



Curriculum Vitae

RESEARCH INTERESTS

Analog electronics, bio-impedance modeling, biosensors, constant phase elements, edible electronics, electrical impedance spectroscopy, fractional calculus applications, fractional-order circuits and systems, instrumentation and measurement, modeling and fabrication of energy storage elements, nano/microelectronics, nanodevices, organic electronics and tissue engineering, synthesis and optimization of fractional-order elements, MOS-only circuits, sensory systems, VLSI analog integrated circuits, and related topics.

EDUCATION

- 2006–2010 **Ph.D.**, *Brno University of Technology*, Brno, Czech Republic,
Doctoral Thesis Title: Novel Active Function Blocks and Their Applications in Frequency Filters and Quadrature Oscillators.
Supervisor: Assoc. Prof. Ivo Lattenberg.
Specialization: Teleinformatics.
- 2000–2006 **M.Sc.**, *Brno University of Technology*, Brno, Czech Republic,
Master's Thesis Title: Frequency Filters with OTA Amplifiers.
Supervisor: Prof. Dr. Kamil Vrba.
Specialization: Electronics and Communication.

ACADEMIC & RESEARCH POSITIONS

- Since 2015 **Associate Professor**, *Brno University of Technology, Dept. of Telecommunications*, Brno, Czech Republic,
Habilitation Thesis Title: Linear Function Blocks Following Recent Trends in Analog Circuit Design.
Specialization: Teleinformatics.
- 2012 – 2015 **Research Fellow**, *Centre of Sensor, Information and Communication & Systems (SIX)*, Brno, Czech Republic.
- 2010–2015 **Assistant Professor**, *Brno University of Technology, Dept. of Telecommunications*, Brno, Czech Republic.
- 2007–2010 **Assistant**, *Brno University of Technology, Dept. of Telecommunications*, Brno, Czech Republic.

ERASMUS+ PROGRAMME DEPARTMENTAL COORDINATOR

- 2021–2022 **Bordeaux INP**, *Graduate School of Engineering in Electronics, Computer Sciences, Telecommunications, Mathematics and Mechanics of Bordeaux (ENSEIRB-MATMECA)*, F BORDEAU54, France.
- 2018–2022 **University of L'Aquila**, *Department of Industrial and Information Engineering and Economics*, I L-AQUIL01, Italy.
- 2016–2021 **Işık University**, *Faculty of Engineering*, TR ISTANBU14, Turkey.
- 2016–2021 **Kaunas University of Technology**, *Faculty of Electrical and Electronics Engineering*, LT KAUNAS02, Lithuania.
- 2014–2021 **Bogazici University**, *Department of Electrical & Electronics Engineering*, TR ISTANBU01, Turkey.
- 2014–2021 **Yildiz Technical University**, *Dept. of Electronics and Communication Engineering*, TR ISTANBU07, Turkey.

