

PROFILE

- **+12 years of Telecom R&D experience**, in Europe and Japan, in both academia and industry, in the areas of Evolved Packet System (EPS), Mobile Cloud Networking, and Mobile Network Standardization with focus on Long Term Evolution (LTE) and EPS.
- **Initiation, direction & management of several EU cooperative research projects and technical NEC business unit projects** related to wireless networking, in particular to mobile data offload, mobile cloud networking, congestion control, mobile content delivery networks, mobile multimedia streaming, wireless access steering, vehicular communications, and social multimedia networking.
- **Author of several scientific publications** in top IEEE Magazines & Transactions (61), reputable IEEE flagship international conferences (93), and patents (17) with impact on both mobile core network and RAN businesses.
- **IEEE Communications Society (ComSoc) Distinguished Lecturer:** 11 Keynotes, 9 Tutorials, and 45 Invited talks
- **Cross-cultural work environments**
Heavy international exposure and deep understanding of social cultures of Asia (+14 years of residence in Japan), various European countries (+6 years of residence in Germany), and most Middle Eastern and North-African countries.
- **Written and verbal communications in several languages**
Arabic (Native), Japanese (Full professional proficiency), English (Full professional proficiency), French (Full professional proficiency), and German (Elementary proficiency).
- **Ph.D. degree in Information Sciences** from the Graduate School of Information Sciences, Tohoku Univ., Japan.
- **Citizenship:** Japanese



BIOGRAPHY

Prof. Tarik Taleb is an IEEE Communications Society (ComSoc) Distinguished Lecturer and a senior member of IEEE. He is currently a Professor at the School of Electrical Engineering, Aalto University, Finland. He has been working as Senior Researcher and 3GPP Standards Expert at NEC Europe Ltd, Heidelberg, Germany. He was then leading the NEC Europe Labs Team working on R&D projects on carrier cloud platforms. He was also serving as technical leader of the main work package, Mobile Core Network Cloud, in EU FP7 Mobile Cloud Networking project, coordinating among 9 partners including NEC, France Telecom, British Telecom, Telecom Italia, Portugal Telecom Innovation, SAP, & Intel. Prior to his work at NEC and till Mar. 2009, he worked as assistant professor at the Graduate School of Information Sciences, Tohoku University, Japan, in a lab fully funded by KDDI, the second largest network operator in Japan. From Oct. 2005 till Mar. 2006, he was working as research fellow with the Intelligent Cosmos Research Institute, Sendai, Japan. He received his B. E degree in Information Engineering with distinction, M.Sc. and Ph.D. degrees in Information Sciences from GSIS, Tohoku Univ., in 2001, 2003, and 2005, respectively.

Prof. Taleb's research interests lie in the field of architectural enhancements to mobile core networks (particularly 3GPP's), mobile cloud networking, network function virtualization, software defined networking, mobile multimedia streaming, inter-vehicular communications, and social media networking. Prof. Taleb has been also directly engaged in the development and standardization of the Evolved Packet System as a member of 3GPP's System Architecture working group. Prof. Taleb is a board member of the IEEE Communications Society Standardization Program Development Board. As an attempt to bridge the gap between academia and industry, Prof. Taleb has founded and has been the general chair of the "IEEE Workshop on Telecommunications Standards: from Research to Standards", a successful event that got awarded "best workshop award" by IEEE Communication Society (ComSoC). Based on the success of this workshop, Prof. Taleb has also founded and has been the steering committee chair of the IEEE Conference on Standards for Communications and Networking (IEEE CSCN).

Prof. Taleb is/was on the editorial board of the IEEE Transactions on Wireless Communications, IEEE Wireless Communications Magazine, IEEE Transactions on Vehicular Technology, IEEE Communications Surveys & Tutorials, and a number of Wiley journals. He is serving as chair of the Wireless Communications Technical Committee, the largest in IEEE ComSoC. He also served as Secretary and then as Vice Chair of the Satellite and Space Communications Technical Committee of IEEE ComSoc (2006 - 2010). He has been on the technical program committee of different IEEE conferences, including Globecom, ICC, and WCNC, and chaired some of their symposia.

Prof. Taleb is the recipient of the 2009 IEEE ComSoc Asia-Pacific Best Young Researcher award (Jun. 2009), the 2008 TELECOM System Technology Award from the Telecommunications Advancement Foundation (Mar. 2008), the 2007 Funai Foundation Science Promotion Award (Apr. 2007), the 2006 IEEE Computer Society Japan Chapter Young Author Award (Dec. 2006), the Niwa Yasujiro Memorial Award (Feb. 2005), and the Young Researcher's Encouragement Award from the Japan chapter of the IEEE Vehicular Technology Society (VTS) (Oct. 2003). Some of

Prof. Taleb's research work have been also awarded best paper awards at prestigious conferences.

WORK EXPERIENCE

Aalto University, Espoo, Finland

Oct. 2014 - Present

Professor

Communications and Networking Department, School of Electrical Engineering

NEC Europe Ltd., Heidelberg, Germany

Apr. 2009 - Apr. 2015

Senior Researcher/Telecommunications Standards Expert

Mobile Core Network R&D and 3GPP Systems Architecture Standards Expert

Main Roles: Technical leader of NEC Europe Labs Team (7 members) working on R&D projects on carrier cloud platforms. Technical leader of the main work package, Mobile Core Network Cloud, in EU FP7 Mobile Cloud Networking project (coordinating among 9 partners including NEC, France Telecom, British Telecom, Telecom Italia, Portugal Telecom Innovation, SAP, & Intel). Senior Telecom Standardization Engineer and NEC delegate to 3GPP System Architecture (SA2).

Tohoku University, Sendai, Japan

Apr. 2006 - Mar. 2009

Assistant Professor

Advanced Information Exchange Technology (AIET) Lab, Endowed by **KDDI Corporation**.

Main Roles: Fostering collaboration between KDDI Corporation and labs in Tohoku University. R&D on mobile multimedia streaming, QoS support in mobile networks, and ambient assisted living. Graduate and undergraduate student supervision and teaching.

Intelligent Cosmos Research Institute, Sendai, Japan

Oct. 2005 - Mar. 2006

Research Fellow

Involved with the "Intelligent Network Security Management" Project

Main Roles: R&D on network security, particularly intrusion detection systems, detection of Internet worms and denial of service attacks using encrypted protocols.

21st Century Centre of Excellence (COE) program, Tohoku Univ., Sendai, Japan

Apr. 2004 - Sep. 2005

Assistant Researcher

Involved with the "System Construction of Global Network Oriented Information Electronics" Project

Main Roles: R&D on TCP performance, resource management, data routing, and load balancing techniques for integrated terrestrial/satellite communications systems for Internet use.

