

Curriculum Vitae



Personal data

Name: Ing. Milan Polívka, Ph.D.
Date, birthplace: December 11, 1971, Prague, Czech Republic
Gender: male
Nationality: Czech
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Info: [Www](#), [ResearcherID](#), [Google Scholar](#)

Education

Ph.D. 2003, Ing. (MSc. equiv.) 1996
from the [Czech Technical University in Prague, Faculty of Electrical Engineering](#) (CTU FEE), both in Radioelectronics

Experience

09/2019-12/2018 Fulbright-Masaryk Scholar, Pennsylvania State University, [CEARL](#)
12/2018-06/2015 CTU FEE, Vice-Dean for Doctoral Study and Science, member of Scientific Council of FEE
present-03/2013 CTU FEE, assoc. professor
2013-2000 CTU FEE, assistant professor
- teaching and research in the field of antennas, microwave technique and related computer aided modeling, RFID;
- advisor of 27 diploma and 3 doctoral students
2014-2003 [RFspin](#), s.r.o., co-founder, project and wifi antennas development
2014-2010 Municipal council of Květnice, member
2011 University of Ilmenau, German – R&D internship, 1 month
2003-1996 Wave systems, s.r.o. – antennas development
2000-1997 CTU FEE, research and development assistant

Scientific Achievements

28 SCI-E WoS journal papers, 2 book chapters, 100+ conf. papers, 8 Czech patents, h-index: 11 WoS, 14 GoogleScholar

Scientific projects

2019-2017 Wireless Sensing of Physical Quantities in Complex Environment, Czech Science Foundation GA17-02760S (Team Member)
2017-2015 Remote Sensing of Small Scatterers by Electromagnetic Waves, CSF GA15-08803S (Principal Investigator)
2017-2014 Electromagnetic Structures and Circuits for Wireless Power, LD 14122, part of COST WiPE IC1301 (TM)
2015-2012 Advanced Technologies and Modelling for Antennas and Sensors, LD 12055, part of COST VISTA IC1102 (TM)
2010-2008 Artificial Electromagnetic Structures for Miniaturisation of High Frequency and Microwave Radiation and Circuit Components, CSF GA102/08/1282 (PI)
2010-2008 Antenna Systems and Sensors with Special Characteristics, OC08018, part of COST ASSIST IC0603 (TM)
2006-2004 Multiband Planar Antennas with Compact Shapes, CSF 102/04/P131 (PI)
2003-2002 Design of Integrated Multiband Antenna System for NMT/GSM/DCS mobile phone detection system for Prison Administration of the Czech Republic, (TM)
2000-1997 Antenna anechoic chamber laboratory, MSMT VS97035 (TM)

CAD tool skills Electromagnetic and circuit simulators: Zeland I3D, CST Microwave Studio, AWR Microwave Office; MATLAB

Peer reviewer 60+ reviews for WoS SCI-E journals: IEEE Transactions on Antennas and Propagation, IEEE Transactions on Microwave Theory and Technique, IEEE Antennas and Wireless Propagation Letters, Electronics Letters, Radioengineering

Community and voluntary service

2018-2005 TPC member of international and national conferences (PIERS, COMITE, Radioelektronika, student POSTER)

2015-2012 Radioengineering journal, editorial board member

2011-2010 IEEE Czechoslovakia section, chairman

2011-2010 Radioengineering journal, associated editor

2010 IEEE R8 Voluntary Contribution Fund Coordinator – distribution of funds enabling students from poor countries to attend scientific conferences, email contact with students and IEEE R8 Treasurer

2009-2007 MTT/AP/ED/EMC joint chapter of IEEE CS section, chairman - organization of society and scientific activities (support of student activities, IEEE Distinguished lectures)

Membership in professional associations

IEEE, EuMA, Radioengineering Society

Languages Czech - native, English - advanced

Publications in WoS SCI-Expanded journals

- [1] ŠVANDA, M. et al., Platform Tolerant, High Encoding Capacity Dipole Array-Plate Chipless RFID Tags. *IEEE Access*. 2019, early access.
- [2] ŠVANDA, M. et al., Polarisation Independent Chipless RFID Tag Based on Circular Arrangement of Dual-Spiral Capacitively-Loaded Dipoles with Robust RCS Response. *IET Microwaves, Antennas and Propagation*. 2018, 12(14), pp. 2167–2171.
- [3] ŠVANDA, M. et al., Reliability Improvement of RF Identification of Shadowed People in Building Corridors Using Space Diversity. *Radioengineering*. 2018, 27(3), pp. 762-769.
- [4] HAVLÍČEK, J., et al., Chipless RFID Tag Based on Electrically Small Spiral Capacitively Loaded Dipole. *IEEE Antennas and Wireless Propagation Letters*. 2017, 16(1), pp. 3051-3054.
- [5] ŠVANDA, M., et al., Chipless RFID Tag with an Improved Magnitude and Robustness of RCS Response. *Microwave and Optical Technology Letters*. 2017, 59(2), pp. 488-492.
- [6] MACHÁČ, J., et al., Reducing Mutual Coupling in Chipless RFID Tags Composed of U-Folded Dipole Scatterers. *Microwave and Optical Technology Letters*. 2016, 58(11), pp. 2723-2725.
- [7] POLÍVKA, M., et al., Improvement in Robustness and Recognizability of RCS Response of U Shaped Strip-Based Chipless RFID Tags. *IEEE Antennas and Wireless Propagation Letters*. 2016, 15(1), pp. 2000-2003.
- [8] HAVLÍČEK, J., et al., Improvement of Reading Performance of Frequency Domain Chipless RFID Transponders. *Radioengineering*. 2016, 25(2), pp. 219-229.
- [9] ŠVANDA, M. and POLÍVKA, M. On-body semi-electrically-small tag antenna for ultra high frequency radio-frequency identification platform-tolerant applications. *IET Microwaves, Antennas & Propagation*. 2016, 10(6), pp. 631-637.
- [10] POLÍVKA, M. and ŠVANDA, M. Stepped Impedance Coupled-Patches Tag Antenna for Platform-Tolerant UHF RFID Applications. *IEEE Transactions on Antennas and Propagation*. 2015, 63(9), pp. 3791-3797.

