Aakash Ahmad
Ph.D. (Software Engineering)

PERSONAL DETAILS

Designation	Assistant Professor (Software Engineering)
Address	College of Computer Science and Engineering (CCSE) — University of Ha'il, KSA
Mail	ahmad.aakash@gmail.com
Phone	+966-582401673 — +966-539257291
Webpage	`http://ahmadaakash.wix.com/aakash`
Research	`https://scholar.google.com.pk/citations?user=nWtJYoIAAAAJ&hl=en`

EDUCATION

Ph.D. in Software Engineering   Jan 2009 - Nov 2014

School of Computing, Dublin City University, Ireland. (`www.dcu.ie`)
  Thesis adviser: Prof. Claus Pahl.
  Thesis title: A Pattern Language for Evolution Reuse in Component-based Software Architectures
  Thesis link - `www.doras.dcu.ie/20757/`
  Examiners: Dr. Kung-Kiu Lau (UoM, Manchester, UK), Dr. David Sinclair (DCU, Dublin, IRL)
  Grade: 75%, ECTS Grade A (Ph.D. course work)
  Funding source: Lero - the Irish Software Engineering Research Centre, Ireland.

B.S. in Software Engineering   Sep 2003 - Aug 2007

Department of Computer Science, International Islamic University, Pakistan. (`www.iiu.edu.pk`)
  Project adviser: Dr. Mata ur Rehman (academic), Mr. Shahid Shafiq (industrial).
  Project title: 'Opus Web': Cross Browser and Customised Web-based Document Designing.
  Project link: `http://media.wix.com/ugd/396772_c74c46a5753b4caea9deb9e838fa1b16.pdf`
  Project examiner: Mr. Fazal Wahab (Bahria University, Islamabad - PAK)
  Grade: 3.88/4.0, 82.8%, A+ with distinction
  Scholarship award: International Islamic University, Islamabad, Pakistan.
  Industrial funding: Elixir Technologies, Pakistan.

PROFESSIONAL EXPERIENCE

Assistant Professor (Software Engineering) Sep 2015 - to Date

College of Computer Science and Engineering (CCSE), University of Ha'il, KSA.

    Teaching: UG courses - Software Design and Architecture, Computer Programming.

    Web Link - `www.uoh.edu.sa/en/Subgates/Faculties/CCSE/`

Postdoctoral Researcher Jan 2014 - Dec 2014

Software and Systems Section, IT University of Copenhagen, Denmark.

    Teaching: MSc. in Software Engineering - Introduction to Software Architecture.

    Thesis Supervision: Masters thesis - Architectural Solutions for Adaptive Cloud-based Software.

    Web Link - `www.sss.wikit.itu.dk/`

SCJA/SCJP Tutor Jan 2010 - Sep 2010

Log Entries, Ireland.

    Role: Tutoring of Foundation and Advanced Java Programming Certification Modules.

    Web Link - `www.logentries.com/`

Software Engineer Aug 2007 - Oct 2008

Elixir Technologies, Pakistan.

    Role: Development and Deployment of Health Management Information System.

    Role: Development of a Tele-medicine Web Portal named TelmedPak

    Web Link - `www.elixir.com`

RESEARCH PUBLICATIONS (SELECTIVE LIST)

Full publication record available at Google Scholar profile:
`http://scholar.google.dk/citations?user=nWtJYoIAAAAJ&hl=en`

Quantum Software Engineering and Software Architecture (work under progress)

- Arif Ali Khan, Aakash Ahmad, Muhammad Waseem, Peng Liang, Mahdi Fahmideh, Tommi Mikkonen, Pekka Abrahamsson. *Software Architecture for Quantum Computing Systems - A Systematic Review*. (Journal submission under review), 2022.

- Aakash Ahmad, Arif Ali Khan, Muhammad Waseem, Mahdi Fahmideh, Tommi Mikkonen. *Towards Process Centered Architecting for Quantum Software Systems*. (Conference submission under review), 2022.

