

Europass Curriculum Vitae

Personal information

First name / Surname

Miroslav Vozňák (* 1971)

Address

IEEE Senior Member

Faculty of Electrical Engineering and Computer Science, VSB–Technical University of Ostrava
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Education and training

Dates

1995

Title of qualification awarded

MSc. (Ing.)

Principal subjects covered

Electronics and Telecommunications

Thesis: Source of emission for optical communications

Name of organisation providing education

Faculty of Electrical Engineering and Computer Science
VSB-Technical University of Ostrava, Czech Republic

Dates

2002

Title of qualification awarded

Ph.D.

Principal subjects covered

Telecommunications

Dissertation: Voice traffic optimization with regard to speech quality in network with VoIP technology

Name of organisation providing education

Faculty of Electrical Engineering and Computer Science
VSB-Technical University of Ostrava, Czech Republic

Dates

2009

Title of qualification awarded

assoc. prof. (Doc.)

Principal subjects covered

Electronics and Communication Technology

Habilitation Thesis: Impact of security on speech quality

Name of organisation providing education

Faculty of Electrical Engineering and Computer Science
VSB-Technical University of Ostrava, Czech Republic

Dates

2017

Title of qualification awarded

prof., appointment as a professor in Electronics and Communication Technology

Personal skills, competences

Mother tongue(s)

Czech

Self-assessment

European level (*)

English

German

Understanding				Speaking				Writing	
Listening		Reading		Spoken interaction		Spoken production			
B2	Independent	C1	Proficient User	C1	Proficient User	B2	Independent	B2	Independent
A2	Basic User	A2	Basic User	A2	Basic User	A2	Basic User	A2	Basic User