- [11] ŠVANDA, M. and POLÍVKA, M. Matching Technique for an On-Body Low-Profile Coupled-Patches UHF RFID Tag and for Sensor Antennas. *IEEE Transactions on Antennas and Propagation*. 2015, 63(05), pp. 2295-2301.
- [12] ŠVANDA, M. and POLÍVKA, M. Illustration of the Impedance Behaviour of Extremely Low Profile Coupled Shorted-Patches Antennas for UHF RFID of People. *International Journal of Antennas and Propagation*. 2014(2014), pp. 1-10.
- [13] ŠVANDA, M. and POLÍVKA, M. Small-Size Wearable High-Efficiency TAG Antenna for UHF RFID of People. *International Journal of Antennas and Propagation*. 2014(2014), pp. 1-5.
- [14] MORÁVEK, O., et al. Precise Measurement Using Coaxial-to-Microstrip Transition Through Radiation Suppression. *IEEE Transactions on Microwave Theory and Techniques*. 2013, 61(8), pp. 2956-2965.
- [15] MACHÁČ, J., POLÍVKA, M., and ZEMLYAKOV, K. A, Dual Band Leaky Wave Antenna on a CRLH Substrate Integrated Waveguide. *IEEE Transactions on Antennas and Propagation*. 2013, 61(7), pp. 3876-3879.
- [16] POLÍVKA, M., et al., Impedance Properties and Radiation Efficiency of Electrically Small Double and Triple Split-Ring Antennas for UHF RFID Applications. *IEEE Antennas and Wireless Propagation Letters*. 2013, 12(1), pp. 221-224.
- [17] POLÍVKA, M. and VRBA, D., Input Resistance of Electrically Short Not-too-Closely Spaced Multi-Element Monopoles with Uniform Current Distribution. *IEEE Antennas and Wireless Propagation Letters*. 2012, 11(1), pp. 1592-1595.
- [18] ŠVANDA, M., POLÍVKA, M., and HUDEC, P. Novel Low-Profile Foam Dielectric Over the Shoulder Antenna Based On Coupled Patches Technique. *Microwave and Optical Technology Letters*. 2013, 55(3), pp. 593-597.
- [19] ŠVANDA, M. and POLÍVKA, M. Horizontal Five-arm folded dipole over metal screening plane for UHF RFID of Dielectric objects. *Microwave and Optical Technology Letters*. 2010, 52(10), pp. 2291-2294.
- [20] ŠVANDA, M. and POLÍVKA, M., Two Novel Extremely Low-Profile Slot-Coupled Two-Element Patch Antennas for UHF RFID of People. *Microwave and Optical Technology Letters*. 2010, 52(2), pp. 249-252.
- [21] POLÍVKA, M. and VRBA, D., Shielded Micro-Coplanar CRLH TL Zeroth-Order Resonator Antenna: Critical Performance Evaluation. *Radioengineering*. 2009, 18(4), pp. 368-372.
- [22] HOLUB, A. and POLÍVKA, M. Vertically Meander-folded, Shorted-patch Antennas. *Microwave and Optical Technology Letters*. 2009, 51(12), pp. 2938-2942. ISSN 0895-2477.
- [23] VRBA, D. and POLÍVKA, M. Radiation Efficiency Improvement of Zeroth-Order Resonator Antenna. *Radioengineering*. 2009, 18(1), pp. 1-8.
- [24] POLÍVKA, M., et al. UHF RF Identification of People in Indoor and Open Areas. *IEEE Transactions on Microwave Theory and Techniques*. 2009, 57(5), pp. 1341-1347.
- [25] ŠVANDA, M. and POLÍVKA, M. Novel Dual-loop antenna Placed over Patch Array Surface for UHF RFID of Dielectric and Metallic Objects. *Microwave and Optical Technology Letters*. 2009, 51(3), pp. 709-713.
- [26] HAZDRA, P., POLÍVKA, M., and SOKOL, V. Microwave Antennas and Circuits Modeling Using Electromagnetic Field Simulator. *Radioengineering*. 2005, 14(4), pp. 2-10. ISSN 1210-2512.
- [27] POLÍVKA, M., HOLUB, A., and MAZÁNEK, M. Collinear Microstrip Patch Antenna. *Radioengineering*. 2005, 14(4), pp. 40-42. ISSN 1210-2512.
- [28] HUDEC, P., POLÍVKA, M., and PECHAČ, P. Microwave System for the Detection and Localization of Mobile Phones in Large Buildings. *IEEE Transactions on Microwave Theory and Techniques*. 2005, 53(6), pp. 2235-2239. ISSN 0018-9480.