

# Nauman A. Qureshi

PhD, Computer Science (Software Engineering)

## Assistant Professor

Department of Computer Science

College of Computer Science and Information Technology (CCSIT)

King Faisal University, Kingdom of Saudi Arabia

Email: [nauman.kureshi@gmail.com](mailto:nauman.kureshi@gmail.com) | Skype: nauman.qureshi | Mob: +(966) 537677084

## CAREER SUMMARY

More than 8 years' professional research and academic training experience with recognized strengths in software and business requirements management, system analysis and design, web and application development, service-based mobile applications, self-adaptive software systems research. I have been reviewer and co-organizer for several top-tier conferences and workshops in the area of software engineering. I have more than 20 publications in top-tier venues in the area of software engineering. Current research focus is on novel techniques to model and analyze user-centric requirements in context of Internet of Things, engineering adaptive service-based mobile and web applications taking the perspective of software engineering and cloud computing concepts.

## SYNOPSIS OF ACHIEVEMENTS

- ✓ Invited as Speaker at **TEDx Damanekoh**, under **TED** License, Pakistan, 2013
- ✓ Invited as Visiting Researcher at University of Toronto, Canada. 2010
- ✓ Won ACM Travel Grant for 31st Intl. Conf. on Soft. Engg. (ICSE), Canada, 2009
- ✓ Won fully funded PhD Scholarship by University of Trento, Italy. 2007
- ✓ Invited as Adjunct Faculty at University of North Carolina Charlotte, USA. 2007.

## EDUCATION

### PhD, Computer Science (Software Engineering) (2007 - 2011)

University of Trento, Italy

Thesis: "Requirements Engineering for Self-Adaptive Software: Bridging the gap between Design-Time and Run-Time".

### Master of Science - MS (Information Technology) (2003 - 2005)

National University of Sciences and Technology (NUST), Pakistan

Thesis: "Autonomous Natural Language Translation to Agent Language for FIPA Compliant Multi-Agent Systems"

### Master of Computer Science - MCS (2000 - 2002)

Shaheed Zulfiqar Ali Bhutto Institute of Science & Technology (SZABIST), Pakistan

Thesis: "Sales Automation System on Handheld devices (PALM)"

## ADDITIONAL TRAININGS

- ✓ Models@run.time, **Dagstuhl Seminar** 11481, 27th Nov. – 2nd Dec. (2011)
- ✓ EASSS 2009 - European Agent Systems Summer School, Torino, Italy, (2009)
- ✓ GII Doctoral School in Computer Engineering, L`Aquila, Italy, (2008)
- ✓ Software Project Planning By SYSCOMP Intl. (PMI-REP Islamabad) 02 PDU(s)
- ✓ Intro. to Project Mgmt. By SYSCOMP Intl. (PMI-REP Islamabad) 06 PDU(s)

## INVITED TALKS

- ✓ "User-Centric Adaptive Applications using IoT Technologies", King Faisal University, KSA, 2017
- ✓ "Incorporating Testing in Software Projects", King Faisal University, KSA, 2016
- ✓ "Future Internet of Services", **TEDx Damanekoh**, Islamabad, Pakistan, 2013
- ✓ "Requirements Engg. for Self-Adaptive Systems", University of Toronto, CA, 2010
- ✓ "Requirements Engg. for Self-Adaptive Systems", York University, CA, 2010

## ACADEMIC EXPERIENCE

### Assistant Professor

(Jan'2015 - Present)

Department of Computer Science,  
College of Computer Science and Information Technology (CCSIT),  
King Faisal University (KFU), Kingdom of Saudi Arabia (KSA).

- ✓ Research: Requirements Engineering, Adaptive Systems, Internet of Things
- ✓ Research Collaborations:
  - University of Kaiserslautern, Germany
  - University of Namur, Belgium
- ✓ Teaching: under-graduate courses and post-graduate courses
- ✓ Institutional Services:
  - Member, Quality Assurance Committee
  - Member, Curriculum Committee
  - Member, Programming Expert Group
  - Member, Graduate Project Committee

### Assistant Professor

(Jan'2012 – Jan'2015)

Department of Computing (Software Engineering),  
School of Electrical Engineering and Computer Science (SEECS),  
National University of Sciences & Technology (NUST), Pakistan.