RESEARCH VISITS, TEACHING MOBILITY & OTHER EDUCATION

- 16–20/11/2020 **Seasonal School 2020 – Technology and Agribusiness: How Technology is Impacting Agribusiness**, Zoom event organized by IEEE-CAS Society & Universidad Santo Tomas, Chile (15 hours, Certificate of Participation).
- 15–19/06/2020 **'MICRO-614: Electrochemical Nano-Bio-Sensing and Bio/CMOS interfaces'**, by Prof. Dr. Sandro Carrara, Swiss Federal Institute of Technology (EPFL), Switzerland, Zoom lectures of PhD course (15 hours, Certificate of Participation).
- 30/06/2020 **'Body Area Networks – Connecting Things Together Around the Body'**, by Assoc. Prof. Jerald Yoo, National University of Singapore, Singapore, IEEE Circuits and Systems Society Virtual Distinguished Lecturer Webinar (1 hour, Certificate of Attendance).
- 24/06/2020 **'Printed and Flexible Electronics and Devices'**, by Dr. Jin-Woo Han, NASA Ames Research Center, USA, webinar organized by The National Academy of Sciences, India (NASI) – Delhi Chapter & University of Delhi, India (1 hour, Certificate of Completion).
- 03/2019–08/2019 **Visiting Senior Research Fellow**, Department of Electrical and Computer Engineering, University of Calgary, Calgary, Canada (6 months).
- 11/2018 **Erasmus+ Staff for Teaching Mobility**, University of L'Aquila, L'Aquila, Italy (4 days).
- 12/2017 **Erasmus+ Staff for Teaching Mobility**, Isik University, Istanbul, Turkey (1 week).
- 10/2017 **COST Action CA15225 'Workshop on Current Progress in Fractional-Order Systems and Their Utilization'**, San Sebastian, Spain (2 days).
- 09/2017 **COST Action CA15225 'Training School on Fractional Order Controllers: From Theory to Application'**, Catania, Italy (4 days).
- 05/2017 **Erasmus+ Staff for Teaching Mobility**, Istanbul Technical University, Istanbul, Turkey (1 week).
- 09/2016 **Erasmus+ Staff for Teaching Mobility**, Escola Superior Politecnica (Fundacio & TecnoCampus), Mataro - Maresme, Spain (1 week).
- 09/2015 **Erasmus+ Staff for Training Mobility**, Bogazici University, Istanbul, Turkey (1 week).
- 05/2015 **ISCAS/MCE Conference Organizing Workshop**, Lisbon, Portugal.
- 02/2014–04/2014 **Postdoctoral Internship**, Visiting Researcher at the Department of Electronics and Communications Engineering, Dogus University, Istanbul, Turkey.
- 02/2013–05/2013 **Postdoctoral Internship**, Visiting Researcher at the BETA Laboratory, Department of Electrical and Electronics Engineering, Bogazici University, Istanbul, Turkey.
- 07/2012 **Erasmus Staff Training Mobility**, Bogazici University, Istanbul, Turkey (2 weeks).
- 05/2011 **Erasmus Teaching Staff Mobility**, Namik Kemal University, Corlu, Turkey (1 week).
- 09/2009–02/2010 **LLP Erasmus Exchange Student**, Bogazici University, Istanbul, Turkey.

AWARDS, HONORS & CERTIFICATES

- 2021 **Certificate of Recognition**, by IEEE Member Recruitment and Recovery Committee, USA.
- 2021 **Certificate of Appreciation**, by IEEE Member and Geographic Activities, USA.
- 2020 **ELEX Editorial Contribution Award**, by IEICE Electronics Express Editorial Committee, Japan.
- 2017 **Certificate of Merit**, by IEEE Signal Processing Society, USA.
- 2017 **Outstanding Volunteer Award**, by IEEE Czechoslovakia Section.
- 2015 **IEEE Senior Member**, by Institute of Electrical and Electronic Engineers, USA.
- 2015 **Certificate of Outstanding Contribution in Reviewing**, by AEÜ - International Journal of Electronics and Communications, Elsevier B.V.
- 2012 **Rector Award**, University competition 'Top 10 Excellence VUT 2011', 8th most productive scientist at the Brno University of Technology, Czech Republic, category 'Publications'.
- 2011 **Rector Award**, University competition 'Top 10 Excellence VUT 2010', 9th most productive scientist at the Brno University of Technology, Czech Republic, category 'Publications'.
- 2011 **Best Paper Award in Memory of Prof. Dr. Mustafa Bayram**, 7th International Conference on Electrical Electronics Engineering - ELECO 2011, Bursa, Turkey.