EDUCATION

Ph.D., Information Sciences

Apr. 2003 - Sep. 2005

Graduate School of Information Sciences, Tohoku University, Sendai, Japan

Dissertation Title: "Internetworking over Next-Generation NGEO/IP-Based Satellite Communications Systems"

M.S., Information Sciences

Apr. 2001 - Mar. 2003

Graduate School of Information Sciences, Tohoku University, Sendai, Japan

Thesis Title: "TCP Performance Evaluation over Multi-Hop Satellite Constellations"

B.E., Information Engineering

Apr. 1997 - Mar. 2001

School of Engineering, Tohoku University, Sendai, Japan

Bachelor Thesis: "A Study of Multicast Usage to Provide Scalable and Interactive Video-on-Demand Service"

Graduated with Distinction

SUMMARY OF PROFESSIONAL ACTIVITIES

- **Member, 5G Observatory Scientific Committee**, Jun. 2015 – Present.
- **IEEE ComSoc Technical Activities Council Representative**, IEEE Online Content Board, Apr. 2015 - Present
- **Chair**, Wireless Communications Technical Committee, IEEE Communications Society (ComSoc), Jan. 2015 – Present.
- **Secretary**, Special Technical Community on Big Data, IEEE Computer Society, Jan. 2015 – Present.

- **Advisory Board member**, IEEE Communications Standards Supplement at IEEE Communications Magazine – Apr. 2014 – present.
- **IEEE Communications Society (ComSoc) Distinguished Lecturer** – 2014 and 2015 program
- **Vice Chair**, Wireless Communications Technical Committee, IEEE Communications Society (ComSoc), Jan. 2013 – Dec. 2014.
- **Board member**, IEEE ComSoc Standardization Program Development Board, Jun. 2012 - present
- **Secretary**, Wireless Communications Technical Committee, IEEE Communications Society (ComSoc), Jan. 2011 - Dec. 2012.
- **Vice chair**, Satellite and Space Communications Technical Committee, IEEE Communications Society (ComSoc), Jul. 2008 - Jun. 2010.
- **Secretary**, Satellite and Space Communications Technical Committee, IEEE Communications Society (ComSoc), Jul. 2006 - Jun. 2008.
- **Executive member**, IEEE ComSoc Practice Analysis Task Force (PATF), Dec. 2006 – Nov. 2007. (as part of the IEEE ComSoc Certification Program in Wireless Communication Engineering Technologies (WCET)).

SUMMARY OF EDITORIAL ACTIVITIES

- **Advisory Board member**, IEEE Communications Standards Supplement at IEEE Communications Magazine – Apr. 2014 – present.
- **Associate editor**, IEEE Transactions on Wireless Communications, Nov. 2014 - present
- **Associate editor**, IEEE Transactions on Vehicular Technology, Jun. 2009 - present
- **Associate editor**, Wiley Interscience J. on Wireless Communications and Mobile Computing, Jan. 2008 - present
- **Associate editor**, IEEE Communications Surveys & Tutorials journal, May. 2008 - Dec. 2012
- **Associate editor**, Journal of Computer Systems, Networks, and Communications, Oct. 2007 – Dec. 2012
- **Associate editor**, Wiley Journal on Security and Communication Networks, Dec. 2007 – Dec. 2012
- **Department editor**, IEEE Wireless Communications Magazine, Apr. 2006 – Mar 2009.

SUMMARY OF GUEST EDITORIAL ACTIVITIES

- **Guest editor** of a Special Issue on “Research & Standards: Advanced Cloud & Virtualization Techniques for 5G Networks,” at Communications Standards Supplement of IEEE Communications Magazine, Publication date: Jun. 2015
- **Guest editor** of a Special Issue on “Unveiling 5G: Emerging Research Advances, Prospects, and Challenges,” at IEEE Network Magazine. Publication date: late 2014
- **Guest editor** of a Special Issue on “Research and Standards: Leading the Evolution of Telecom Network Architectures,” at IEEE Wireless Communications Magazine. Publication date: early 2014
- **Guest editor** of a Special Issue on “Communications and Networking in the Cloud,” at the Elsevier Journal on Computer Networks. Publication date: May 15, 2013
- **Guest editor** of a Feature Topic on “Telecommunications Standards” at the IEEE Communications Magazine. Publication date: March and August 2013
- **Guest editor** of a Special Issue on “Security in Smart Grid” for Wiley Security and Communication Networks Journal, Publication year: 2013
- **Guest editor** of a Special Issue on “Next Generation Wireless Communications and Mobile Computing/Networking Technologies” for Wireless Communication and Mobile Computing Journal (Wiley). Publication date: End of 2008

SUMMARY OF CONFERENCE/WORKSHOP FOUNDED

- **Founder, General Chair, and Steering Committee Chair**, “IEEE Conference on Standards for Communications and Networking”, Tokyo, Japan, Oct. 2014
- **Founder & General Chair**, “IEEE Workshop on Telecommunications Standards: from Research to Standards”, Austin, USA, Dec. 2014
- **Founder & General Chair**, “IEEE Workshop on Telecommunications Standards: from Research to Standards”, Budapest, Hungary, Jun. 2013
- **Founder & Technical Program Committee chair**, “IEEE Workshop on Telecommunications Standards: from Research to Standards”, Ottawa, Canada, Jun. 2012 (**IEEE ComSoc Best Workshop Awarded**)
- **Founder & Technical Program Committee chair**, IEEE iCOST 2011, Shanghai, China, Oct. 2011.

SUMMARY OF CONFERENCE ORGANIZATION ACTIVITIES

- **General Chair**, “IEEE Wireless Communications and Networking Conference (IEEE WCNC) 2019”, Marrakech, Morocco, Apr. 2019.

- **Workshops Chair**, “IEEE Conf. on Personal Indoor and Mobile Radio Communications - PIMRC’16,” Valencia, Spain, June. 2016.
- **Founder & General Chair**, “IEEE Workshop on Telecommunications Standards: from Research to Standards”, Austin, USA, Dec. 2014.
- **Service and Applications Track Chair**, IEEE Wireless Communications and Networking Conf., Doha, Qatar, Apr. 2016
- **Program Track Chair**, “9th Int’l Conf. on Testbeds and Research Infrastructures for the Development of Networks & Communities,” Guangzhou, China, May 2014.
- **Program Track Chair**, “Green ICT, HCI and Virtualization for cloud,” 4th Int’l Conf. on Cloud Computing, Wuhan, China, Oct. 2013
- **Symposium chair**, Wireless Networking Symposium, IEEE ICC 2011, Kyoto, Japan, May 2011.
- **Technology/Business Application Panels Chair**, IEEE WCNC 2010, Sydney, Australia, Apr. 2010.
- **Technical Program Chair**, IEEE WiMOB 2010, Niagara Falls, Canada, Oct. 2010.
- **Symposium chair**, Selected Areas in Communications Symposium, IEEE ICC 2010, Capetown, South Africa, May 23-27, 2010.
- **Symposium chair**, WLANs/WPANs Symposium, ACM IWCMC 2010, France, Jun. 2009.
- **Symposium chair**, Wireless Networking Symposium, IEEE Globecom 2009, Honolulu, Hawaii, USA, 30 Nov – 4 Dec, 2009.
- **Symposium chair**, WLANs/WPANs Symposium, ACM IWCMC 09, Leipzig, Germany, Jun. 2009.
- **Symposium chair**, Communication and Signal Processing Symposium, IEEE GCC 2009, Kuwait, Kuwait, Mar. 17-19, 2009.
- **Symposium chair**, Wireless Local Area Networks and Personal Area Networks Symposium, Int’l Wireless Communications and Mobile Computing Conference 2008 (IWCMC 2008), Crete Island, Greece, Aug. 6-8, 2008.
- **Publicity chair**, 2008 International Conference on Access Networks, Las Vegas, Nevada, USA, Oct. 15-17, 2008.
- **Symposium chair**, Computing & Information Systems track, 4th Int’l Conf. on Innovations in Information Technology (IIT 2007), Dubai, UAE, Nov 18-20, 2007.
- **Workshop chair**, 2007 Sendai Int’l Workshop on Internet Security and Management, Jan. 2007.
- **Workshop chair**, 2007 Sendai Int’l Workshop on Advanced Information Exchange Technology, New Services and Applications and their impacts on Network Technology, Jun. 2007.