- ✓ Research: Requirements Engineering, Adaptive Systems, Service-Based Systems
- ✓ Research Collaborations:
  - University of Trento / Fondazione Bruno Kessler (FBK), Italy
  - York University, Canada
  - University of Namur, Belgium
- ✓ Teaching: under-graduate courses and post-graduate courses
- ✓ Institutional Services:
  - Head of Department, Software Engineering (Feb'2014 to Sep'2014)
  - Project Lead/Coordinator, NUST LMS, (Aug'2012 to Dec'2014)
  - Lab Director, IBM training Lab (Jan'2012 to Dec'2013)
  - Member, Faculty Induction Group (Jan'2013 to Dec'2014)
  - Member, Committee preparing Self-Assessment Report
- ✓ Major Accomplishments:
  - Headed the accreditation of Bachelors in Software Engineering degree program from PEC (Pakistan Engineering Council) [faculty strength 18+]
  - Headed the development, deployment, migration and other technical issues of NUST Learning Management System. Successfully deployed LMS in all NUST schools in multiple phases. [team strength 20+]

### Lecturer

(Aug'2005 – Oct'2007)

Department of Computing (Software Engineering),  
School of Electrical Engineering and Computer Science (SEECS) – [Formerly, NIIT]  
National University of Sciences & Technology (NUST), Pakistan.

- ✓ Research: Agent-Oriented Software Engineering
- ✓ Teaching: under-graduate courses
- ✓ Institutional Services:
  - Member, Distributed Computing Lab

### Visiting Faculty

(May'2007 – June'2007)

Department of Computer Science,  
University of North Carolina at Charlotte (UNCC), USA.

- ✓ Teaching: under-graduate course (Introduction to Computing)

## Courses Taught

### TEACHING

- ✓ Undergraduate Level:
  - Object-Oriented Programming – I [in Java] (Spring/Fall 2015)
  - Object-Oriented Programming – II [in Java] (Spring 2016)
  - Selected Topics in Computer Science (Spring/Fall 2015, Spring/Fall 2016)
  - Human Computer Interaction (Spring 2012, 2013, 2014)
  - Software Requirements Engineering (Fall 2012, 2013, 2014)
  - Software Engineering (Fall 2006, Fall 2016, Spring 2017)
  - Object Oriented Software Engineering (using UML) (Spring 2007)
  - Introduction to JAVA Programming (Fall 2006)
  - Web Technologies (Spring 2006, Spring 2007)
  - Introduction to ICT & Programming Fundamentals (Fall 2005, Spring 2006)
- ✓ Postgraduate Level:
  - Research Methodology (Spring 2017)
  - Advanced Software Engineering (Summer 2012,2013,2014)
  - Software Requirements Engineering (Fall 2015, 2016)

## Theses and Projects Supervised

### SUPERVISIONS

- ✓ Postgraduate Level:
  - "User-Centric Adaptive Applications using IoT and Cloud Technologies" (2017)
  - "E-Voting System" (2016)
  - "Continuous Refinement of Requirements Model at Runtime" (2014)
  - "Tool for Adaptive Requirements Modeling Language" (2014)
  - "Implementation of CARE framework"(2014)
  - "Runtime Planning using CARE framework" (2014)
- ✓ Undergraduate Level:
  - "Smart City Mobile Application" (2016)
  - "Community-based Web portal for Health Care" (2016)
  - "Smart Society – Problem Acquisition and Resolution via Mobile App" (2014)
  - "Flow – Gesture-based Agile Software Modeling Tool" (2014)
  - "Pretzel – Tariff Recommendation system"(2014)
  - "Dental Specialty-based Practice Management System" (2014)

