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Morteza Karimzadeh

Curriculum Vitae

Career Target

As a telecommunication engineer, I have broad knowledge on both Telecommunication and Computer Science areas. I am particularly experienced in Data Networking, Mobile Network Systems (e.g., 4G and 5G), Network Infrastructure, Cloud Services and Management. I believe that, I can act as a good connection between engineers, designers and developers in these domains. Therefore, I am looking for a position in Research & Development, Design and Managerial sectors, where I can use my skills, knowledge and experiences to contribute on achieving the organization objectives. An international environment to learn more and grow, where I can combine independent activities with team work, having opportunities to contribute to global projects and activities, particularly in areas of Networks, Cloud Computing, IoT, Data Science, are of my interest.

Work Experience

2013–Present **Ph.D Candidate**, *Design and Analysis of Communication Systems (DACs) group, University of Twente, The Netherlands.*

- **Research topic** : Mobility Management in Future Mobile Networks.
- **Main activities** : Design and development of three novel Mobility Management solutions for Future LTE system with a decentralized network architecture. The implemented approaches are based on the following mechanisms:
 - Network Address Translation (NAT).
 - Software Define Networking (SDN).
 - Multipath TCP (MPTCP).
- **Expected graduation time** : August 2017.

2013–2016 **Designer & Developer**, *The EU FP7 Mobile Cloud Networking (MCN) project.*

- **Objective** : Visualization of the LTE network system in Cloud Computing platform.
- **Main activities** :
 - Representative of University of Twente in the MCN project.
 - Leading of a team with members from University of Twente and Bern, One Source company, Telecom Italia and Fraunhofer institute, with the main focus of designing and developing the MOBaaS (Mobility and Bandwidth Availability Prediction as a Service). A service to estimate users mobility and network links usage in a cloud-based LTE system.
 - Collaborating in designing and developing of RANaaS (Radio Access Network as a Service), ICNaaS (Information Centric Networking as a Service) and FMC (Flow Me Cloud) concept.
 - Proposing five approaches for integrating ICN concept with the LTE core network (EPC).

2011–2013 **Designer & Developer**, *Advanced Network Technology Lab (ANTLab), Polytechnic University of Milan, Italy & Telecom Italia.*

- **Topic** : Wireless Sensor Network Virtualization (WSNV).
- **Main activities** : Designing and developing an optimization framework aiming to maximize the number of applications which can share a common physical network, while keeping the limitations of the WSN's environment (e.g., storage, processing power, energy consumption).

2000–2009 **Expert of Data Network**, *Data Communication Department of Telecommunication Company of West Azarbaijan (TCWA), Urmia, Iran.*

○ **Main activities :**

- Designing, implementing & maintaining of Internet and Intranet services, using Cisco devices & Tellabs 8100 and Alcatel network systems for private and public customers.
- Implementing & administering of network and services based on Windows Server 2003 & Linux.
- Coaching Network+, Windows XP Professional, Windows Server 2003 Network Infrastructure, Windows Server 2003 Network Active Directory & CCNA courses.

2000–2008 **Part-time Employee**, *IBM (Iran Bilgisayar Merkezi) Computer Company, Urmia, Iran.*

○ **Main activities :**

- Technical (Pre-sales) consultant in Servers, Storage & Networking.
- Implementing & administering of network and services based on Windows Server 2003 & Linux.
- Assembling, installing & repairing of PC & Servers.

Education

2009–2011 **MSc. in Communication Networks and Protocols Engineering**, *GPA 4.45/5, Tampere University of Technology, Finland.*

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

1996–2000 **BSc. in Electronics and Electrical Engineering**, *GPA 16.55/20, Urmia University, Iran.*

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

1993–1996 **High school diploma in Physics and Mathematics**, *GPA 17.80/20, Imam Khomeini high school, Urmia, Iran.*

Professional Computer Skills

Programming Python, C++, Java, Matlab, AMPL.

Software NS2, NS3, Wireshark, Cisco PacketTrace, MAX+PLUS II.

Network Windows & Linux based networks, SDN, Openstack, Virtualization.

Hardware Cisco routers & switches, ADVANTECH biscuit PCs & industrial computers, HP ProLiant servers, storage & controllers, Tellabs & Alcatel based network systems.

Languages

Persian & Azerbaijani (Native), English & Turkish (Fluent), Dutch & Arabic (Basic).