EDITORSHIPS

Associate Editorships & Editorial Board/Topical Advisory Panel Memberships

- Since 01/01/2022 **Editor-in-Chief**, *IEEE Consumer Electronics Magazine*, SCI-E; IF 2020 = 3.789 – <https://ieeexplore.ieee.org/xpl/RecentIssue.jsp?punumber=5962380>.
- Since 30/07/2021 **Editor-in-Chief**, *Engineering Section of Fractal and Fractional*, MDPI; SCI-E; IF 2020 = 3.313 – <http://www.mdpi.com/journal/fractalfract>.
- Since 14/07/2021 **Topical Advisory Panel**, *Nanomaterials*, MDPI; SCI-E; IF 2020 = 5.076 – <https://www.mdpi.com/journal/nanomaterials>.
- Since 26/05/2020 **Review Editor on the Editorial Board of Flexible Electronics**, *Frontiers in Electronics*, <https://www.frontiersin.org/journals/electronics>.
- 05/09/2019–31/12/2020 **Review Editor on the Editorial Board of Human-Media Interaction**, *Frontiers in Computer Science*; *Frontiers in Digital Humanities*; *Frontiers in ICT (Scopus indexed)*; *Frontiers in Psychology (SCI-E; IF 2020 = 2.990)*, <https://www.frontiersin.org/>.
- Since 18/04/2019 **Editorial Board Member**, *Elektronika ir Elektrotechnika*, SCI-E; IF 2020 = 1.128 – <http://eejournal.ktu.lt/>.
- Since 24/11/2018 **Editorial Board Member**, *Radioengineering*, SCI-E; IF 2020 = 0.951 – <https://www.radioeng.cz/>.
- Since 03/10/2018 **Associate Editor**, *IEICE Electronics Express*, IEICE; SCI-E; IF 2020 = 0.578 – <http://www.elex.ieice.org/>.
- Since 06/09/2018 **Editorial Board Member**, *Fractal and Fractional*, MDPI; SCI-E; IF 2020 = 3.313 – <http://www.mdpi.com/journal/fractalfract>.
- Since 02/08/2017 **Associate Editor**, *IEEE Access*, IEEE; SCI-E; IF 2020 = 3.367 – <http://ieeaccess.ieee.org/>.
- Since 19/02/2014 **Associate Editor**, *Journal of Circuits, Systems and Computers*, World Scientific Publishing; SCI-E; IF 2020 = 1.333 – <https://www.worldscientific.com/worldscinet/jcsc>.
- Since 01/01/2012 **Co-Editor**, *International Journal of Advances in Telecommunications, Electrotechnics, Signals and Systems*, <http://ijates.org/>.

Invited Guest Editorships

- 2022 **Invited Main Guest Co-Editor**, *Special Section 'Artificial Intelligence and Machine Learning for Robust VLSI Systems (VSI-vlsi)' published in Computers & Electrical Engineering journal*, Elsevier; SCI-E; IF 2020 = 3.818, Editors: E. Tlelo-Cuautle, N. Herencsar, and M. Faseehuddin – <http://bit.do/CEE-AI-ML-VSI-vlsi>.
- 2020–2021 **Invited Guest Co-Editor**, *Special Issue 'Signal Processing Circuits and Systems for Smart Sensing Applications' published in Sensors journal*, MDPI; SCI-E; IF 2020 = 3.576, Editors: N. Herencsar and K. N. Salama – https://www.mdpi.com/journal/sensors/special_issues/signal_processing_circuit.
- 2020 **Invited Guest Co-Editor**, *Special Issue 'Selected Papers from the 2020 43rd International Conference on Telecommunications and Signal Processing (TSP)' published in Applied Sciences journal*, MDPI; SCI-E; IF 2020 = 2.679, Editors: N. Herencsar, F. Benedetto, J. Crichigno – http://www.mdpi.com/journal/applsci/special_issues/tsp_2020.
- 2019 **Invited Guest Co-Editor**, *Special Issue 'Selected Papers from the 2019 42nd International Conference on Telecommunications and Signal Processing (TSP)' published in Applied Sciences journal*, MDPI; SCI-E; IF 2019 = 2.474, Editors: N. Herencsar, F. Benedetto, J. Crichigno – http://www.mdpi.com/journal/applsci/special_issues/tsp2019.
- 2018 **Invited Guest Co-Editor**, *Special Issue 'Selected Papers from the 2018 41st International Conference on Telecommunications and Signal Processing (TSP)' published in Applied Sciences journal*, MDPI; SCI-E; IF 2018 = 2.217, Editors: N. Herencsar, F. Benedetto, J. Crichigno – http://www.mdpi.com/journal/applsci/special_issues/tsp.
- 2017 **Invited Guest Co-Editor**, *Special Issue 'Current-Mode Circuits and Systems; Recent Advances, Design and Applications' published in the AEÜ - International Journal of Electronics and Communications journal*, Elsevier; SCI-E; IF 2017 = 2.115, Editors: L. Safari, N. Pandey, N. Herencsar, F. Khateb – <https://bit.ly/2PztCm0>.
- 2013 **Invited Guest Co-Editor**, *Special Issue 'Low-Voltage Low-Power Analogue Devices and Their Applications' published in Radioengineering journal*, SCI-E; IF 2013 = 0.796, Editors: S. Minaei, O. Cicekoglu, D. Bielek, N. Herencsar, J. Koton – <https://www.radioeng.cz/papers/2013-2.htm>.

- 2011–2013 **Invited Guest Co-Editor**, *TSP10 - TSP12 Special Issues on Signal Processing published in the Radio-engineering journal*, SCI-E; IF 2013 = 0.796.
- 2011 **Invited Guest Co-Editor**, *TSP10 Special Issue on Telecommunications published in the Telecommunication Systems journal*, Springer; SCI-E; IF 2011 = 0.689.