AWARDS

- **IEEE ComSoc Best Asia-Pacific Young Researcher Award** of the IEEE ComSoc Asia Pacific, Jun. 2009.
- **2008 TELECOM System Technology Award** from the Telecommunications Advancement Foundation, Mar. 2008.
- **Funai Foundation Science Promotion Award**, Kyoto, Japan, Mar. 2007.
- **IEEE Computer Society Japan Chapter Young Author Award**, Tokyo, Japan, Dec. 2006.
- **Niwa Yasujiro Memorial Paper Award**, Tokyo Denki University, Tokyo, Japan, Feb. 2005.
- **Young Researcher's Encouragement Award**, IEEE Vehicular Tech. Society JP Chapter, Orlando, USA, Oct. 2003.

BEST PAPER AWARDS

- **Best paper award**, IEEE ICC 2012, Ottawa, Canada, Jun. 2012. [Paper Title: T. Taleb and A. Ksentini, “QoS/QoE Predictions-based Admission Control for Femto Communications”]
- **Best paper award**, IEEE Globecom 2010, Miami, USA, Dec. 2010. [Paper Title: T. Taleb and A. Benslimane, "Design Guidelines for a Network Architecture Integrating VANET with 3G & Beyond Networks"]
- **Best paper award**, ACM IWCMC 2009, Leipzig, Germany, Jun. 2009. [Paper Title: Z. Fadlullah, T. Taleb, N. Nasser, and N. Kato, "Exploring the Security Requirements for Quality of Service in Combined Wired and Wireless Networks"]
- **Best Paper Award**, 9th Int. Symposium on Wireless Personal Multimedia Communications (WPMC’06), San Diego, USA, Sep. 2006. [Paper title: K. Kashibuchi, T. Taleb, N. Kato, and Y. Nemoto, "Fast Convergent Layered Multicast in Fixed and Mobile Networks"]

HONORS

- **CME (Compétences Marocaines à l’Etranger – Skillful Moroccans Living Abroad)**, Centre National pour la Recherche Scientifique et Technique (CNRST), Morocco, Sep. 2014-Jun. 2015
- **High-Level Foreign Expert**, Republic of China, 2014-2016
- **Certificate of Appreciation** from Int’l Wireless Communications & Mobile Computing Conf. 2014.
- **IEEE Communications Society (ComSoc) Distinguished Lecturer**, Jan. 2014 – Dec. 2015.
- **Certificate of Appreciation** from IEEE Communications Society Standards Development Board, Dec. 2013

- **IEEE Wireless Communication Engineering Technologies (WCET) Certification** from IEEE Communications Society, Nov. 2013
- **Certificate of Appreciation** from IEEE Int'l Conf. on Green Computing and Communications for delivering a keynote on Carrier Cloud at IEEE GreenCom, Beijing, China, Aug. 2013
- **IEEE ComSoc Best Workshop Award** for the organization of the IEEE ICC 2012 edition of "IEEE Workshop on Telecommunications Standards: from Research to Standards", Ottawa, Canada, Jun. 2012
- **Certificate of Appreciation** from IEEE Communications Society for chairing the Wireless Networking Symposium, ICC 2011, Kyoto, Japan, Jun. 2011.
- **Certificate of Appreciation** from IEEE Communications Society recognizing excellence as a Reviewer and Editorial Board Member of IEEE Surveys and Tutorials journal, Apr. 2011.
- **Certificate of Appreciation** from 7th Int'l Conf. on Innovations in Information Technology, Apr. 2011.
- **Certificate of Appreciation** from Second Kuwait Conference on e-Services and e-Systems, Apr. 2011.
- **Certificate of Appreciation** from IEEE ComSoc for services to the satellite and space communications Technical Committee, Dec. 2010.
- **Certificate of Appreciation** for chairing the Symposium on Selected Areas in Communications, ICC 2010, Cape Town, South Africa, May 2010.
- **Certificate of Appreciation** for chairing the Wireless Networking Symposium, Globecom 2009, Hawaii, USA, Nov. 2009.
- **Certificate of Appreciation** from 2009 Int'l Conf. on High Performance Computing and Simulation (HPCS), Jun. 2009.
- **Best Symposium Award** of the IEEE IWCMC 2008 Conference, Crete, Greece. (Aug. 2008)
- **Certificate of Appreciation**, Symposium Chair, Innovations'07, Nov. 2007.
- **IEEE Travel Grant Award**, IEEE, New Orleans, USA, Mar. 2005 - Travel grant to attend WCNC'05 conference.
- **Research Internship**, Nippon Telegraph and Telephone East Corporation, NTT East Co., summer 2001; working on "Performance Evaluation of Windows-based Video-on-Demand Servers."

EVALUATOR FOR FUNDING AGENCIES

- Qatar National Research Fund, Qatar Foundation, Qatar,
- National Centre of Science & Technology Evaluation, Republic of Kazakhstan
- Czech Science Foundation, Czech Republic
- Centre National pour la Recherche Scientifique et Technique, Morocco

STANDARDISATION ACTIVITIES

- 3GPP System Architecture Working Group 2 – Member (May 2009 – Apr. 2013)
- IEEE ComSoc Standardization Program Development Board – Board Member (Jun. 2012 – Present)

RESEARCH PROJECTS

- **Mobile Edge/Fog Computing**
- **Cloud-based Internet of Things**
- **Mobile cloud networking**
- **Multimedia-centric social media networking**
- **Architecture enhancements for E-UTRAN and non-3GPP accesses**
- **Machine type communications**
- **Network resiliency and self organization**
- **Mobile networks:** multimedia streaming, cross layer design, handoff/mobility management, resource management, dynamic QoS negotiation, and adaptive scheduling.
- **Integrated terrestrial/satellite communications systems for Internet use:** TCP performance, load balancing, and handover management.
- **Context aware mobile applications and internet services.**
- **E-health:** designing indoor assistance systems for persons with cognitive impairments.
- **Network security:** intrusion detection systems, detection of denial of service attacks, internet worms.
- **Sensor networks, ad-hoc networks, and vehicle ad-hoc networks:** routing and energy efficiency.

EU FP7 PROJECTS

- **Mobile Cloud Networking** – FP7-318109 (15.7M Euros, Nov. 2012 – Oct 2015)
 - Main contributor to proposal drafting.
 - Leader of the main work package, "Mobile Core Network Cloud", coordinating among nine partners

including NEC, France Telecom, British Telecom, Telecom Italia, and Portugal Telecom Innovations.