Positions and Organisational skills	<p>Since 1995 at positions in VSB-Technical University of Ostrava:</p> <ul style="list-style-type: none"> - assistant professor, associate professor and full professor (FEECS VSB-TUO) - junior researcher, senior researcher and external specialist (IT4I VSB-TUO) <p>2009 - 2013 Vice-Chair of Department of Telecommunications (FEECS VSB-TUO), Since 2013 Department chair, Department of Telecommunications (FEECS VSB-TUO), Since 2017 Department chair, Big Data Analysis Lab (IT4I VSB-TUO)</p>
Professional competencies	<p>Research in field of Information and Communication Technologies focusing on Quality of multimedia services, Wireless Networks, Network security, Internet of Things and knowledge datamining in mobile networks.</p>
Membership and professional community	<ul style="list-style-type: none"> - Member of Scientific council at Faculty of Electrical Engineering and Computer Science in VSB-Technical University of Ostrava, - Member of Scientific council at Faculty of Transportation Sciences in Czech Technical University in Prague, - Member of Scientific council at IT4Innovations National Supercomputing Centre, - Member of doctoral branch committees "Telecommunication Technology" at Czech Technical University in Prague, "Telecommunications" at University of Zilina and " Computer Science, Communication Technology and Applied Mathematics" at VSB-Technical University of Ostrava, - IEEE Senior member of Communications Chapter and BigData Community, <p>Editorial board member of journals:</p> <ul style="list-style-type: none"> - Journal of Communications (Alabama, US), - Communications (Ankara, TR), - Advances in Electrical and Electronic Engineering" (Ostrava, CZ), - Elektrevue (Brno, CZ), - Journal of Advanced Engineering and Computation (Ho Chi Minh City, VN), - guest-editor of special issues in "Wireless Personal Communications" (Springer, US), etc... <ul style="list-style-type: none"> - Member of several conference committees such as in 2017: ELECTRONICS2017 - Palanga(LT), MCSS2017 – Cracow(PL), CN2017 - Ladek Zdroj(PL), TSP2017 - Barcelona(ES), FiCloud2017 - Prague(CZ), SEA2017 - Dubai(UAE), AETA207 - Ho Chi Minh City (VN), ICNIT2017 - Penang (MY), KTTO2017 - Malenovice (CZ) and ICAT2017 - Sarajevo (BiH).
Projects in last years	<ul style="list-style-type: none"> - Technology Transfer via Multinational Application Experiments (TETRAMAX), HORIZON 2020 (2017-2021), under grant agreement No. 761349, role: researcher. - Intelligent information system supporting observation, searching and detection for security of citizens in urban environment (INDECT). The 7FP EU (2009-2014) under Grant Agreement No. 218086, role: researcher. - Multi-Gigabit European Research and Education Network and Associated Services (GN3), The 7FP EU (2009-2013) under Grant Agreement No. 238875, role: researcher. - Digital Broadcasting and Broadband Technologies, Erasmus+ Capacity Building in Higher Education, project No. 561688-EPP-1-2015-1-XK-EPPKA2-CBHE-JP (2015-2018), role: coordinator in VSB-TUO. - Multimedia and Digital TV Curricula, Erasmus+ Capacity Building in Higher Education, project No. 586318-EPP-1-2017-1-AL-EPPKA2-CBHE-JP (2017-2020), role: coordinator in VSB-TUO. - IT4Innovations, National Supercomputing Centre, Czech National Centre of Excellence, Ostrava (2011-2016), senior researcher in Research Programme No. 5, role: senior researcher. - Secure Gateway for the Internet of Things (IoT), Ministry of the Interior (CZ), under grant VI2VS/491 (2017-2020), role: coordinator in VSB-TUO. - Development of advanced industrial sensors and an extension of portfolio in Internet of Things, Ministry of Industry and Trade, CZ.01.1.02/0.0/0.0/16_084/0009815 (2017-2020), role: PI in VSB-TUO - Specific method of check-in and number of passengers, Technology Agency of the Czech Republic, under grant TB0500MD011 (2016), role: PI. - Limits of data from mobile sites in statistical surveys of Czech statistical office, Technology Agency of the Czech Republic, grant id TD03000452 (2016-2017), role: coordinator in VSB-TUO. - Security of mobile devices and communication, Technology Agency of the Czech Republic, under grant TF01000091 (2015-2017), role: deputy of PI.
Degrees and awards	<p>2017 - The best paper award, 2017 Multimedia Communications, Services and Security 9th International Conference, MCSS 2017, Kraków, http://mcss2017.kt.agh.edu.pl/</p> <p>2016 – The best paper award, IEEE Symposium on Performance Evaluation of Computer and Telecommunication Systems, Montréal, http://atc.udg.edu/SPECTS2016/</p> <p>2016 – Overall Best Paper Runner Up Award, 2016 Summer Simulation Multiconference, Montréal, http://scs.org/summersim/</p> <p>2016 - Elevation to the grade of IEEE Senior member</p> <p>2015 – The best paper award, IEEE Conference on Computer Networks, http://cn.polsl.pl/2015/</p> <p>2009-2017 supervising theses of ten students who obtained dean's or rector's appreciation</p> <p>2008 - achievement rector's award for contribution to cooperation with industry, from rector of VSB – Technical University of Ostrava</p>

Publications

Scopus
WoS
Google Scholar
Research Gate

- **427 results** indexed in Czech national database of Research, Development and Innovations (IS VaVal), **single author 75 of them**, 89 outputs of industrial and applied research
- **257 results** indexed in **SCOPUS**, 114 articles in journals, 806 citations, h-index=15
- **185 results** indexed in **WoS**, 69 articles in journals, 282 citations, h-index=9
- **h-index = 18** in Google Scholar, 1300 citations
- RG Score = 31.22