INTERNATIONAL CONFERENCE TPC MEMBERSHIPS & PC CHAIR

- 05/2022 **Best Student Paper Award Review Committee Member**, *2022 IEEE International Instrumentation and Measurement Technology Conference (I2MTC)*, May 16-19, 2022, Ottawa, Canada – organized by IEEE Instrumentation and Measurement Society – <https://i2mtc2022.ieee-ims.org/>.
- Since 2021 **General Chair**, *International Conference on Telecommunications and Signal Processing (TSP)*, 2021/ Virtual Event – technically co-sponsored by IEEE R8 – <http://tsp.vutbr.cz/>.
- 2017–2020 **General Co-Chair**, *International Conference on Telecommunications and Signal Processing (TSP)*, 2017/Barcelona, Spain; 2018/Athens, Greece; 2019/Budapest, Hungary; 2020/ Milan, Italy (Virtual Event) – technically co-sponsored by IEEE R8 – <http://tsp.vutbr.cz/>.
- 2017 **Publication Chair**, *2017 24th IEEE International Conference on Electronics, Circuits and Systems (ICECS 2017)*, Batumi, Georgia – organized by IEEE R8 Circuits and Systems Society – <http://icecs2017.org/>.
- 2017 **Technical Program Committee Member**, *2017 IEEE 60th Midwest Symposium on Circuits and Systems (MWSCAS)*, Boston, USA – organized by IEEE Circuits and Systems Society – <http://www.mwscas2017.org/>.
- Since 2017 **Technical Program Committee Member**, *22nd International Conference Applied Electronics (APPEL)*, Pilsen, Czech Republic – organized by IEEE Industrial Electronics Society – <http://www.appel.zcu.cz/>.
- 2016–2017 **Technical Program Committee Member**, *International Symposium on Emerging Topics in Circuits and Systems (SET-CAS)*, India, 2016/Jaipur; 2017/Manipal – technically co-sponsored by IEEE Communications Society – <http://icacci-conference.org/>.
- 2016 **General Co-Chair**, *COST/IEEE-CASS Seasonal Training School in Fractional-Order Systems*, Brno, Czech Republic – financially co-sponsored by IEEE Circuits and Systems Society, COST Association, and IEEE Czechoslovakia Section – <http://fractal.utko.feec.vutbr.cz/>.
- 2016 **Technical Program Committee Member**, *23rd International Conference on Systems, Signals and Image Processing (IWSSIP 2016)*, Bratislava, Slovakia – technically co-sponsored by IEEE Czechoslovakia and IEEE Croatia Sections – <http://iwSSIP.stuba.sk/>.
- Since 2016 **Technical Program Committee Member**, *International Conference ELECTRONICS*, Palanga, Lithuania – <http://electronicsconf.ktu.edu/>.
- Since 2016 **Publication Chair**, *International Congress on Ultra Modern Telecommunications and Control Systems (ICUMT)*, 2016 Lisbon (Portugal), 2017 Munich (Germany), 2018 Moscow (Russia) – technically co-sponsored by IEEE R8 – <http://www.icumt.info/>.
- 2015 **Technical Program Committee Member**, *12th IEEE Region 8 AFRICON 2015 Conference*, Addis Ababa, Ethiopia – technically co-sponsored by IEEE R8 – <http://africon2015.org/>.
- 2015 **Technical Program Committee Member**, *2015 International Conference on Advances in Computers, Communication, and Electronic Engineering (COMMUNE-2015)*, Srinagar, India – <http://www.commune.co.in/>.
- 2015 **Local Arrangement Chair**, *7th International Congress on Ultra Modern Telecommunications and Control Systems (ICUMT 2015)*, Brno, Czech Republic – technically co-sponsored by IEEE R8 – <http://www.icumt.info/2015/>.
- 2013–2017 **Technical Program Committee Member**, *International Conference on Electrical and Electronics Engineering (ELECO)*, Bursa, Turkey – technically co-sponsored by IEEE R8 – <http://www.eleco.org.tr/>.
- 2010–2012 **PC Chair**, *International Conference on Computer and Automation Engineering (ICCAE)*, ICCAE10 Singapore; ICCAE11 Chongqing, China; ICCAE12 Mumbai, India – <http://www.iccae.org/>.
- 2010–2017 **Technical Committee Member**, *International Conference on Knowledge in Telecommunication Technologies and Optics (KTTO)*, KTTO10 Ostrava, Czech Republic; KTTO11: Szczyrk, Poland; KTTO12: Frydlant nad Ostravici, Czech Republic; KTTO13: Hradec nad Moravici, Czech Republic; KTTO14: Malenovice, Czech Republic; KTTO15: Ostravice, Czech Republic; KTTO16 and KTTO17: Malenovice, Czech Republic – <https://ktto.vsb.cz/>.