- Leader of NEC Europe Laboratories team consisting of seven members.
- **ResumeNet** – FP7-224619 – Resilience & Survivability for Future Networking: Framework, Mechanisms, & Experimental Evaluation
- **UniverSelf** – FP7-257513 – Realizing Autonomics for Future Networks

SELECTED RECENT PROJECTS

- **Carrier Cloud**: This is an ongoing project where I investigate and devise solutions for the on-demand deployment of mobile networks on federated cloud, improving the virtual EPC (Evolved Packet Core) product of NEC and its business. The project also investigates the concept of Follow Me Cloud, a term I coined, whereby mobile services follow mobile users as they move and according to their needs. I am currently technically leading the NEC Europe Labs team (7 members) working on this project and also technically leading the main work package, mobile core network cloud, in the relevant EU FP7 mobile cloud networking project (15.7M €) coordinating among 9 partners.
- **Cost-Efficient Mobile Content Delivery Network (CDN) for Mobile Operators**: The overall objective of this project is the design of cost-efficient mobile CDN and the maximization of ARPU (Average Revenue Per User) in LTE environments. In this project, I developed techniques for selective IP traffic offload from mobile core networks, proposed a number of enhancements to the architecture of eUTRAN to support decentralized mobile core networks, and devised techniques for the placement of caches and content. I also investigated the impact of popular social media services on RAN and mobile core network and proposed adequate solutions.
- **Mobile Network Improvements for the Support of Machine Type Communications (MTC)**: In this project, I developed solutions to mitigate congestion due to signalling from potential number of MTC devices impacting the control plane of a mobile network. These solutions pertain to usage of back-off timers, handling of signalling messages in bulk, optimized paging of MTC devices with low mobility features, and efficient grouping methods of MTC devices.
- **Wireless Access Steering in Heterogeneous Wireless Networks**: In this project, I principally designed an admission control for handoff and flow mobility between macro core network and small cell networks, and also for the selection of optimal access between WiFi networks and mobile networks, taking into account different criteria regarding users, their running applications and services, and the underlying wireless/mobile networks.

GRANTS

(while being affiliated with Tohoku University)

- **Grant-in-Aid for Scientific Research (B) (Collaborator Investigator -- CI)** Apr. 2008 - Mar. 2011
 - Japan Society for the Promotion of Science (JSPS)
 - Next Generation Multi-Layered Satellite Network Highly Compatible with Internet Protocol
 - URL: <http://kaken.nii.ac.jp/d/p/20300021.en.html>
- **Grant-in-Aid for Scientific Research (B) (Principal Investigator -- PI)** Apr. 2007 - Mar. 2009
 - Japan Society for the Promotion of Science (JSPS)
 - Towards the design of a global ubiquitous next-generation information system
 - URL: <http://kaken.nii.ac.jp/d/p/19300014.en.html>
- **Grant-in-Aid for Scientific Research (B) (CI)** Apr. 2007 - Mar. 2009
 - Japan Society for the Promotion of Science (JSPS)
 - A Study on risk detection and evaluation system to guarantee the safety of the elderly in daily life
 - URL: <http://kaken.nii.ac.jp/d/p/19360181.en.html>
- **Grant-in-Aid for Young Scientists (start-up)** Apr. 2006 - Mar. 2007
 - Japan Society for the Promotion of Science (JSPS)
 - Robust routing, data transport, and mobility management protocols for hybrid wired/wireless networks
 - URL: <http://kaken.nii.ac.jp/d/p/18800004.en.html>
- **Research Equipment Fund (PI)** Apr. 2006 - Mar. 2007
 - Graduate School of Information Sciences, Tohoku University
 - Large scale networks equipment
- **KDDI Endowment Fund (CI)** Apr. 2006 - Mar. 2009
 - KDDI Corporation
 - Research on advanced information exchange technology
- **21st Century Centre of Excellence (COE) Program (CI)** Apr. 2004 - Sep. 2005
 - Japanese Ministry of Education, Culture, Sports, Science and Technology (MEXT)
 - In charge of "Transmission protocols for satellite communication systems" as part of the "System Construction of Global Network Oriented Information Electronics" project

STUDENT SUPERVISION

- Currently supervising 5 master students at Aalto University.
- Supervised to graduation 5 Ph. D students, 14 master students and 10 bachelor students, all at Tohoku University, Sendai, Japan, one Ph.D student at University of Montreal, Montreal, Canada.
 - Four PhD students got academic positions, two at Tohoku Univ., one at Venezuela Univ., and another at Burkina Faso University.
 - Many of my other students succeeded in securing competitive jobs in world-renowned Japanese companies (e.g., KDDI, NTT, NTT DOCOMO, Hitachi, Fujitsu, and NEC).
 - Some of my students were awarded also many competitive national and regional awards.

TEACHING

(while being affiliated with Tohoku University)

- Computer Networks
- Introduction to the Network Simulator
- Basics in C programming
- Practical Laboratory: Experiments on clustering and networking

EXTERNAL PhD EXAMINATION

- Dr. Hassan Ali-Ahmad, "Design and Analysis of Distributed Mobility Management in IPv6 Mobile Networks," Telecom Bretagne, France, Jan. 2014.
- Dr. Ehssan Sakhaee, "Stable communication protocol design for aeronautical and large-scale network," University of Sydney, Australia, May 2008.

PUBLICATIONS

Journals

- J1- A. Walid, A. Kobanne, E. Sabir, **T. Taleb**, and M. Elkoutbi, "Group Vertical Handoff Management in Heterogeneous Networks", in **Wireless Communications and Mobile Computing**. (to appear)
- J2- H. Shariatmadari, R. Ratasuk, S. Iraji, A. Laya, T. Taleb, R. Jäntti, and A. Ghosh, "Machine-Type Communications: Current Status and Future Perspectives Towards 5G Systems," in **IEEE Communications Magazine**. (to appear)
- J3- F.Z. Yousaf and **T. Taleb**, "Fine Granular Resource-Aware Virtual Network Function Management for 5G Carrier Cloud," in **IEEE Network Magazine**. (to appear)
- J4- F.Z. Yousaf, P. Loreiro, F. Zdarsky, **T. Taleb**, and M. Leibsche, "Cost Analysis of initial deployment strategies of a Virtual Network Infrastructure in a Datacenter", in **IEEE Communications Magazine**. (to appear)
- J5- M. Chen, Y. Zhang, L. Hu, **T. Taleb**, and Z. Sheng, "Cloud-based Wireless Network: Virtualized, Reconfigurable, Smart Wireless Network to Enable 5G Technologies," in **ACM Mobile Networks and Applications (MONET) J.** (to appear)
- J6- A. Nadembega, A. Hafid, and **T. Taleb**, "A Destination & Mobility Path Prediction Scheme for Mobile Networks," in **IEEE Trans. on Vehicular Technology**. (to appear)
- J7- A. Nadembega, A. Hafid, and **T. Taleb**, "Mobility Prediction-aware Bandwidth Reservation Scheme for Mobile Networks," in **IEEE Trans. on Vehicular Technology**. (to appear)
- J8- **T. Taleb**, Y. Hadjadj-Aoul, and K. Samdanis, "Efficient Solutions for Enhancing Data Traffic Management in 3GPP Networks," in **IEEE Systems J.**, Vol.9, No. 2, Jun. 2015. pp.519 - 528
- J9- **T. Taleb**, M. Corici, C. Parada, A. Jamakovic, S. Ruffino, G. Karagiannis, and T. Magedanz, "EASE: EPC as a Service to Ease Mobile Core Network," in **IEEE Network Magazine**, Vol. 29, No. 2, Mar. 2015. pp.78 – 88.
- J10- **T. Taleb** and A. Ksentini, "VECOS: A Vehicular Connection Steering Protocol," in **IEEE TRANS. on Vehicular Technology**, Vol. 64, No. 3, Mar. 2015. pp. 1171 – 1187
- J11- A. Nadembega, A. Hafid, and **T. Taleb**, "An Integrated Predictive Mobile-Oriented Bandwidth-Reservation Framework to Support Mobile Multimedia Streaming," in **IEEE Trans. on Wireless Communications**, Vol. 13, No. 12, Dec. 2014, pp. 6863 – 6875 .
- J12- M. Chen, D.O. Mau, Y. Zhang, **T. Taleb**, and V.C.M. Leung, "VENDNET: Vehicular Named Data Network," in **Elsevier J. Vehicular Communications**, Vol. 1, No. 4, Oct. 2014, pp. 208 – 213.
- J13- **T. Taleb**, A. Ksentini, and A. Kobbane, "Lightweight Mobile Core Networks for Machine Type Communications," in **IEEE Access Magazine**, Vol 2, Oct. 2014. pp.1128-1137
- J14- A. Ksentini, **T. Taleb**, and F. Messaoudi, "A LISP-based Implementation of Follow Me Cloud," in **IEEE Access Magazine**, Vol 2, Oct. 2014. pp. 1340-1347
- J15- **T. Taleb**, K. Samdanis, and A. Ksentini, "Supporting Highly Mobile Users in Cost-Effective Decentralized Mobile Operator Networks," in **IEEE Trans. on Vehicular Technology**, Vol. 63, No. 7, Sep. 2014, pp. 3381-3396.

