Zdenek Becvar

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Work experiences

Since 01/2018	**Czech Technical University in Prague, FEE, Dept. of Telecommunication Engineering** Deputy head of the Department of Telecommunication Engineering
Since 05/2014	**Czech Technical University in Prague, FEE, Dept. of Telecommunication Engineering** Associate professor
2011 – 04/2014	**Czech Technical University in Prague, FEE, Dept. of Telecommunication Engineering** Assistant professor
2008 - 2010	**Czech Technical University in Prague, FEE, Dept. of Telecommunication Engineering** Researcher
2009	**Vodafone RDC at Czech Technical University in Prague, Czech Republic** PhD student focused on development of testbed for wireless networks
2006 - 2007	**Sitronics R&D centre, Prague, Czech Republic** PhD student researcher focused on VoIP speech quality improvement

Education

2005 – 2010	**Czech Technical University in Prague, Faculty of Electrical Engineering** Ph.D. in Telecommunications Thesis: Reduction of handover interruption in mobile network
1999 – 2005	**Czech Technical University in Prague, Faculty of Electrical Engineering** M.Sc. in Telecommunications Thesis: Bluetooth modul for radiomodem

Internships

05-06/2016	**EURECOM, Communication Systems Department**, Sophia Antipolis, France
08/2014	**University College Dublin, Performance Engineering Lab**, Dublin, Ireland
01-07/2013	**CEA-Leti, Wireless Telecommunications Lab**, Grenoble, France
04/2007	**Budapest Politechnic, FEE, Dpt. of Telecommunication**, Budapest, Hungary

Research interests

Radio resource management in mobile networks, mobility support in wireless networks, device-to-device communication, power control, architecture of radio access network (MEC, C-RAN, drones, small cells).

Academic activities

Lectures in Mobile Networks and in Wireless Technologies and Sensor Networks.

Supervisor of 4 PhD and more than 20 BSc/MSc students (Dean's award for two master and one PhD students).

Author and coordinator of double-degree master study programs with NTUST, Taiwan and EURECOM, France.

Member of committee for PhD studies in Telecommunications @ FEE, CTU.

Member of board of Electronics and Communications MSc and BSc study program @ FEE, CTU.

Miscellaneous

Representative of Czech Technical University in Prague in 3GPP and ETSI standardization bodies (2013-2017).

Third place in App Contest at Mobicom 2015 with Android application Percipio.

Member of more than 20 conference committees at prestigious conferences.

Reviewer for many WoS indexed journals including many IEEE Trans. (TWC, TMC, TVT, TNSM), IEEE Letters (CL, WCL), IEEE magazines (Wireless, Communications, Networks, Vehicular technology), and many others.

IEEE Senior member, member of Communications and Vehicular Technology Societies.

Publication activities

More than sixty papers published in journals and international conferences and four book chapters.

Best paper award at European Wireless 2017 (paper: Z. Becvar et al, “Performance of Mobile Networks with UAVs: Can Flying Base Stations Substitute Ultra-Dense Small Cells?”).

One national patent (on D2D) and three provisional US patents (on C-RAN).

H-index: WoS = 7, Scopus = 9, Google scholar = 14

Number of citations: WoS = 216, Scopus = 345, Google scholar = 811

Contributions to 3GPP (D2D, architecture of mobile networks) and IEEE 802.16m (handover).

Selected papers:

[1] R.G. Cheng, Z. Becvar, P.H. Yang, "Modeling of Distributed Queueing-based Random Access for Machine Type Communications in Mobile Networks," *IEEE Communications Letters*, vol. 22, no. 1, 2018.

[2] P. Mach, Z. Becvar, "Energy-aware Dynamic Selection of Overlay and Underlay Spectrum Sharing for Cognitive Small Cells," *IEEE Transactions on Vehicular Technology*, Vol. 66, No. 5, May 2017.

[3] P. Mach, Z. Becvar, "Mobile Edge Computing: A Survey on Architecture and Computation Offloading", accepted to *IEEE Communications Surveys & Tutorials*, third quarter 2017.

[4] M. Vondra, Z. Becvar, "Distance-based Neighborhood Scanning for Handover Purposes in Network with Small Cells," *IEEE Transactions on Vehicular Technology*, Vol. 65, No. 2, February 2016.

[5] Z. Becvar, P. Mach, M. Vondra, "Self-optimizing Neighbor Cell List with Dynamic Threshold for Handover Purposes in Networks with Small Cells," *Wireless Communications and Mobile Computing*, Vol. 15, No. 13. September 2015.

Selected research projects

01/2018 – 12/2020	**Communication in Self-optimizing Mobile Networks with Drones** Research project no. P102/18/27023S funded by Czech Science Foundation (GACR)
01/2018 – 12/2019	**Cooperation with the International Research Centre in Area of Commun. Systems** Research project funded by Ministry of Education, Youth and Sport of Czech Republic
01/2017 – 12/2019	**Combined RF and Visible Light Bands for Device-to-Device communication** Research project no. P102/17/17538S funded by Czech Science Foundation (GACR)
10/2017 – 09/2019	**Mobile Edge Computing and Functional Splitting for Scheduling of Radio Resources** Research project funded by FOXCONN Taiwan
07/2016 – 06/2018	**Game theoretic aspects of wireless spectrum access** Bilateral project no. 8G15008 with prof. Amir Leshem, Bar-Ilan University funded by Ministry of Education, Youth and Sport of Czech Republic
09/2012 – 04/2015	**Project TROPIC** (www.ict-tropic.eu) FP7 project (No. ICT-318784) funded by European Commission Workpackage leader (Scenarios, Architecture, and Market Analysis)
01/2012 – 12/2014	**Prediction Algorithms for Efficient Mobility Management in Wireless Networks** Research project no. P102/12/P613 funded by Czech Science Foundation (GACR)
01/2010 – 12/2011	**Project FREEDOM** (www.ict-freedom.eu) FP7 project (No. ICT-248891) founded by European Commission Workpackage leader (Control procedures for RRM)
12/2008 – 12/2009	**Project WiMATE** (http://www.rdc.cz/en/projects/WiMate) Vodafone RDC project.
01/2008 – 12/ 2009	**Project ROCKET** (www.ict-rocket.eu) FP7 project (No. ICT-215282) founded by European Commission.
01/2006 – 12/2007	**Improvement of VoIP speech quality** Project founded by Sitronics R&D centre, Prague.

Language skills

Czech	Native
English	Fluent
French	Basic
German	Basic