- 2010–2016 **Deputy-Chair**, *International Conference on Telecommunications and Signal Processing (TSP)*, technically co-sponsored by IEEE R8 – <http://tsp.vutbr.cz/>.
- 2008–2016 **Organizing and Technical Committee Member**, *International Conference on Telecommunications and Signal Processing (TSP)*, 2008/Paradfurdu, Hungary; 2009/Dunakiliti, Hungary; 2010/Baden near Vienna, Austria; 2011/Budapest, Hungary; 2012/Prague, Czech Republic; 2013/Rome, Italy; 2014/Berlin, Germany; 2015/Prague, Czech Republic; 2016/Vienna, Austria – technically co-sponsored by IEEE Czechoslovakia Section.

MEMBERSHIPS & VOLUNTEERING

- 22/06/2022 **Chair**, *Expert Panel on 'Electrical, electronic and information engineering' – Estonian Research Council (ETAg)*, <https://www.etag.ee/en/>.
- Since 21/03/2022 **Member of the External Public Body**, *Hungarian Academy of Sciences (MTA)*, Member ID 10061618 – https://mta.hu/koztestuleti_tagok?PersonId=10061618.
- 22/06/2022–14/02/2022 **Expert Panel Member & Reviewer**, *Expert Panel on 'Electrical, electronic and information engineering' – Estonian Research Council (ETAg)*, <https://www.etag.ee/en/>.
- Since 01/01/2022 **Publications Board Member**, *IEEE Consumer Technology Society (CTSoc)*, <https://ctsoc.ieee.org/publications/call-for-nominations-editor-in-chiefs.html>.
- 2016–2021 **Science Communications Manager**, *COST Action CA15225 – 'Fractional-order systems; analysis, synthesis and their importance for future design'*, EU COST Association – <https://www.cost.eu/actions/CA15225/>.
- 2020 **Reviewer**, *Estonian Research Council (ETAg)*, Team grant (PRG) – <https://www.etag.ee/en/>.
- 2016–2021 **Science Communications Manager**, *COST Action CA15225 – 'Fractional-order systems; analysis, synthesis and their importance for future design'*, EU COST Association – <https://www.cost.eu/actions/CA15225/>.
- 2016–2021 **MC Member**, *COST Action CA15225 – 'Fractional-order systems; analysis, synthesis and their importance for future design'*, EU COST Association – <https://www.cost.eu/actions/CA15225/>.
- Since 2015 **Senior Member**, *IEEE (Institute of Electrical and Electronic Engineers)*.
- Since 2015 **Chair**, *IEEE Czechoslovakia Section CAS/COM/SP Joint Chapter*.
- 2015 – 2019 **Membership Development Officer**, *IEEE Czechoslovakia Section*.
- Since 2015 **Member**, *Radionegineering Society (RS)*.
- Since 2015 **Senior Member**, *Institute of Research Engineers and Doctors (IRED)*.
- 2012–2014 **Member**, *IEEE*.
- Since 2011 **Senior Member**, *International Association of Computer Science and Information & Technology (IACSIT)*.
- Since 2009 **Member**, *IEEE Circuits and Systems Society (CAS)*.
- Since 2009 **Member**, *Association of Computer, Electronics and Electrical Engineers (ACEEE)*.
- Since 2009 **Committee Member**, *IACSIT Electronics and Electrical Society (EES)*.
- 2009–2010 **Member**, *IACSIT*.
- Since 2007 **Member**, *International Association of Engineers (IAENG)*.
- 2007–2010 **Student Member**, *IEEE*.

