dr. Malek
 - Thesis Committee: Dr. Menascé, Dr. Sousa, and Dr. Ganesan
 - Total Cumulative GPA: 4/4
 - **Sharif University of Technology**
 - *M.Sc. in Computer Engineering (Emphasis in Software Engineering)* 2005 - 2008
 - Thesis: “Introducing a set of process patterns for development of real-time software”
 - Advisor: Dr. Mirian-Hosseinabadi
 - Thesis Committee: Dr. Ramsin and Dr. Khosravi
 - Total Cumulative GPA: 17.61/20
 - **University of Tehran**
 - *B.Sc. in Electrical and Computer Engineering (Emphasis in Software Engineering)* 2001 - 2005
 - Final Project: “UT-Plag, A System to find plagiarism in a collection of texts”
 - Advisor: Dr. Sirjani
 - Consultant: Dr. Oroomchian
 - Total Cumulative GPA: 18.23/20 (*Top Student of the Class*)

RESEARCH INTERESTS

- Software Architecture and Design
- Autonomic Computing and Self-* Software Systems
- Quality of Service Analysis and Improvement
- Patterns in Software Engineering
- Software Engineering for Embedded, Mobile, and Distributed Systems
- Model Driven Architecture
- Service Oriented Architecture

HONORS & AWARDS

ACM SIGSOFT CAPS (travel award to MODELS conference) August 2009
George Mason University Doctoral Fellowship Fall 2009, Spring 2010, Spring 2011
University of Tehran FOE Awards (The top student in each year) 2002, 2003
Top student of the class during the B.Sc. study 2001-2005
286th student among more than one million students in university entrance exam 2001

WORK EXPERIENCES

- **Software Engineering Intern**
Google Inc., New York City, New York, USA September 2011 - December 2011
- **Mobile Software Engineering Intern**
Sysnet Group, Fairfax, Virginia, USA May 2010 - August 2010
- **IK Card project architecture consultant**
Iran Khodro, Tehran, Iran March 2006 - October 2006
- **J2EE developer and designer**
A'van Corp, Tehran, Iran July 2005 - March 2006

- **Research & Development**

Eide Pardazan Corp, Tehran, Iran

July 2004 - January 2005

- **Admin of Linux server and clients**

ECE department, University of Tehran, Tehran, Iran

July 2003 - October 2004

TECHNICAL SKILLS

- **Platforms**

Java 2 Platform Enterprise Edition (J2EE), MS .Net, Service Oriented Architecture (SOA), Android, iPhone, MS Windows CE, Eclipse, Generic Modeling Environment (GME)

- **Programming**

Java, C++, C#, Object-C, C, Pascal, Assembly, Prolog, Verilog, Matlab, R, Python, JavaScript, Web Development

- **Modeling**

Unified Modeling Language (UML), Model Driven Architecture (MDA), Domain Specific Modeling (DSM), Business Process Modeling Notation (BPMN), Formal Methods

- **Operating Systems**

Linux, MS Windows, Mac OS X, MS DOS

- **Miscellaneous**

Technical Writing, Software Engineering Processes, Databases, Software Architecture, Algorithms, Patterns, Software Quality Assurance, Software Testing, Rational Unified Process (RUP), Agile Processes, Rational Method Composer (RMC), System Integration, MS Office, L^AT_EX, Networks, Micro Controllers, Field Programmable Gate Array (FPGA)

PUBLICATIONS AND PAPERS (available at <http://mason.gmu.edu/~nesfaha2/publications.htm>)

1. Naeem Esfahani and Sam Malek. “*Systematic Exploration of Architectural Solution Space in the Face of Uncertainty*”. Submitted.
2. Naeem Esfahani and Sam Malek. “*Utilizing Architectural Styles to Enhance Adaptation Support in Middleware Platforms*”. Accepted to appear in Information and Software Technology (IST) Journal.
3. Naeem Esfahani and Sam Malek. “*Uncertainty in Self-Adaptive Software Systems*”. Software Engineering for Self-Adaptive Systems 2 (SEfSAS 2 Book), Editors R. de Lemos, H. Giese, H. Müller and M. Shaw, Lecture Notes on Computer Science Hot Topics, Springer, 2012.
4. Naeem Esfahani. “*A Framework for Managing Uncertainty in Self-Adaptive Software Systems*”. The 26th IEEE/ACM International Conference On Automated Software Engineering (ASE 2011), Doctoral Symposium, Lawrence, Kansas, USA, November 2011.
5. Naeem Esfahani, Ehsan Kouroshfar and Sam Malek. “*Taming Uncertainty in Self-Adaptive Software*”. The 8th joint meeting of the European Software Engineering Conference and the ACM SIGSOFT Symposium on the Foundations of Software Engineering (ESEC/FSE 2011), Szeged, Hungary, September 2011. (16%)
6. Naeem Esfahani and Sam Malek. “*Guided Exploration of the Architectural Solution Space in the Face of Uncertainty*”. Technical Report #GMU-CS-TR-2011-3. Department of CS, George Mason University.
7. Naeem Esfahani, Ehsan Kouroshfar and Sam Malek. “*Taming Uncertainty in Self-Adaptation through Possibilistic Analysis*”. Technical Report #GMU-CS-TR-2010-10. Department of CS, George Mason University.
8. Naeem Esfahani and Sam Malek. “*On the Role of Architectural Styles in Improving the Adaptation Support of Middleware Platforms*”. 4th European Conference on Software Architecture (ECSA 2010), Copenhagen, Denmark, August 2010.
9. Ahmed Elkhodary, Naeem Esfahani and Sam Malek. “*FUSION: A Learning-Based Approach for Engineering Self-Adaptive Software Systems*”. 18th International Symposium on the Foundations of Software Engineering (2010 FSE-18), Santa Fe, New Mexico, USA, November 2010. (20%)

