

Morteza Karimzadeh

Curriculum Vitae

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Career Target

As a Computer and Communication engineer, I have gained broad knowledge on various Computer Science areas. I believe that, I can act as a good connection between designers, developers and engineers in the relevant domains. Therefore, I am looking for a career in Consultancy, Research & Development, Design and Implementation sectors, where I can use my skills, knowledge and experiences to contribute on achieving the organization objectives.

Areas of Interest

Mobile Networks, Architecture Design, Mobility and Connectivity Management, Connected Car Networking, Network Management, Cloud Services and Networking, Internet of Things, Security, Algorithm Design/Analysis/Implementation, System Modeling/Evaluating/Optimizing, Data Mining.

Work Experience

Mar 2013–Aug
2017

Ph.D. in Computer and Communication Science, *University of Twente.*

- Carrying out research focused on the topic of Future Mobile Network architecture.
- Design and development of an approach to realize a Future (decentralized) mobile network system (e.g., 4G, 5G), and extend NS3 simulation environment for implementation and evaluation of the proposed approach.
- Detailed discussion and analysis on the essential modifications in the current 3GPP LTE's data and control planes, required for implementation of the new architecture.
- Design and development of a hybrid simulation and analytical modeling to analyze performance and scalability of the current (centralized) and future (decentralized) mobile network architectures.
- Design and development of three novel Mobility Management solutions for future mobile networks, and extend NS3 simulation environment for implementation and evaluation of proposed solutions. The proposed approaches are based on Network Address Translation, Software Defined Networking and Multipath-TCP).
- Design and development of a framework for radio resource allocation in 5G network for connected car networking.

⊗ *Tools and Methodologies:* C++, Python, Matlab, Mathematica, NS3, Wireshark, Linux, VM VirtualBox.

Mar 2013–Oct
2016

Researcher & Design Engineer, *The EU FP7 Mobile Cloud Networking (MCN) project.*

- Representative of University of Twente in MCN project.
- Designing and development of an algorithm to estimate the future location of mobile user(s) in the LTE network. This information can be used e.g., to optimize resource allocation, traffic management and network planing.
- Project tasks manager.
- Leading a team on software design, development, integration and evaluation of the following service;
 - MOBaaS (Mobility and Bandwidth prediction as a Service): A software framework to be deployed, provisioned and disposed on-demand at a cloud computing platform to provide predication information about user(s) mobility and network link(s) bandwidth availability.
- Contributing of software design, development, integration and evaluation of the following services;
 - RANaaS (Radio Access Network as a Service): A software framework to be deployed, provisioned and disposed on-demand at a cloud computing platform, enabling the functionalities of the LTE cell antenna (eNodeB), for attachment of mobile users to 3GPP access network.
 - FMC (Flow Me Cloud): A software framework to be deployed, provisioned and disposed on-demand at a cloud computing platform for dynamical content placement for users in a mobile network.
 - ICNaaS (Information Centric Networking as a Service): A software framework to be deployed, provisioned and disposed on-demand at a cloud computing platform for placement of content at the locations to be easily retrieved by mobile user(s) based on the user(s) mobility predication information (provided by MOBaaS).

⊗ *Tools and Methodologies:* Python, R, Matlab, HTTP Server, JSON, Agile, OpenStack (NFV), Linux, Cloud Computing.

Sep 2011–Feb 2013 **Researcher & Design Engineer**, *Advanced Network Technology Lab (ANTLab), Polytechnic University of Milan & Telecom Italia, Milan, Italy.*

- Design and development of a complete framework for Wireless Sensor Network Virtualization (WSNV);
 - Aiming to maximize the number of applications using a shared physical network, while keeping the limitations of the WSN's environment (e.g., storage, processing power, energy consumption).
 - Designing and development of an optimization algorithm.
- ⊗ *Tools and Methodologies:* AMPL, Matlab, Perl, Linux, VM VirtualBox.

Sep 2000–Jul 2009 **Expert of Data Network**, *Telecommunication company of West Azarbaijan, Urmia, Iran.*

- Design, implementation & maintenance of Internet and Intranet services for private and public customers.
 - Implementation, administration & monitoring of network servers and services.
 - Installation, maintenance, update and support of applications, software and network services.
 - Coaching Network+, Windows XP Professional, Windows Server Network Infrastructure, Windows Server Active Directory & CCNA courses.
- ⊗ *Tools and Methodologies:* Cisco devices, Tellabs 8100, Alcatel system, Windows Server 2003, Linux.