Service Computing and Internet of Things Based Systems

- Muhammad Waseem, Peng Liang, Aakash Ahmad, Mojtaba Shahin, Arif Ali Khan, Gaston Marquez. *Decision Models for Selecting Patterns and Strategies in Microservices Systems and their Evaluation by Practitioners*. In IEEE/ACM 44th International Conference on Software Engineering: Software Engineering in Practice (ICSE-SEIP), 2022. **[CORE Rank: A*]**

- Mahdi Fahmideh, Aakash Ahmad, Ali Behnaz, John Grundy, Wily Susilo. *Software Engineering for Internet of Things: The Practationers' Perspective*. IEEE Transactions on Software Engineering, IEEE, 2021. **[CORE Rank: A*, Impact Factor: 6.22]**

- Mahdi Fahmideh, John Grundy, Aakash Ahmed, Jun Shen, Jun Yan, Davoud Mougouei, Peng Wang, Aditya Ghose, Anuradha Gunawardana, Uwe Aickelin, Babak Abedin. *Software Engineering for Blockchain Based Software Systems: Foundations, Survey, and Future Directions*. ACM Computing Surveys, ACM, 2021. **[CORE Rank: A*, Impact Factor: 10.28]**

- Muhammad Waseem, Peng Liang, Mojtaba Shahin, Aakash Ahmad, Ali Rezaei Nasab. *On the Nature of Issues in Five Open Source Microservices Systems: An Empirical Study*. The 25th International Conference on Evaluation and Assessment in Software Engineering (EASE), ACM, 2021, **[CORE Rank: A]**.

- Muhammad Waseem, Peng Liang, Mojtaba Shahin, Gaston Marquez, Arif Ali Khan, Aakash Ahmad. *A Decision Model for Selecting Patterns and Strategies to Decompose Applications into Microservices*. The 19th International Conference on Service Oriented Computing (ICSOC), 2021, **[CORE Rank: A]**.

- Chiara Boldrini, Aakash Ahmad, Mahdi Fehmideh, Rabie Ramadan, Mohammed Younis. (Guest Editors) *Special Issue on IoT for Fighting COVID-19*. Pervasive and Mobile Computing, Elsevier, 2021. **[CORE Rank: B, Impact Factor: 3.45]**

Secure Mobile Computing

- Bakheet Aljedani, Aakash Ahmad, Mansooreh Zahedi, Ali Babar. *Security Awareness of End-Users of Mobile Health Applications: An Empirical Study*. 17th EAI International Conference on Mobile and Ubiquitous Systems (MobiQuitous 2020), EAI, 2020. **[CORE Rank: A]**

- Aakash Ahmad, Adel Alkhalil, Ahmed B. Altamimi, Khalid Sultan, Wilayat Khan. *Modernising Legacy Software as Context-sensitive and Portable Mobile-enabled Application*. IEEE IT Professional, IEEE, 2020. **[Impact Factor: 2.62]**

- Aakash Ahmad, Asad Waqar Malik, Abdulrahman Alreshidi, Wilayat Khan, Maryam Sajjad. *Adaptive Security for Self-Protection of Mobile Computing Devices*. In Mobile Networks and Applications, Springer 2020. **[Impact Factor: 3.42]**

- Bakheet Aljedani, Aakash Ahmad, Mansooreh Zahedi, Muhammed Ali Babar. *An Empirical Study on Developing Secure Mobile Health Apps: The Developers' Perspective*. 27th Asia-Pacific Software Engineering Conference (APSEC 2020), IEEE, 2020. **[CORE Rank: B]**

- Maryam Sajjad, Aakash Ahmad, Asad W. Malik, Ahmed B. Altamimi, Ibrahim M. Alsaedon. *Classification and Mapping of Adaptive Security for Mobile Computing*. In IEEE Transactions on Emerging Topics in Computing, IEEE, 2018. **[Impact Factor: 7.69]**

THESIS SUPERVISION

MSc. Thesis

Thesis: Internet of Things based Frmework fo Smart Order Processing.
MS. Software Engineering.
Institute: *International Islamic University Islamabad, Pakistan.*