10. Mohsen Asadi, Naeem Esfahani and Raman Ramsin. “*Process Patterns for MDA-Based Software Development*”. 8th ACIS Conference on Software Engineering Research, management and Applications (SERA 2010), Montreal, Canada, May 2010.
11. Naeem Esfahani and Sam Malek. “*Social Computing Networks: A New Paradigm for Engineering Self-Adaptive Pervasive Software Systems*”. 32nd International Conference on Software Engineering (ICSE 2010), New Ideas and Emerging Results (NIER) Track, Cape Town, South Africa, May 2010. (25%)
12. Ahmed Elkhodary, Sam Malek and Naeem Esfahani. “*On the Role of Features in Analyzing the Architecture of Self-Adaptive Software Systems*”. 4th International Workshop on models@runtime, Denver, Colorado, USA, October 2009. (20%)
13. Naeem Esfahani, Sam Malek, João P. Sousa, Hassan Gomaa and Daniel A. Menascé. “*A Modeling Language for Activity-Oriented Composition of Service-Oriented Software Systems*”. 12th International Conference on Model Driven Engineering Languages and Systems (MODELS2009), Denver, Colorado, USA, October 2009. (16%)
14. Sam Malek, Naeem Esfahani, Daniel A. Menascé, João P. Sousa and Hassan Gomaa. “*Self-Architecting Software SYstems (SASSY) from QoS-Annotated Activity Models*”. 31st International Conference on Software Engineering (ICSE 2009) workshop on Principles of Engineering Service Oriented Systems (PESOS 2009), Vancouver, Canada, May 2009. (23%)
15. Naeem Esfahani, Seyyed-Hassan Mirian-Hosseiniabadi and Kamyar Rafati. “*Real-Time Analysis Process Patterns*”. 13th International CSI Computer Conference (CSICC’08), Kish Island, Persian Gulf, Iran, March 2008.
16. Kamyar Rafati, Naeem Esfahani and Mohammad Ghodsi. “*Kinetic Data Structures for Routing Problem in Mobile Sensor Networks*”. 12th International CSI Computer Conference (CSICC’07), Tehran, Iran, February 2007.

TEACHING ASSISTANTSHIPS AND TEACHING EXPERIENCES

- **Taught Advanced Operating Systems**
Tadbir Institute *Fall 2007*
- **TA for Software Engineering**
Sharif University of Technology (Dr. Mirian-Hosseiniabadi) *Spring 2007, Fall 2006*
- **TA for Advanced Algorithm Design**
University of Tehran (Dr. Rostamabadi) *Fall 2004, Spring 2004*
- **TA for Advanced Computer Programming**
University of Tehran (Mr. Sheikh Attar) *Spring 2004*
- **TA for Introduction to Computer Programming**
University of Tehran (Dr. Taghiyareh) *Fall 2002*

GRADUATE COURSES

- **Fall 2009**
Performance Evaluation and Capacity Planning
- **Spring 2009**
Software Architecture Research Issues, Quantitative Methods and Experimental Design in CS
- **Fall 2008**
Distributed Software Engineering, Self-Adaptive Software Systems
- **Fall 2006**
Object Oriented Methodologies
- **Spring 2006**
Reactive System Verification, Semantic Web, Computer Performance Evaluation, Data Base Security
- **Fall 2005**
Advanced Operating Systems, Advanced Algorithms, Advanced Software Engineering

SERVICES

Reviewer for Journal of Software: Practice and Experience *August 2011*
Reviewer for Journal of Systems and Software *June 2011*
External reviewer for Brazilian Conf. on Software: Theory and Practice *May 2011*
Student Volunteer at 18th Int'l Symp. on Foundations of Software Engineering *November 2010*
External reviewer for 33rd Int'l Conf. on Software Engineering *October 2010*
Reviewer for ISeCure Journal *October 2010, June 2010*
Founding member of the Board of Trustees in Komeil charity group *2007-now*
Organizing seminar course, CE Dep., Sharif University of Technology *December 2006*
Chairman of ACM Student Chapter, ECE Dep., University of Tehran *2003-2004*
Managing freshman ECE students in a multi-day orientation camp *2002,2003,2004*
Representative of the class in the student education board, ECE Dep., University of Tehran . . . *2002-2003*
Representative of the class in ACM Student Chapter, ECE Dep., University of Tehran *2001-2002*

REFERENCES

- Dr. Sam Malek [smalek@gmu.edu]
- Dr. Marjan Sirjani [marjan@ru.is]
- Dr. Daniel A. Menascé [menasce@gmu.edu]
- Dr. Seyed-Hassan Mirian-Hosseinabadi [hmirian@sharif.edu]