- J16-**T. Taleb**, "Towards Carrier Cloud: Potential, Challenges, & Solutions," in **IEEE Wireless Communications Magazine**, Vol. 21, No. 3, Jun. 2014. pp. 80-91.
- J17-S. Medjiah, **T. Taleb**, and A. Toufik, "Sailing over Data Mules in Delay Tolerant Networks," in **IEEE Trans. on Wireless Communications**, Vol. 13, No. 1, Jan. 2014. pp. 5-13.
- J18-X. Wang, M. Chen, **T. Taleb**, A. Ksentini, and V.C.M. Leung, "Cache in the air: exploiting content caching and delivery techniques for 5G systems," in **IEEE Communications Magazine**, Vol. 52, No. 2, Feb. 2014. pp.131-139
- J19-**T. Taleb** and A. Ksentini, "Follow Me Cloud: Interworking Federated Clouds & Distributed Mobile Networks", in **IEEE Network Magazine**, Vol. 27, No. 5, Sep./Oct. 2013. pp. 12 - 19
- J20-N. Nasser, L. Karim, and **T. Taleb**, "Dynamic Multilevel Priority Packet Scheduling Scheme for Wireless Sensor Network," in **IEEE Trans. on Wireless Communications**, Vol. 12, No. 4, Apr. 2013. pp. 1448 - 1459.
- J21-**T. Taleb** and A. Ksentini, "On Alleviating MTC overload in EPS", in **Elsevier J. on Ad Hoc Networks**, Vol. 18, Jul. 2014, pp. 24–39.
- J22-A. Ksentini and **T. Taleb**, "QoE-Oriented Adaptive SVC Decoding in DVB-T2," in **IEEE Trans. on Broadcasting**, Vol. 59, No. 2, Jun. 2013. pp.251-264
- J23-M.P. Anastasopoulos, **T. Taleb**, M. Obaidat, and P.G. Cottis, "Feedback Suppression in Multicast Satellite Networks using Game Theory," in **IEEE Systems Journal**, Vol. 6, No. 4, Dec. 2012. pp. 657 - 666
- J24-**T. Taleb** and Y. Hadjadj-Aoul, "QoS²: A Framework for Integrating Quality of Security with Quality of Service," in **Wiley J. on Security & Communication Networks**, Vol. 5, No. 12, Dec. 2012. pp. 1462-1470.
- J25-K. Samdanis, **T. Taleb**, and S. Schmid, "Traffic Offload Enhancements for eUTRAN", in **IEEE Communications Surveys & Tutorials Journal**, Vol. 14, No. 3, Third Quarter 2012. pp. 884-896.
- J26-A. Ksentini, Y. Hadjadj-Aoul, **T. Taleb**, "Cellular-Based Machine-to-Machine: Overload Control," **IEEE Network Magazine**, Vol. 26, No. 6, Nov/Dec 2012. pp. 54-60.
- J27-**T. Taleb** and A. Kunz, "Machine Type Communications in 3GPP Networks: Potential, Challenges, and Solutions," in **IEEE Communications Magazine**, Vol. 50, No. 3, Mar. 2012.
- J28-K. Samdanis, **T. Taleb**, D. Kutscher, and M. Brunner, "Self Organized Network Management Functions for Energy Efficient Cellular Urban Infrastructures," in **ACM Mobile Networks and Applications (MONET) J.**, Vol. 17, No. 1, Feb. 2012. pp.119 – 131
- J29-**T. Taleb**, M.P. Anastasopoulos, and N. Nasser, "An Auction-based Pareto-optimal Strategy for Dynamic and Fair Allotment of Resources in Wireless Mobile Networks," in **IEEE Trans. on Vehicular Technology**, Vol. 60, No. 9, Nov. 2011, pp. 4587-4597.
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- C82- K. Kashibuchi, **T. Taleb**, A. Jamalipour, Y. Nemoto, and N. Kato, "A New Smooth Handoff Scheme for Mobile Multimedia Streaming using RTP Dummy Packets and RTCP Explicit Handoff Notification", in Proc. of **IEEE WCNC**, Las Vegas, USA, Apr. 2006.
- C83- **T. Taleb**, H. Nishiyama, N. Kato, and Y. Nemoto, "Securing Hybrid Wired/Mobile IP Networks from TCP-Flooding Based Denial-of-Service Attacks", in Proc. of **IEEE Globecom**, St. Louis, Missouri, USA, Nov. 2005.
- C84- **T. Taleb**, T. Suzuki, N. Kato, and Y. Nemoto, "A Dynamic and Efficient MAP Selection for Mobile IPv6 Networks", in Proc. of **IEEE Globecom**, St. Louis, Missouri, USA, Nov. 2005.
- C85- **T. Taleb**, A. Jamalipour, N. Kato, and Y. Nemoto, "IP Traffic Load Distribution in NGE0 Broadband Satellite Networks", in Proc. of 20th **Int.l Symposium on Computer & Information Sciences**, Istanbul, Turkey, Oct. 2005. (**Invited Paper**)
- C86- **T. Taleb**, A. Jamalipour, N. Kato, and Y. Nemoto, "A Global Video-on-Demand Architecture Based on Novel Constellation Composed of Quasi-Geostationary Satellites", in Proc. of 7th **IFIP Int. Conf. on Mobile & Wireless Commun. Networks (MWCN'05)**, Marrakech, Morocco, Sep. 2005.
- C87- **T. Taleb**, N. Kato, and Y. Nemoto, "REFWA Plus: Enhancement of REFWA to Combat Link Errors in LEO Satellite Networks", in Proc. of 2005 **IEEE Workshop on High Performance Switching and Routing**, Hong Kong, P. R. China, May 2005.
- C88- **T. Taleb**, U. Dharmaratna, N. Kato, and Y. Nemoto, "A Geographical Location Based Satellite Selection Scheme for a Novel Constellation Composed of Quasi-Geostationary Satellites", in Proc. of **IEEE ICC 2005**, Seoul, Korea, May 2005.
- C89- **T. Taleb**, K. Kashibuchi, N. Kato, and Y. Nemoto, "A Dummy Segment Based Bandwidth Probing Technique to Enhance the Performance of TCP over Heterogeneous Networks", in Proc. of **IEEE WCNC 2005**, New Orleans, LA USA, Mar. 2005.
- C90- **T. Taleb**, N. Kato, and Y. Nemoto, "An RTT-Based Prevention Technique to Secure LEO Satellite Networks from Denial-of-Service Attacks", in Proc. of **IEEE VTC 2004-Fall**, LA, California, USA, Sep. 2004.
- C91- **T. Taleb**, N. Kato, and Y. Nemoto, "A Recursive, Explicit and Fair Method to Efficiently and Fairly Adjust TCP Windows in Satellite Networks", in Proc. of **IEEE ICC.**, Paris, France, Jun. 2004.
- C92- **T. Taleb**, N. Kato, and Y. Nemoto, "On Improving the Efficiency and Fairness of TCP over Broadband Satellite Networks", in Proc. of **IEEE VTC 2003-Fall**, Orlando, FL., USA, Oct. 2003.
- C93- **T. Taleb**, N. Kato, and Y. Nemoto, "A Neighbors-Buffering Based Technique to Provide Scalable Distance Learning Service in a Multicast Environment", in Proc. of the **4th Int. Conf. on Information Technology Based Higher Education and Training**, Marrakech, Morocco, July 2003.