### RESEARCH FOCUS

- ✓ Conceptual Modeling
- ✓ Software Engineering /Requirements Engineering
- ✓ Self-Adaptive Software Systems
- ✓ Service-Based Systems
- ✓ Internet of Things

### Research Highlights:

Citations: **316**

h-Index: **10**

i-10 Index: **10**

[\(Google Scholar\)](#)

### PROFESSIONAL RESEARCH ACTIVITIES

#### Co-Organizer/Co-Chair

- ✓ Third Intl. Wks on Usability and Accessibility focused Requirements Engineering (UsARE 2017) co-located with RE 2017, Lisbon, Portugal.
- ✓ Second Intl. Wks on Usability and Accessibility focused Requirements Engineering (UsARE 2014) co-located with RE 2014, Karlskrona, Sweden.
- ✓ First Intl. Wks on Usability and Accessibility focused Requirements Engineering (UsARE 2012) co-located with ICSE 2012, Zurich, Switzerland.
- ✓ Fourth Intl. Wks on Requirements@Runtime 2012 co-located with RE 2012, Chicago, USA.

**Student Volunteer Chair**

- ✓ 19th IEEE International Requirements Engineering Conference (RE'11), Trento, Italy, September 2011.

**PC Member:**

- ✓ RE@NEXT!:25th IEEE International Requirements Engineering Conference (RE'17), Lisbon, Portugal, September 2017
- ✓ RE@NEXT!:24th IEEE International Requirements Engineering Conference (RE'16), Beijing, China, September 2016

**Co-Reviewer:**

- SEAMS'11: 6th Intl. Sym. on Software Engg. for Adaptive and Self-Managing Systems
- SEAMS'10: 5th Intl. Wks. on Software Engg. for Adaptive and Self-Managing Systems
- SEAMS'09: 4th Intl. Wks. on Software Engg. for Adaptive and Self-Managing Systems
- AAMAS'09: Intl. Conference on Autonomous Agents and Multi-Agent Systems
- AAMAS'08: Intl. Conference on Autonomous Agents and Multi-Agent Systems

**Software Product Consultant****(Jun'2014 – Jan'2015)**

Secure Tech Consultancy (Pvt) Ltd, Islamabad Pakistan.

- ✓ Research: Requirements Engineering, Social Applications, Service-Based Systems
- ✓ University-Industry Collaboration:
  - Headed the research, design and development of a social service based mobile application named: "***THelp: Trusted Help***". In this project, the aim was to provide end-user with trusted information sharing it via mobile application and services [team strength: 2 students, 2 industry technical experts]

**Software Product Consultant****(Jan'2012 – Dec'2014)**

Apollo Telecom (Pvt) Ltd, Islamabad Pakistan.

- ✓ Research: Requirements Engineering, Social Applications, Service-Based Systems
- ✓ University-Industry Collaboration:
  - Headed the research, design and development of a social application platform named: "***Smart City***". This project aims to bridge the gap between problem acquisition and problem resolution involving key stakeholders (end-users, government departments and social services). [team strength: 5 students, 3 industry technical experts]

**Software Engineer****(Jun'2003 – April'2004)**

Ex-Cel Solutions Intl. Inc., Islamabad, Pakistan

- ✓ Project "Hearthstone" – Porting legacy code to .Net framework in C#
  - Involved in Client Interaction (requirements gathering), Analysis and designing of Software, Supporting development activities, Preparation/Analysis of Test Scripts

**Jr. Software Engineer****(Feb'2002 – April'2003)**

Fauji Software Co. (Pvt) Ltd, Islamabad, Pakistan

- ✓ Industry Projects:
  - Involved in the development, testing and documentation of Software/Web applications for local clients.