Ten selected articles in SCIE journals in last three years

- [1] J. Tovarek, HG. Ilk, P. Partila and M. Voznak, *Human Abnormal Behaviour Impact on Speaker Verification Systems* (2018) **IEEE Access**, on-line published in July 2018, DOI: 10.1109/ACCESS.2018.2854960. 5Year IF **4.199** (2017)
- [2] TN. Nguyen, THQ. Minh, PT. Tran, M. Voznak, *Energy Harvesting over Rician Fading Channel: A Performance Analysis for Half-Duplex Bidirectional Sensor Networks under Hardware Impairments* (2018) **Sensors**, 18(6), art. no. 1781, DOI 10.3390/s18061781. 5Year IF **3.014** (2017)
- [3] HS. Nguyen, TS. Nguyen, VT. Vo, M. Voznak, *Hybrid full-duplex/half-duplex relay selection scheme with optimal power under individual power constraints and energy harvesting* (2018) **Computer Communications**, Vol. 124, pp. 31-44. DOI: 10.1016/j.comcom.2018.04.014. 5Year IF **2.681** (2017)
- [4] HS. Nguyen, TS. Nguyen, M. Voznak, *Relay Selection for SWIPT: Performance Analysis of Optimization problems and the Trade-off between Ergodic Capacity and Energy Harvesting* (2018) **AEU – International Journal of Electronics and Communications**, Vol. 85, pp. 59-67. DOI: 10.1016/j.aeue.2017.12.012. 5Year IF **1.957** (2017)
- [5] M. Mehic, O. Maurhart, S. Rass, M. Voznak, *Implementation of quantum key distribution network simulation module in the network simulator NS-3* (2017) **Quantum Information Processing**, Vol. 16, No. 10, 2017, pp. 253(1-23), DOI: 10.1007/s11128-017-1702-z. 5Year IF **2.252** (2017)
- [6] HS. Nguyen, TS. Nguyen, M. Voznak, *Successful transmission probability of cognitive device-to-device communications underlying cellular networks in the presence of hardware impairments* (2017) **EURASIP Journal on Wireless Communications and Networking**, 2017 (1), art. no. 208, DOI: 10.1186/s13638-017-0994-0. 5Year IF **1.923** (2017)
- [7] J.C.-W. Lin, L. Yang, P. Fournier-Viger, T. Hong, M. Voznak, *A binary PSO approach to mine high-utility itemsets* (2017) **Soft Computing**, Volume 21, Issue 17, pp. 5103-5121, DOI: 10.1007/s00500-016-2106-1. 5Year IF **2.204** (2017)
- [8] P. Fazio, M. Tropea, F. De Rango, M. Voznak, *Pattern Prediction and Passive Bandwidth Management for Hand-Over Optimization in QoS Cellular Networks with Vehicular Mobility* (2016) **IEEE Transactions on Mobile Computing**, Vol. 15, Issue 11, Nov. 2016, pp. 2809-2824. DOI: 10.1109/TMC.2016.2516996. 5Year IF **4.513** (2016)
- [9] J.C.-W. Lin, Q. Liu, P. Fournier-Viger, T. Hong, M. Voznak, J. Zhan, *A sanitization approach for hiding sensitive itemsets based on particle swarm optimization* (2016) **Engineering Applications of Artificial Intelligence**, Vol. 53, 2016, pp. 1–18. DOI: 10.1016/j.engappai.2016.03.007. 5Year IF **3.177** (2016)
- [10] J. Frnda, M. Voznak, L. Sevcik, *Impact of packet loss and delay variation on the quality of real-time video streaming* (2016) **Telecommunication Systems**, Vol. 62, Issue 2, June 2016, pp. 265-275. DOI 10.1007/s11235-015-0037-2. 5Year IF **1.502** (2016)

References

Name, position, company and contact

Prof. RNDr. Václav Snášel, CSc., rector, VSB-Technical University of Ostrava, vaclav.snasel@vsb.cz, +420 596 995 279

Name, position, company and contact

Doc. Ing. Karol Molnár, Ph.D., senior researcher, Honeywell International, karol.molnar@honeywell.com, +420 532 115 508

Ostrava, September 8th, 2018