VERIFIED EDITOR & REVIEWER RECORDS

(<https://publons.com/researcher/2873955/norbert-herencsar/>)

- Editor Records **503** (in 8 journals: AEÜ - International Journal of Electronics and Communications; Applied Sciences; Fractal and Fractional; IEEE Access; IEEE Consumer Electronics Magazine; IEICE Electronics Express; Journal of Circuits, Systems and Computers; Sensors)
- Since 2014

Peer Reviews **243** (in 52 journals: ACM Transactions on Management Information Systems; ACS Omega; Advanced Electronic Materials; Advanced Engineering Materials; Advanced Materials Technologies; Advances in Electrical and Computer Engineering; Advances in Electrical and Electronic Engineering; AEÜ – International Journal of Electronics and Communications; American Journal of Electrical and Electronic Engineering; Analog Integrated Circuits and Signal Processing; Biomedical Signal Processing and Control; Chaos, Solitons & Fractals; Circuits, Systems, and Signal Processing; Electronics; Electronics and Electrical Engineering; Electronics Letters; Elektronika Ir Elektrotechnika; Energies; Expert Systems; Frontiers In Electronics; Future Generation Computer Systems; IEEE Access; IEEE Sensors Journal; IEEE Transactions on Circuits and Systems I: Regular Papers; IEEE Transactions on Circuits and Systems II: Express Briefs; IEEE Transactions on Instrumentation and Measurement; IEICE Electronics Express; IET Circuits, Devices and Systems; IET Systems Biology; IETE Journal of Education; IETE Journal of Research; Indian Journal of Engineering and Materials Sciences; Indian Journal of Pure and Applied Physics; Integration, the VLSI Journal; International Journal of Circuit Theory and Applications; International Journal of Computer and Electrical Engineering; International Journal of Electronics; Journal of Advanced Research; Journal of Circuits, Systems and Computers; Journal of Engineering Research (JER); Measurement Science and Technology; Measurement Science Review; Microelectronics and Solid State Electronics; Microelectronics Journal; Mobile Networks and Applications; Radioengineering; Scientia Iranica; Sensors; Sensors and Actuators A: Physical; The Scientific World Journal; Transactions on Electrical Engineering, Electronics, and Communications; Turkish Journal of Electrical Engineering & Computer Sciences)

PARTICIPATION IN PROJECTS

Project supported by the European Union

2016–2020 **COST Action CA15225**, *Fractional-Order Systems; Analysis, Synthesis and Their Importance for Future Design*, Holder: Prof. Dr. J. Koton.

Projects supported by the Czech Science Foundation (GA ČR)

2019–2021 **19-24585S**, *Synthesis of Reliable Electrical Phantoms Describing Fractional Impedance Behavior of Real-World Systems*, Holder: Prof. Dr. J. Koton.

2016–2018 **GJ16-11460Y**, *Active Devices with Differencing Terminals for Novel Single-Ended and Pseudo-Differential Function Block Design*, Holder: Assoc. Prof. N. Herencsar, 5.81M CZK (approx. 248,150 USD) for 3Y.

2016–2018 **GA16-06175S**, *Synthesis and Analysis of Fractional-Order Systems Using Non-Conventional Active Elements*, Holder: Prof. Dr. J. Koton.

2011–2013 **GPP102/11/P489**, *Electronically Tuneable First-Order Allpass Filters and Their Application to Quadrature Oscillators*, Holder: Assoc. Prof. N. Herencsar, 1.93M CZK (approx. 82,400 USD) for 3Y.

2009–2013 **GA102/09/1681**, *Computer Automatation of Methods for Linear Functional Block Synthesis and Research of New Active Elements*, Holder: Prof. K. Vrba.

2006–2008 **GA102/06/1383**, *Circuits with Universal Current and Voltage Conveyors and with Current Operational Amplifiers*, Holder: Prof. K. Vrba.

Projects supported by the Ministry of Education, Youth and Sports of the Czech Republic

2018–2020 **INTER-EXCELLENCE/INTER-COST LTC18022**, *Analogue fractional systems, their synthesis and analysis*, Holder: Assoc. Prof. J. Jeřábek.

2010–2012 **OP VK CZ.1.07/1.3.10/02.0018**, *Complex educational programme in the field of ICT for the employees of South-Moravian schools*, Holder: Assoc. Prof. K. Molnar.

2005–2011 **MSM21630513**, *Electronic communication systems and technologies of novel generations (ELKOM)*, Holders: Prof. Z. Raida, Prof. K. Vrba, Prof. J. Jan.

2011 **FRVS 2498/2011/F1a**, *Modernization of laboratory equipments and complete innovation of lectures for course Analog Circuits*, Holder: Assoc. Prof. N. Herencsar, 282 CZK (approx. 12,050 USD) for 1Y.