## RESEARCH PUBLICATIONS

1. **[Book Chapter]** B. H. C. Cheng, K. I. Eder, M. Gogolla, L. Grunske, M. Litoiu, H. A. Müller, P. Pelliccione, A. Perini, **N. A. Qureshi**, B. Rumpe, D. Schneider, F. Trollmann, N. M. Villegas, "*Using models at runtime to address assurance for self-adaptive systems*", **Models@run.time, Springer, LNCS**, vol. 8378, pp. 101-136, **2014**.
2. **[Journal]** Umair Abdullah Aamir Khan, **Nauman A. Qureshi**, "*Software Engineering Challenges: A Cloud Based Architecture For Earthquake Forecasting*", Science International Lahore, Vol. 5 Issue 26, Pp 2309-2313, **2014**
3. Shah Rukh Humayoun, Norbert Seyff, **Nauman A. Qureshi**, Anna Perini, Achim Ebert, David Callele, and Simone D. J. Barbosa. Proceedings for *2nd International IEEE Workshop on Usability and Accessibility Focused Requirements Engineering (UsARE)*, Karlskrona, Sweden, **2014**, pp. 1-2.
4. Tiziana Catarci, Anna Perini, Norbert Seyff, Shah Rukh Humayoun, and **Nauman Ahmed Qureshi**. First Int. workshop on usability and accessibility focused requirements engineering (UsARE 2012): summary report. **SIGSOFT Softw. Eng. Notes** 37, 6 (**January 2013**), 1-9.
5. **Qureshi, Nauman A.**, Ivan Jureta, Anna Perini. "*Towards a Requirements Modeling Language for Self-Adaptive Systems*", at 18th International Working Conference on Requirements Engineering: Foundation for Software Quality (**REFSQ'12**) {Nominated for Best Paper Award}
6. Marc Oriol, **Qureshi, Nauman A.**, Xavier Franch, Anna Perini, Jordi Marco. "Requirements Monitoring for Adaptive Service-Based Applications", at 18th International Working Conference on Requirements Engineering: Foundation for Software Quality (**REFSQ'12**)
7. **Qureshi, Nauman A.**, Liaskos, S., Perini, A.: "Reasoning about adaptive requirements for self-adaptive systems at runtime", at Second International Workshop on RE @ Runtime (**RRT'11**) collocated with 19th IEEE Int. Requirements Eng. Conf. (**RE '11**), pp. 16 -22, Trento, Italy, 2011.
8. Perini, A., **Qureshi, Nauman A.**, Sabatucci, L., Siena, A., Susi, A.: "Evolving requirements in Socio-Technical Systems: concepts and practice", at 30th International Conference on Conceptual Modeling (**ER'11**), pp. 440-447, Brussels, Belgium, 2011.
9. **Qureshi, Nauman A.**, I. J. Jureta, A. Perini: "Requirements engineering for self-adaptive systems: Core ontology and problem statement", at Conference on Advanced Information Systems Engineering (**Caise'11**). pp. 33-47, vol. 6741. Springer (LNCS), London, UK (2011) **Qureshi, Nauman A.; A. Perini**, "Requirements engineering for adaptive service based applications", at 18th IEEE International Requirements Engineering Conference (**RE '10**), pp.108-111, Sydney, 2010.
10. **Qureshi, Nauman A.**, Norbert Seyff, Anna Perini, "Satisfying user needs at the right time and in the right place: A research preview, at 17th International Working Conference on Requirements Engineering: Foundation for Software Quality (**REFSQ'11**), vol. 6606, pp. 94-99, Springer (LNCS), Essen, Germany, 2011.
11. **Qureshi, Nauman A.**, A. Perini, "Continuous adaptive requirements engineering: An Architecture for Self-Adaptive Service-Based Applications", at First International Workshop on RE @ Runtime (**RRT'10**) collocated with 18th IEEE International Requirements Engineering Conference (**RE '10**), Sydney, pp.17-24, 2010.
12. **Qureshi, Nauman A.**, A. Perini, N. A. Ernst, J. Mylopoulos, "Towards a Continuous Requirements Engineering Framework for Self-Adaptive Systems", at First International Workshop on RE @ Runtime (**RRT'10**) collocated with 18th IEEE International Requirements Engineering Conference (**RE '10**), pp. 9 – 16, Sydney, Australia, 2010.
13. **Qureshi, Nauman A.**; C. D. Nguyen, Perini, A., "Analyzing Interoperability Requirements for Adaptive Service-based Applications" at (**REFS '10**) Fourth International Workshop on Requirements Engineering for Services collocated with COMSPAC, pp. 239-244, S. Korea, 2010.