Completed - Oct 2018

Thesis: A Context-Aware Recommender System for Smart Markets
MS. Information Technology.
Institute: *National University of Sciences and Technology, Pakistan.*

Completed - Mar 2017

Thesis: Network Aware Adaptive Security for Mobile Computing
MS. Computer Science.
Institute: *National University of Sciences and Technology, Pakistan.*

Completed - Mar2017

Thesis: Architecture for Cloud-based Software Portability
MSc. Software Engineering.
Institute: *IT University of Copenhagen, Denmark.*

Completed - Aug 2014

Thesis title: Data Analytic Using Cloud Computing
MSc. Software Engineering.
Institute: *IT University of Copenhagen, Denmark.*

Completed - Dec 2014

RESEARCH SERVICES

Associate Editor & Organiser

- Guest Editor (IoTs for COVID-19) - Pervasive and Mobile Computing, Elsevier.

- Guest Editor (Software Engineering for Internet of Things) - Electronics, MDPI.

- Associate Editor for IEEE Access, IEEE.

- Publicity Chair, SCITA 2020, Springer.

Reviewer & Program Committee Member

- IEEE International Conference on Software Analysis, Evolution and Reengineering (SANER) [Tool Track], IEEE.

- IEEE Transactions on Mobile Computing (TMC), IEEE.

- IEEE Access, IEEE.

- IBM Journal of Research and Development, IEEE.

- Journal of Systems and Software (JSS), Elsevier.

- Future Generation Computer Systems (FGCS), Elsevier.

- IET Software (IET-SW), IET.

- 1st International Workshop on Cloud Adoption and Migration (CloudWay), 2015 - 2017.

- 10th International ACM Sigsoft Conference on Quality of Software Architectures (QoSA), 2014.

- 8th European Conference on Software Architecture (ECSA), 2014.

- 21st Asia-Pacific Software Engineering Conference (APSEC), 2014.

Research Talks & Guest Lectures

- *Migration and Evolution of Cloud-based Systems*. School of Computer Science, University of Adelaide, Australia. 2014

- *Introduction to Software Architecture*. Shaheed Zulfiqar Ali Bhutto Institute of Science and Technology, Pakistan. 2013

- *Research Topics in Software Engineering*. University Institute of IT, UAAR, Pakistan. 2013

Session Chair

- *Context-Aware Systems*. 7th International Conference on Software Paradigm Trends (ICSOFT). Italy, 2012

FUNDING & AWARDS

Role of Software Architectures in Engineering Internet of Things (IoTs) | Aug 2019 - Jul 2020
Awarded by: University of Ha'il, Saudi Arabia. (amount: 38900 USD)

Architecting Software Systems for Quantum Computing | Nov 2021 - Oct 2022
Awarded by: University of Ha'il, Saudi Arabia. (amount: 10500 USD)

Research Travel Award to visit University of Adelaide | Apr 2014 - May 2014
Awarded by: IT University of Copenhagen, Denmark.

Best Research Idea | 2012
Awarded by: Lero - the Irish Software Engineering Research Centre, Ireland.

Fully Funded Scholarship for Ph.D. in Software Engineering | Jan 2009 - Dec 2013
Awarded by: Lero - the Irish Software Engineering Research Centre, Ireland.

Proposals under review

Modernising Legacy Software as Internet of Things-driven Applications | 2021
Under Review at KAUST, KSA

TEACHING

Course title: Software Design and Architecture 2017
Department of Software Engineering, CCSE, UoH, KSA

Course title: Software Construction 2016
School of Electrical Engineering and Computer Science, NUST, Pakistan
  Degree Program: *B.E. in Software Engineering.*

Course title: Model Driven Software Development 2016
Department of Computer Science, IIUI, Pakistan.
  Degree Program: *M.S. in Software Engineering.*

Course title: Introduction to Software Architecture 2014
IT University of Copenhagen, Denmark
  Degree Program: *MSc. in Software Engineering.*

Course title: Web Programming 2010 - 2013
Dublin City University, Ireland.
  Degree Program: *B.S. in Computer Applications.*

MEMBERSHIPS

- IEEE Member.

- Irish Computer Society Member.