Local Conferences (in Japan)

- L1- T. Nakamura, **T. Taleb**, and K. Hashimoto, "A Handoff Mechanism to support Multi-Source Streaming in Mobile Communication Systems", in Proc. of the 2008 **IEICE Society Conference**, Kobe, Japan, Dec. 2008.
- L2- T. Nakamura, **T. Taleb**, D. Hanata, and K. Hashimoto, "Partner-based Fast Handoff Mechanism: Issues and Solutions", in Proc. of the 2008 **IEICE Society Conference**, Kyoto, Japan, Jul. 2008.
- L3- T. Nakamura, **T. Taleb**, and K. Hashimoto, "A Handoff Mechanism to support Multi-Source Streaming in Mobile Communication Systems", in Proc. of the 2008 **IEICE Society Conference**, Hakodate, Japan, May 2008.
- L4- T. Nakamura, **T. Taleb**, and K. Hashimoto, "An Efficient Multi-Source Streaming Approach for Mobile Communication Systems," in Proc. of the 2007 **IEICE Society Conference**, Sendai, Japan, Sep. 2007.
- L5- K. Ooi, **T. Taleb**, and K. Hashimoto, "Improvement of VANET-based Cooperative Collision Avoidance Systems," in Proc. of the 2007 **IEICE Society Conference**, Sendai, Japan, Sep. 2007.
- L6- K. Kashibuchi, **T. Taleb**, A. Jamalipour, and N. Kato, "Impact of RTP Handoff on the Performance of Destination Network", in Proc. of the 2007 **IEICE Society Conference**, Okinawa, Japan, Mar. 2007
- L7- D. Mashimo, **T. Taleb**, K. Hashimoto, Y. Nemoto, and N. Kato, "ELB in IP/NGEO Satellite Constellations: Issues and Solutions", in Proc. of the 2006 **Joint Conf. on Satell. Commun.**, Jeju, Korea, Oct. 2006
- L8- Y. Ikeda, Tarik Taleb, K. Hashimoto, Y. Nemoto, and N. Kato, "A Distributed Feedback Mechanism for an Efficient Distribution of Traffic in Hierarchical Mobile IPv6 Networks", in Proc. of the 2006 **IEICE Society Conference**, Sendai, Japan, Sep. 2006
- L9- H. Nishiyama, **T. Taleb**, K. Hashimoto, Y. Nemoto, and N. Kato, "A TCP-based Congestion Avoidance Algorithm with Priority Control", in Proc. of the 2006 **IEICE Society Conference**, Sendai, Japan, Sep. 2006
- L10- K. Kashibuchi, **T. Taleb**, Kazuo Hashimoto, Yoshiaki Nemoto, and Nei Kato, "Streaming Rate Control Mechanism Considering Handoff Operation in RTP/RTCP Communication", in Proc. of the 2006 **IEICE Society Conference**, Sendai, Japan, Sep. 2006.
- L11- M. Ochi, **T. Taleb**, A. Jamalipour, N. Kato, and Y. Nemoto, "Proposal and evaluation of a routing protocol for VANET using mobile velocity vector", **IEICE Technical Report**, Vol. 105, No. 280, CS2005-30, pp. 79-84, Sep.

2005.

- L12- D. Mashimo, **T. Taleb**, A. Jamalipour, N. Kato, and Y. Nemoto, "A Traffic Congestion Avoidance Scheme for LEO Satellite Networks by Using Traffic Detour Technique", in Proc. of the 2005 Joint Conf. on Satell. Commun., Nagoya, Japan, Oct. 2005.
- L13- **T. Taleb**, N. Kato, and Y. Nemoto, " On TCP Performance over Multi-Hops Satellite Constellations", in Proc. of the 2002 Joint Conf. on Satell. Commun., Daejeon, Korea, Oct. 2002.
- L14- **T. Taleb**, N. Kato, and Y. Nemoto, "Effects of Flow Count Change on TCP Behavior", in Proc. of the 2002 IEICE Society Conference, Miyazaki, Japan, Sep. 2002.
- L15- **T. Taleb**, N. Kato, and Y. Nemoto, "REFWA: A Novel Scheme to Improve the Performance of TCP over Low-Earth Orbit Satellite Communications Systems", In Proc. of the 2nd Student-Organizing International Mini-Conference on Information Electronics Systems, SOIM-COE04, Sendai, Japan, Oct. 2004.

Tutorials

- T1- "On the Cloudification of Mobile Core Networks," IEEE Globecom 2015, San Diego, USA, Dec. 2015
- T2- "Cloud-Native 5G Mobile Systems – RAN & Core," IEEE AFRICON 2015, Addis Ababa, Ethiopia, Sep. 2015.
- T3- "Towards 5G: Carrier-Grade Programmable Virtual Mobile Networks," IEEE ICC 2015, London, UK, Jun. 2015.
- T4- "The Evolved Packet System," 7th Int'l Conf. on Innovations in Information Technology, Dubai, UAE, Apr. 2011.
- T5- "e-Health Services: Potential, Challenges, and Way Forward," Second Kuwait Conference on e-Services and e-Systems, Kuwait, Apr. 2011
- T6- "LTE Advanced," Online Tutorial, IEEE Communications Society, Feb. 2011. (based on a business panel in WCNC 2010)
- T7- "The Evolved Packet System," online Tutorial for IEEE ComSoc, IEEE Wireless Communication Engineering Technologies Certification program, 2011.
- T8- "Towards Ubiquitous Healthcare Services", ACM IWCMC 09, Leipzig, Germany, Jun. 2009.
- T9- "Wireless Technologies for Healthcare Services", IEEE GCC 09, Kuwait, Kuwait, Mar. 2009.