14. Chiara Di Francescomarino, Chiara Leonardi, Alessandro Marchetto, Cu D. Nguyen, **Nauman A. Qureshi**, Luca Sabatucci, Anna Perini, Angelo Susi, Paolo Tonella, Massimo Zancanaro, "A bit of "Persona", a bit of "Goal", a bit of "Process" ... a recipe for Analyzing User Intensive Software Systems". In J. Castro, X. Franch, J. Mylopoulos, E. Yu (Eds.) of Proc. of the 4th International i\* Workshop (**iStar'10**), pp. 36-40, CEUR-WS.org, ISSN 1613-0073, Hammamet, Tunisia, 2010.
15. A. Marchetto, C. D. Nguyen, C. D. Francescomarino, **Nauman A. Qureshi**, A. Perini, and P. Tonella, "A design methodology for real services" at **ICSE** Workshop on Principles of Engineering Service Oriented Systems (**PESOS '10**), pp. 15-21, South Africa, 2010.
16. **Qureshi, Nauman A.**, Perini, A., "Engineering Adaptive Requirements" at **ICSE** Workshop on Software engineering for adaptive and self-managing systems (**SEAMS '09**) co-located with ICSE '09, pp. 126-13, Vancouver, Canada, May 2009.
17. **Qureshi, Nauman A.**, Perini, A., "Towards Seamless Adaptation: An Agent-Oriented Approach," at Second IEEE International Conference on Self-Adaptive and Self-Organizing Systems (**SASO '08**), pp.471-472, 20-24 Venice, Italy. 2008 [Short Paper]
18. **Qureshi, Nauman A.**, Perini, A., "An Agent-Based Middleware for Adaptive Systems", Eighth International Conference on Quality Software (**QSIC '08**), pp.423-428, London, UK. 2008
19. **Qureshi, N.A.**, Ali A., Ahmad F. H., Suguri, H., "Autonomous Natural Language Translation to Agent Language for FIPA Compliant Multi-Agent Systems", in proceedings of the Eighth Pacific Rim International Workshop on Multi-Agents (**PRIMA 2005**), pp. 261-273, Malaysia.
20. Malik, S.S., **Qureshi, N.A.**, Ali, A., Ahmad, H.F., Suguri, H., "Inter platform agent mobility in FIPA compliant multi-agent systems," in proceedings of International Conference on Active Media Technology (**AMT 2005**), vol., no., pp. 393-396, 19-21, May 2005
21. Haider M., Gohar N.D., Ahmad, H.F., Kamal A., **Qureshi, N.A.**, "GENIOUS: Generating Enhanced results from NLP Intelligently by Ontology Using Semantics", in proceedings of 4th International Workshop on Multi-Agent Systems and Semantic Grid (**MASSG06**), NUST, Pakistan.
22. Kamal A., Ali A., **Qureshi, N.A.**, Tariq M., "Optimal and economic solution for eLaw data storage and retrieval", First IEEE International conference on Open Source Technology (**ICOST**) Dec 2006, UET Lahore, Pakistan.

## INTERESTS

- ✓ Reading: Technology Blogs, Research Papers, News Sites;
- ✓ Sports: Badminton, Swimming,
- ✓ Socializing: Watching movies, Traveling with family and friends
- ✓ Online Social Media: [LinkedIn](#)

## REFERENCES

- Dr. Paolo Tonella (Head, Software Engineering)**, (email: tonella@fbk.eu )
- [Fondazione Bruno Kessler \(FBK\), Trento, Italy](#)
- Dr. Anna Perini (PhD Supervisor)**, (email: perini@fbk.eu)
- [Fondazione Bruno Kessler \(FBK\), Trento, Italy](#)
- Dr. Ivan Jureta (Associate Professor)**, (email: ivan.jureta@fundp.ac.be )
- [University of Namur, Belgium](#)