

# 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  
17. listopadu 15/2172, 708 33 Ostrava, Czech Republic

Telephone, E-mail , web

+420 603 565 965, [voznak@ieee.org](mailto:voznak@ieee.org) , <http://voznak.eu>



## 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"> <li>- assistant professor, associate professor and full professor (FEECS VSB-TUO)</li> <li>- junior researcher, senior researcher and external specialist (IT4I VSB-TUO)</li> </ul> <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"> <li>- Member of <b>Scientific council</b> at Faculty of Transportation Sciences in Czech Technical University in Prague,</li> <li>- Member of <b>Scientific council</b> at Faculty of Electrical Engineering and Computer Science in VSB-Technical University of Ostrava,</li> <li>- Member of <b>Scientific council</b> at IT4Innovations National Supercomputing Centre,</li> <li>- Member of <b>doctoral branch committees</b> "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,</li> <li>- <b>IEEE Senior member</b> of Communications Chapter and BigData Community,</li> </ul> <p>Editorial board member of <b>journals</b>:</p> <ul style="list-style-type: none"> <li>- Journal of Communications (Alabama, US),</li> <li>- Communications (Ankara, TR),</li> <li>- Mobile, Embedded and Distributed Systems (Bucharest, RO),</li> <li>- Advances in Electrical and Electronic Engineering" (Ostrava, CZ),</li> <li>- Elektrověst (Brno, CZ),</li> <li>- Journal of Advanced Engineering and Computation (Ho Chi Minh City, VN),</li> <li>- guest-editor of special issues in "Wireless Personal Communications" (Springer, US), etc...</li> </ul> <ul style="list-style-type: none"> <li>- Member of several <b>conference committees</b> 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).</li> </ul>
Projects in last years	<ul style="list-style-type: none"> <li>- Technology Transfer via Multinational Application Experiments (<b>TETRAMAX</b>), <b>HORIZON 2020</b> (2017-2021), under grant agreement No. 761349.</li> <li>- Intelligent information system supporting observation, searching and detection for security of citizens in urban environment (<b>INDECT</b>). The <b>7FP EU</b> (2009-2014) under Grant Agreement No. 218086.</li> <li>- Multi-Gigabit European Research and Education Network and Associated Services (GN3), The <b>7FP EU</b> (2009-2013) under Grant Agreement No. 238875.</li> <li>- Digital Broadcasting and Broadband Technologies, <b>Erasmus+</b> Capacity Building in Higher Education, project No. 561688-EPP-1-2015-1-XK-EPPKA2-CBHE-JP (2015-2018).</li> <li>- Multimedia and Digital TV Curricula, <b>Erasmus+</b> Capacity Building in Higher Education, project No. 586318-EPP-1-2017-1-AL-EPPKA2-CBHE-JP (2017-2020).</li> <li>- IT4Innovations, National Supercomputing Centre, Czech <b>National Centre of Excellence</b>, Ostrava (2011-2016), senior researcher in Research Programme No. 5.</li> <li>- Secure Gateway for the Internet of Things (IoT), <b>Ministry of the Interior (CZ)</b>, under grant V12VS/491 (2017-2020), coordinator in VSB-TUO.</li> <li>- Development of advanced industrial sensors and an extension of portfolio in Internet of Things, <b>Ministry of Industry and Trade</b>, CZ.01.1.02/0.0/0.0/16_084/0009815 (2017-2020), PI in VSB-TUO</li> <li>- Platform for predictive maintenance <b>Ministry of Industry and Trade</b>, FV30533 (2018-2020), PI in VSB-TUO</li> <li>- Specific method of check-in and number of passengers, <b>Technology Agency</b> of the Czech Republic, under grant TB0500MD011 (2016), PI.</li> <li>- Limits of data from mobile sites in statistical surveys of Czech statistical office, <b>Technology Agency</b> of the Czech Republic, grant id TD03000452 (2016-2017), coordinator in VSB-TUO.</li> <li>- Security of mobile devices and communication, <b>Technology Agency</b> of the Czech Republic, under grant TF01000091 (2015-2017), deputy of PI.</li> </ul>
Degrees and awards	<p>2017 - <b>The best paper award</b>, 2017 Multimedia Communications, Services and Security 9th International Conference, MCSS 2017, Kraków, <a href="http://mcss2017.kt.agh.edu.pl/">http://mcss2017.kt.agh.edu.pl/</a></p> <p>2016 – <b>The best paper award</b>, IEEE Symposium on Performance Evaluation of Computer and Telecommunication Systems, Montréal, <a href="http://atc.udg.edu/SPECTS2016/">http://atc.udg.edu/SPECTS2016/</a></p> <p>2016 – <b>Overall Best Paper Runner Up Award</b>, 2016 Summer Simulation Multiconference, Montréal, <a href="http://scs.org/summersim/">http://scs.org/summersim/</a></p> <p>2016 - Elevation to the <b>grade of IEEE Senior member</b></p> <p>2015 – <b>The best paper award</b>, IEEE Conference on Computer Networks, <a href="http://cn.polsl.pl/2015/">http://cn.polsl.pl/2015/</a></p> <p>2009-2017 supervising theses of <b>ten students who obtained dean's or rector's appreciation</b></p> <p>2008 - <b>achievement rector's award</b> for contribution to cooperation with industry, from rector of VSB – Technical University of Ostrava</p>

## Publications

Scopus  
WoS  
Google Scholar  
Research Gate

- **380 results** indexed in Czech national database of Research, Development and Innovations (IS VaVal), **single author 75 of them**, eight college books
- **240 papers** indexed in **SCOPUS**, 103 articles in journals, 686 citations
- **170 papers** indexed in **WoS**, 58 articles in journals, 232 citations
- **h-index=17** in Google Scholar, 1188 citations
- RG Score = 30.44

## Ten selected articles in SCIE journals in last five years

- [1] 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 **2.898** (2016)
- [2] TN. Nguyen, HQM. Tran, P. Tran, M. Voznak, *Adaptive Energy Harvesting Relaying Protocol for Two-Way Half Duplex System Network over Rician Fading Channels* (2018) **Wireless Communications and Mobile Computing**, Vol. 2018, Article ID 7693016, 10 pages. DOI 10.1155/2018/7693016. 5Year IF **2.330** (2016)
- [3] 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)
- [4] 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 **2.220** (2016)
- [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 **2.337** (2016)
- [6] 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)
- [7] 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)
- [8] M. Voznak, J. Slachta, L. Macura, K. Tomala, *Advanced solution of SIP communication server with a new approach to management* (2015) **Telecommunication Systems**, Volume 59, Issue 4, August 2015, pp. 541-549, DOI 10.1007/s11235-014-9914-3. 5Year IF **1.502** (2016)
- [9] S. Jakovlev, M. Voznak, A. Andziulis, K. Ruijbs, *Application of predictive control methods for Radio telescope disk rotation control* (2014) **Soft Computing**, Vol. 18, Issue 4, 2014, pp. 707-716. DOI 10.1007/s00500-013-1168-6. 5Year IF **2.220** (2016)
- [10] M. Voznak, J. Rozhon, *Approach to stress tests in SIP environment based on marginal analysis* (2013) **Telecommunication Systems**, Vol. 52, Issue 3, 2013, pp. 1583-1593. DOI 10.1007/s11235-011-9525-1. 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](mailto: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](mailto:karol.molnar@honeywell.com), +420 532 115 508

Ostrava, May 2<sup>nd</sup>, 2018