Sep 2000–Jul 2009 **Windows and Network Administrator-Part time Employee**, *Iran Bilgisayar Merkezi computer systems company, Urmia, Iran.*

- Local and wide area networks infrastructure specialist.
- Technical (Pre-sale) consultant in networking and computer systems (e.g., Switches, Servers, Storage).
- Installation, maintenance, update and support of applications, software, network devices and services.
- Assemble, installation & maintenance of PCs & Servers.

Feb 2006–Dec 2008 **Lecturer**, *Iran Bilgisayar Merkezi computer systems company, Urmia, Iran.*

- Teaching CCNA, Network+, Widows XP and Windows server 2003 courses.

Sep 2005–Jun 2007 **Lecturer**, *Elmofarhang University, Tehran, Iran.*

- Teaching Computer Architecture and Fundamentals of Electrical Engineering & Electronics courses.

Education

Sep 2009–Jun 2011 **M.Sc. in Communication Networks and Protocols Engineering**, *Tampere University of Technology, Finland.*

- **Thesis's Topic:** Efficient Routing Protocols in Delay Tolerant Networks (DTNs).

Sep 1996–Aug 2000 **B.Sc. in Electronics and Electrical Engineering**, *Urmia University, Iran.*

- **Thesis's Topic:** Design of a printer switch using 8085 microprocessor.

Honors, Achievement and Activities

- Awarded as an excellence M.Sc. student, Tampere University of Technology, Finland, 2011.
- Winner of research scholarship, Polytechnic University of Milan, 2011-2013.
- +20 publications in international scientific journals and conferences, 2013-present.
- Technical Program Committee (TPC) member and reviewer of several international scientific conferences and journals, 2013-present.
- IEEE ComSoc member, 2013-present.
- Representative of University of Twente in the EU FP7 Mobile Cloud Networking project, 2013-2016.

Computer Skills

Programming	C++, Matlab, Python, Perl, Mathematica, R, Java, AMPL.
Network	Windows 2003, Linux, CCNA, Tellabs 8100, Alcatel, SDN, LTE (4G)
Hardware	Cisco routers & switches, ADVANTECH biscuit PCs & industrial computers, HP ProLiant servers, storage & controllers, Tellabs 8100 & Alcatel network systems.
Virtualization	VMware, VM VirtualBox, OpenStack.

Simulators NS2, NS3, OMNET, OPNET, mininet, PacketTrace.
Typesetting LATEX, Microsoft Office.
Modeling Tool Microsoft Visio, VHDL, MAX+PLUS II.

Professional Certificates

- o Network+.
- o Cisco Certified Network Associate (CCNA)
- o Installing, Configuring and Administering Microsoft Windows XP Professional.
- o Managing and Maintaining a Microsoft Windows Server 2003 Environment.
- o Implementing, Managing and Maintaining a Microsoft Windows Server 2003 Network Infrastructure.
- o Planning and Maintaining a Microsoft Windows Server 2003 Network Infrastructure.
- o Planning, Implementing, Maintaining Microsoft Windows Server 2003 Active Directory Infrastructure.
- o Linux Junior Level Administration (LPIC-1).

Professional Training Courses

Creative thinking, Project management for PhD students, Time management for researchers, The art of scientific writing, The art of presenting science.

Languages

Persian (Native), English (Fluent), Azerbaijani & Turkish (Verbal communications), Dutch (Elementary).

Hobbies

Cooking, Gardening, Photography, Watching movies, Camping, Traveling, Swimming, Cycling.

References

- o Prof. dr. ir. Aiko Pras, The University of Twente (UT), a.pras@utwente.nl.
- o Prof. dr. Hans van den Berg, The University of Twente (UT), j.l.vandenberg@utwente.nl.
- o Prof. dr. ir. Yevgeni Koucheryav, Tampere University of Technology (TUT), yk@cs.tut.fi.

Travel History

Japan, Turkey, Bulgaria, Poland, Italy, Germany, Switzerland, Austria, Luxembourg, France, Spain, Portugal, Belgium, Finland, Czech Republic, Canada, Greece.

Scientific Publication

List of my publications can be found in: <http://mortezaakarimzadeh.com/publications/>

International Project Contribution

List of my contributions can be found in: <http://mortezaakarimzadeh.com/projects/>