Hobbies

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

Travel History

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

Scientific Appendix

June 10, 2017

Ph.D Research

In mobile networks, Mobility Management refers to a set of mechanisms to allow a node to remain reachable after moving to a different networks or and physical environments. Current mobility management solutions rely on the centralized architectures, imposing several limitations and performance problems. My Ph.D research focuses on designing and developing several novel Mobility Management mechanisms for the Future LTE with a decentralized network architecture, under supervision of Prof. Aiko Pras and Prof. Hans van den Berg.

Academic Activities

2013–2016 Representative of University of Twente in the EU FP7 Mobile Cloud Networking (MCN) project.

2013–Present TPC member of the Workshop on Cloud Computing Systems, Networks, and Applications (CCSNA).

2013–Present Regular reviewer of

- The IEEE Communications Magazine.
- The IEEE/IFIP Network Operations and Management Symposium (NOMS).
- The Conference on Network and Service Management (CNSM).
- The IEEE Workshop on Cloud Computing Systems, Networks, and Applications (CCSNA).

2013–Present Invited reviewer of

- The Elsevier Journal of Electronics and Communications.
- The IFIP Networking.
- The Next Generation Wired/Wireless Advanced Networks and Systems (NEW2AN).

Publication List

2017

1. **M. Karimzadeh**, L. Valtulina, H. van den Berg, A. Pras, P. Garrido Ortiz, R. Sadre, "MultiPath TCP to Support User's Mobility in Future LTE Network", IFIP/IEEE Wireless and Mobile Networking Conference (WMNC 2017) (Submitted).
2. M. Gholibeigi, N. Sarrionandia, **M. Karimzadeh**, M. Baratchi, H. van den Berg, G. Heijenk, *Reliable Vehicular Broadcast using 5G Device-to-Device Communication*, IFIP/IEEE Wireless and Mobile Networking Conference (WMNC 2017) (Submitted).
3. **M. Karimzadeh**, H. van den Berg, R. de O. Schmidt, A. Pras, *Quantitative Comparison of the Efficiency and Scalability of the Current and Future LTE Network Architectures*, Wireless Communications and Mobile Computing (WCMC) Journal 2017 (Submitted).
4. Z. Zhao, **M. Karimzadeh**, T. Braun, A. Pras, H. van den Berg, "Cloudified Mobility and Bandwidth Prediction for Enabling Smart City Application", IFIP/IEEE International Symposium on Integrated Network Management (IM 2017).
5. **M. Karimzadeh**, L. Valtulina, A. Pras, H. van den Berg, R. de O. Schmidt, M. Liebsch, T. Taleb, "Double-NAT Based Mobility Management for Future LTE Networks", IEEE Wireless Communications and Networking (WCNC 2017).
6. **M. Karimzadeh**, L. Valtulina, H. van den Berg, A. Pras, M. Liebsch, T. Taleb, "Software Defined Networking to Support IP Address Mobility in Future LTE Network", IFIP/IEEE Wireless Days 2017.

2016

1. B. Sousa, Z. Zhao, **M. Karimzadeh**, V. Fonseca, D. alma, L. Cordeiro, P. Simoes, H. van den Berg, A. Pras, T. Braun, "Enabling a Customized Follow-Me Cloud Model", 41st IEEE Conference on Local Computer Networks (LCN).

2015

1. **M. Karimzadeh**, Z. Zhao, L. Hendriks, R. de O. Schmidt, S. la Fleur, H. van den Berg, A. Pras, T. I. Braun, M. Corici, "Mobility and Bandwidth Prediction as a Service in Virtualized LTE Systems", 4th IEEE International Conference on Cloud Networking (CLOUDNET).
2. Z. Zhao, **M. Karimzadeh**, T. Braun, A. Pras, H. van den Berg, "A Demonstration of Mobility Prediction as a Service in Cloudified LTE Networks", 4th IEEE International Conference on Cloud Networking (CLOUDNET).