Keynotes:

- K1. "Any Network as a Service," Int'l Conf. on Information and Communication Technologies for Disaster Management, Rennes, France, Nov. 2015.
- K2. "NFV & SDN: What Potential for 5G," Int'l Conf. on Wireless Networks and Mobile Communications (WINCOM), Marrakech, Morocco, Oct. 2015
- K3. "Cloud-Native Mobile Networks," Int'l Symposium on Ubiquitous Networking, Casablanca, Morocco, Sep. 2015
- K4. "Congestion Management in 5G Mobile Systems," Int'l Conf. on Wireless Communications (WINCOM), Rabat, Morocco, Dec. 2014
- K5. "Turning Mobile Networking into Software Engineering," Int'l Wireless Communications & Mobile Computing Conf., Nicosia, Cyprus, Aug. 2014
- K6. "On Virtualizing Mobile Networks & Their Functions: Trends and Potential," Int'l Conf. on Testbeds & Research Infrastructures for the Development of Networks & Communities, Guangzhou, China, May 2014
- K7. "Towards Carrier Cloud," IEEE Int'l Conf. on Green Computing & Communications, Beijing, Aug. 2013.
- K8. "Mobile Cloud Networking: Why & How," IEEE Int'l Conf. on Cloud Networking, Paris, Nov. 2012.
- K9. "Towards Mobile Cloud Networking," 4th IEEE Int'l Workshop on Open NGN and IMS Testbeds (ONIT 2012), IEEE Globecom 2012, Anaheim, USA, 7 Dec 2012
- K10. "Cross Roads: Cloud Computing and Mobile Networking," 1st Int'l workshop on Management and Security technologies for Cloud Computing 2012 (ManSec-CC 2012), IEEE Globecom 2012, Anaheim, USA, 7 Dec 2012
- K11. "Mobile Operator Network Decentralization: Merits, Challenges, and some Solutions," Int'l IEEE Workshop on Multimedia Communications (MMCOM), Globecom 2011, Houston, USA, Dec. 2011.

Invited Talks

- I1. "SDN & NFV: Key enabling techs of 5G?," King Abdulaziz University of Science & Technology (KAUST), Jeddah, Saudi Arabia, Jun. 2015
- I2. "Roadmap to 5G: What Potential for Cloud Computing?," University of Tokyo, Tokyo, Japan, May 2015
- I3. "Roadmap to 5G: What Potential for Cloud Computing?," KDDI, Tokyo, Japan, May 2015
- I4. "Roadmap to 5G: What Potential for Cloud Computing?," Doshisha University, Kyoto, Japan, May 2015
- I5. "Towards 5G: Carrier-Grade Programmable Virtual Mobile Networks," Alcatel Lucent, New Jersey, USA, March 2015.
- I6. "Towards 5G: Carrier-Grade Programmable Virtual Mobile Networks," Ohio State University, Columbus, USA, March 2015
- I7. "Congestion Management in 5G Mobile Systems," Georgia Tech, Atlanta, USA, March 2015
- I8. "Towards 5G: Carrier-Grade Programmable Virtual Mobile Networks," Florida Atlantic University, Boca Raton,

Florida, USA, March 2015

- I9. "Towards 5G: Carrier-Grade Programmable Virtual Mobile Networks," AT&T Labs, New Jersey, USA, March 2015
- I10. "Towards 5G: Carrier-Grade Programmable Virtual Mobile Networks," University of Maine, Maine USA, March 2015
- I11. "Towards 5G: Carrier-Grade Programmable Virtual Mobile Networks," Verizon Wireless, Boston, USA, March 2015
- I12. "On Virtualizing Mobile Networks & Their Functions: Trends and Potential," IMDEA Networks, Madrid, Spain, Jun. 2014
- I13. "Mobile Networks As A Cloud Service," University of Shanghai Tech, Shanghai, China, May 2014
- I14. "Mobile Cloud Networking," University of BUPT, Beijing, China, May 2014
- I15. "Network Function Virtualization: From Architecture to Implementation," Chinese Academy of Science, Beijing, China, May 2014
- I16. "Offering Mobile Networks as a Cloud Service," Jian Toa University of Shanghai, Shanghai, China, May 2014
- I17. "Service Orchestration in Mobile Cloud Networking: EPCaaS," Pre-Future Internet Assembly Workshops, Athens, Greece, Mar. 2014
- I18. "Evolution of 3GPP Mobile Network Architectures," Int'l Univ. of Casablanca, Casablanca, Morocco, Mar. 2014
- I19. "Mobile Networks as a Cloud Service," Beijing Univ. of Posts and Telecommunications, Beijing, China, Feb. 2014
- I20. "What Offerings Have Cloud for Telcos?" University of Oklahoma, Oklahoma City, USA, Nov. 2013.
- I21. "Mobile Cloud Networking: What Potential for Energy Efficiency," Future Networks 12th EU FP7 Concertation Meeting, Brussels, Belgium, Oct. 2013.
- I22. "Machine Type Communications: Potential, Challenges, & Some Solutions," Future Seamless Communication (FUSECO) Forum, Berlin, Germany, Nov. 2013.
- I23. "Mobile Network Decentralization: What Role Will Cloud Computing Play?," University of South Australia, Adelaide, Australia, Jul. 2013.
- I24. "Applying Follow Me and Service Migration & Continuity Features in Cloud-based LTE Systems," Future Network & Mobile Summit, Lisbon, Portugal, Jul. 2013.
- I25. "Virtualizing the LTE Evolved Packet Core: Challenges and Possible Solutions," Future Network & Mobile Summit, Lisbon, Portugal, Jul. 2013.
- I26. "Evolution Tracks in 3GPP Standardization," King Fahd University of Petroleum & Minerals, Dammam, Saudi Arabia, May. 2012.
- I27. "Machine Type Communications in LTE-Connected Vehicles: Potential & Impact," Queens University, Kingston, Canada, Jun. 2012.
- I28. "Social Media Apps Racing Ahead of Mobile Networks!" Etisalat BT Innovation Center, Abu Dhabi, UAE, Feb. 2012.
- I29. "On Elastic Mobile Multimedia Streaming Services," Qatar Mobility Innovation Center, Doha, Qatar, Jan. 2012.
- I30. "Centralized Mobile Operator Networks: A Dead End!" Montreal University, Montreal, Canada, Nov. 2011.
- I31. "Coping with the Mobile IP Tsunami," NTT DoCoMo Research Labs, Yokosuka Research Park, Yokohama, Japan, Jun. 2011.
- I32. "Towards Distributed Mobile Operator Networks," Systems Platform Research Laboratories, NEC Japan, Jun. 2011.
- I33. "Mobile Operator Challenges defining New Academic Research Potential," Huazong University of Science and Technology, Wuhan, China, May 2011.
- I34. "Findings on Network Security and Service Resiliency," 4th Int'l Spring School on Distributed Systems (SystèMEs RéparTIS – METIS 2011), Marrakech, Morocco, Apr. 2011.
- I35. "IP Tsunami: Aspects, Challenges, and Opportunities," Second Kuwait Conference on e-Services and e-Systems, Kuwait, Apr. 2011
- I36. "Resilience and Survivability for future networking: framework, mechanisms, & experimental evaluation", NEC Corporation, Tokyo, Japan, May 2010.
- I37. "Towards Mobile Multimedia Streaming Services", NEC Europe Ltd, Heidelberg, Germany, Jun. 2009.
- I38. "Challenges with Mobile Multimedia Streaming and their Respective Solutions", Japan Advanced Institute of Science & Technology, Kanazawa, Ishikawa, Japan, Mar. 2009.
- I39. "Multi-Source Mobile-Streaming: Opportunities, Challenges, and Solutions", IEEE GCC 09, Kuwait, Kuwait, Mar. 2009.
- I40. "On Supporting Multimedia Services in Next Generation Mobile Systems", University of Guelph, Toronto, Canada, Oct. 2008.
- I41. "Trends in Wireless Communications and Wireless Networking ", Al Akhawayn University, Ifrane, Morocco, Jan. 2008.
- I42. "Delivery of TCP/RTP-based Multimedia Services in Heterogeneous Wireless Networks: A Cross Layer Approach ", University College Dublin, Dublin, Ireland, Oct. 2007.
- I43. "Efficient and Fair Data Transmission Protocols for Next Generation Satellite Networks", Waseda University, Tokyo,