2014

1. T.Taleb, M.Iulian Corici, C.Parada, A.Jamakovic, S.Ruffino, G.Karagiannis, **M.Karimzadeh**, T.Magedanz, "Virtualizing the LTE Evolved Packet Core (EPC)", Mobile Cloud Infrastructures and Services (MCIS) workshop, European Conference on Networks and communications (EuCNC).
2. **M.Karimzadeh**, L. Valtulina, G.Karagiannis, "Applying SDN/OpenFlow in Virtualized LTE to support Distributed Mobility Management (DMM)", International Conference on Cloud Computing and Services Science (CLOSER).
3. **M.Karimzadeh**, T.Satria, G.Karagiannis, "Utilizing ICN/CCN for service and VM migration support in virtualized LTE systems", International Conference on Cloud Computing and Services Science (CLOSER).
4. **M.Karimzadeh**, A.Sperotto, Aiko Pras, "Software Defined Networking to Improve Mobility Management Performance", Autonomous Infrastructure, Management and Security (AIMS).
5. L. Ferreira, D. Pichon, A. Hatefi, A. Gomes, D. Dimitrova, T. Braun, G. Karagiannis, **M. Karimzadeh**, M. Branco, L.M. Correia, "An Architecture to offer Cloud-Based Radio Access Network as a Service", European Conference on Networks and communications (EuCNC).
6. G. Karagiannis, A. Jamakovi, K. Briggs, **M. Karimzadeh**, C. Parada, M.Julian Corici, T. Taleb, A. Edmonds, T. Michael Bohnert, "Mobility and Bandwidth prediction in virtualized LTE systems: Architecture and Challenges", European Conference on Networks and communications (EuCNC).
7. L. Valtulina, **M. Karimzadeh**, G. Karagiannis, G. Heijenk, A. Pras, "Performance evaluation of a SDN/OpenFlow-based Distributed Mobility Management (DMM) approach in virtualized LTE systems", IEEE GLOBECOM.
8. T. Arief Satria, **M. Karimzadeh**, G. Karagiannis, "Performance evaluation of ICN/CCN based service migration approach in virtualized LTE systems", 3rd IEEE International Conference on Cloud Networking (CLOUDNET).

2013

1. A.Gomes, T.Braun, G.Karagiannis, **M.Karimzadeh**, M.Liebsch, A.Rodriguez, P.Comi, "Follow Me Cloud and Virtualization of (Multimedia) Services and Applications: Challenges and Possible Solutions", Future Network & Mobile workshop (FUNEMS).
2. G.Karagiannis, **M.Karimzadeh**, T.Taleb, T.Braun, T.Michael Bohnert, "Applying Follow Me and Service Migration & Continuity Features in Cloud-based LTE Systems", Future Network & Mobile workshop (FUNEMS).
3. I.Drago, R.O. Schmidt, R.Hofstede, A.Sperotto, **M.Karimzadeh**, B.R. Haverkort, A.Pras, "Networking for the Cloud: Challenges and Trends", Praxis der Informationsverarbeitung und Kommunikation (PIK).

Project Appendix

June 10, 2017

Contribution in the EU FP7 Mobile Cloud Networking (MCN) project

Technical Deliverable

- Feb. 2014 D3.1-Infrastructure Management-Specifications & Design for Mobile Cloud framework.
- Nov. 2013 D4.1-Mobile Network Cloud Component Design.
- Apr. 2014 D4.2-First Mobile Network Cloud Software Components.
- Oct. 2014 D4.3-Algorithms and Mechanisms for the Mobile Network Cloud.
- Dec. 2014 D4.4-Final Mobile Network Cloud Software Components.
- Jul. 2015 D4.5-Mobile Network Cloud Component Evaluation Deadline.
- Oct. 2013 D5.1-Design of Mobile Platform Architecture and Services.
- Apr. 2014 D5.2-Implementation of IMSaaS, DSN and Mobile Platform.
- Dec. 2014 D5.3-Final Implementation of IMSaaS, DSN, and Mobile Platform.
- Apr. 2014 D6.1-Initial Report on Integration and Evaluation Plans.
- Oct. 2014 D6.2-Initial Report on Testbeds, Experimentation, and Evaluation.
- Dec. 2014 D6.3-Final Report on Integration and Evaluation Plans.
- Oct. 2015 D6.4-Final Report on Testbeds, Experimentation, and Evaluation, Demonstration.
- Nov. 2013 D7.2.1-Dissemination and Standardization Report.

Project Meetings

- Jun. 2013 2nd General Assembly Meeting, Paris.
- Sep. 2013 WP3 & WP5 Joint Meeting, Sofia.
- Nov. 2013 3rd General Assembly Meeting, Berlin.
- Feb. 2014 1st Developer Meeting , Winterthur.
- May. 2014 4th General Assembly Meeting, Sofia.

June. 2014 5th General Assembly Meeting, Lisbon.
Nov. 2014 6th General Assembly Meeting, Berlin.
May. 2015 4th Developer Meeting, Madrid.
May. 2015 7th General Assembly Meeting, Regensdorf.
Jan. 2016 Final Demonstration Meeting, Berlin.