Japan, Dec. 2006.

- I44. "Experiences within the Sendai Intelligent Cluster Project: Research issues in Network Security, Satellite Communications, and Wireless Networks", the 2006 Sendai International Workshop on Internet Security and Management, Sendai, Japan, Jan. 2006.
- I45. "Recent Trends in Broadband Satellite Communication Systems: Routing, Mobility Management, Transport, and Security Concerns", Kodan Electronics Co. LTD Seminar, Tokyo, Japan, Mar. 2005.

Talks at EU Project Meetings:

1. "DTRAB: Detecting and Tracing back Attacks against Encrypted Protocols through Traffic-feature Analysis," University of Munich, Germany, Oct. 2009.
2. "QoS²: Integrating "Quality of Service" with "Quality of Security", University of Lancaster, UK, Jun. 2009.

Book Chapters:

1. D. Bottazzi, Z. Md. Fadlullah, R. Montanari, and **T. Taleb**, "Integrating Supports for Ubiquitous Eldercare," Book Title: *Advances in Healthcare Information Systems and Administration*, Editor: Stéfane M. Kabene, Publisher: IGI Global, 2010.
2. R. Wang, X. Wu, T. Wang, and **T. Taleb**, "Delay Tolerant Networking (DTN) Protocols for Space Communications," Book Title: *Delay Tolerant Networks – Protocols and Applications*, Editors: Athanos Vasilakos, Yang Zhang, and Thrasyvoulos V. Spyropoulos, Publisher: CRC Press. Taylor & Francis Group, USA.
3. Z. Fadlullah, **T. Taleb**, and M. Scholler "Combating Against Security Attacks against Mobile Ad hoc Networks (MANETs)," in "Security of Self-Organizing Networks: MANET, WSN, WMN, VANET," by Al-Sakib Khan Pathan, Auerbach Publications, CRC Press, Taylor & Francis Group, USA

Patents: (Four granted patents and many under PCT filing)

- P1. K. Samdanis, A. Kunz, and **T. Taleb**, "Efficient network resource management for real-time applications on LTE networks," filed in Mar. 2013.
- P2. **T. Taleb** and K. Samdanis, "Method and apparatus for Managing Elastic Bearers in a 3GPP Evolved Packet Core," filed in Nov. 2012
- P3. A. Kunz, **T. Taleb**, G. Punz, P. Rost, and A. Maeder, "Method for Small Data Transmission for Machine Type Communication," filed in Jul. 2012.
- P4. **T. Taleb** and A. Kunz, "Method for Dynamic Group ID Creation for Congestion Control in Mobile Networks," filed in Jul. 2012.
- P5. **T. Taleb**, "Group-ID based Dynamic Profile Creation/Management for Optimizing Machine Type Communications and Alleviating Congestion", filed in Jul. 2012
- P6. **T. Taleb** and S. Schmid, "Method and system for provisioning frequently requested content," WO2013068415, PCT/EP2012/072049, Nov. 2011.
- P7. **T. Taleb**, S. Schmid, and J. Lessmann, "Method for Supporting PDN Connectivity of a Mobile Terminal and Mobile Terminal," WO2013072403, PCT/EP2012/072693, Nov. 2011.
- P8. **T. Taleb**, "Method and system for admission control of a traffic flow of a user equipment," WO2013041587, PCT/EP2012/068468, Sep. 2011
- P9. **T. Taleb**, J. Seedorf, and J. Awano, "ALTO Support for Mobile Peer to Mobile Peer Networking," under PCT filing, Sep. 2010.
- P10. **T. Taleb** and D. Dudkowski, "Method for collaborative energy transfer in a wireless network and corresponding wireless network," WO2012041355, also published as PCT/EP2010/006001 and EP2606577A1, Oct. 2010
- P11. **T. Taleb** and G. Punz, "Method for Supporting Selection of PDN Connections for a Mobile Terminal and Mobile Terminal," WO2013004793, PCT/EP2012/063176, Jun. 2011
- P12. **T. Taleb** and N. Taleb, "System and Method for Creating Multimedia Content Channel Customized for Social Network," EP20110820657, Also published as US20120054278, WO2012027577A2, WO2012027577A3, Aug. 2010 (**GRANTED**)
- P13. **T. Taleb** and S. Schmid, "A Method for Controlling Traffic within a Network Structure and a Network Structure," PCT/EP2010/005123, WO/2011/020624, Aug. 2009. (**GRANTED**)
- P14. **T. Taleb**, G. Punz and S. Schmid, "Method for Handling Failure of a MME in a LTE/EPC Network," US20130083650, PCT/EP2011/002312, May 2010. (**GRANTED**)
- P15. **T. Taleb** and S. Schmid, "A Method For Routing Traffic Within a Network and a Network," WO2011095358, PCT/EP2011/000548, Feb. 2010.
- P16. **T. Taleb** and S. Schmid, "Method and mobile terminal device for supporting multiple simultaneous PDN connections to the same APN," US20120307799, PCT/EP2011/000574, Feb. 2010.
- P17. **T. Taleb**, G. Punz, S. Schmid, T. Tamura, and H. Zenbutsu, "Communication System and Communication Controlling Method," US 13/149,264, Sep. 2009. (**GRANTED**)

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AFFILIATIONS

- Institute of Electrical and Electronics Engineers (IEEE) - Senior Member
- IEEE Communications Society, Wireless Communications Technical Committee, Chair
- IEEE Computer Society, Special Technical Community on Big Data, Secretary
- IEEE ComSoc Standardization Program Development Board – Board Member
- IEEE ComSoc, Satellite and Space Communications Technical Committee, Past vice chair & Secretary