2010 **FRVS 1157/2010/F1a**, *Innovation of the course Analogue Circuits*, Holder: Assoc. Prof. N. Herencsar, 294 CZK (approx. 12,560 USD) for 1Y.

2009 **FRVS 339/2009/G1**, *Implementation of research results on current-mode circuits to education*, Holder: Assoc. Prof. N. Herencsar, 154k CZK (approx. 6,580 USD) for 1Y.

2009 **FRVS 340/2009/F1a**, *Experimental laboratory for bachelor and diploma theses*, Holder: Prof. K. Vrba.

2008 **FRVS 1648/2008/G1**, *Support of experimental works in Bachelor Theses*, Holder: Assoc. Prof. N. Herencsar, 152k CZK (approx. 6,500 USD) for 1Y.

2008 **FRVS 2057/2008/F1a**, *Support of experimental works in Diploma Theses on study programme Telecommunications and Information Technologies*, Holder: Prof. J. Misurec.

DEVELOPED INTEGRATED CIRCUITS

- 2018 **HERENC SAR, N., SOTNER, R., KLEDROWETZ, V., KARTCI, A., JERABEK, J., KOTON, J.** UDE - Universal Differencing Element (EUROPRACTICE IC Service).
- 2012 **JERABEK, J., VRBA, K., KOTON, J., HERENC SAR, N., KOUDAR, I.** LNVGA – Low Noise Variable Gain Amplifier (LNVGA) (ON Semiconductor).
- 2010 **HERENC SAR, N., VRBA, K., KOUDAR, I.** Universal Voltage Conveyor (UVC.N1C.IK) (ON Semiconductor).

TEACHING EXPERIENCE

- Since 2020 **Analog Technology (FEKT-BPA-ANA)**, *Lecturer & Supervisor*, Undergraduate level (Czech & Erasmus+ students).
- 2013–2020 **Analog Technology (CAN A)**, *Lecturer & Supervisor*, Undergraduate level (Erasmus+ students only).
- 2013–2015 **Communications Theory (MTSD)**, *Laboratories leader*, Graduate level.
- 2007 **Network Architecture (BARS)**, *PC laboratories leader*, Undergraduate level.
- 2006–2009 **Communications Theory (MTSD)**, *Laboratories leader*, Graduate level.
- 2006 **Construction of Electronic Equipments (BKEZ)**, *PC laboratories leader*, Undergraduate level.

STUDENTS SUPERVISION & MENTORSHIP

- Since 2015 No. of published student scientific competition works at Student EEICT, FEEC BUT: 2
- Since 2008 No. of defended Ph.D./M.Sc./Bs. students' theses: 8

LANGUAGE SKILLS

Hungarian	Mother-tongue
Slovak	Advanced
Czech	Advanced
English	Advanced

TALKS

International Conference Presentations

- 2020 [41] "Accurate Empirical Fractional-Order Electrical Models of Young and Old Dentines", *42nd Annual International Conferences of the IEEE Engineering in Medicine and Biology Society in conjunction with the 43rd Annual Conference of the Canadian Medical and Biological Engineering Society via the EMBS Virtual Academy*, Montreal, Canada.
- 2019 [40] "Analogue Implementation of a Fractional-PI^λ Controller for DC Motor Speed Control", *IEEE International Symposium on Industrial Electronics (ISIE)*, Vancouver, Canada.
- [39] "Design of Fractional Order Elements' Series", *ELECO 2019 - 11th International Conference on Electrical and Electronics Engineering*, Bursa, Turkey.
- [38] "Comparative study of op-amp-based integrators suitable for fractional-order controller design", *2019 42nd International Conference on Telecommunications and Signal Processing, TSP 2019*, Budapest, Hungary.
- 2018 [37] "A Novel Pseudo-Differential Integer/Fractional-Order Voltage-Mode All-Pass Filter", *IEEE International Symposium on Circuits and Systems (ISCAS)*, Florence, Italy.
- [36] "Balanced-Output CCCFOA and its Utilization in Grounded Inductance Simulator with Various Orders", *2018 41st International Conference on Telecommunications and Signal Processing, TSP 2018*, Athens, Greece.
- [35] "All-pass time delay circuit magnitude response optimization using fractional-order capacitor", *IEEE Midwest Symposium on Circuits and Systems (MWSCAS)*, Windsor, Canada.
- 2017 [34] "Resistorless electronically tunable grounded inductance simulator design", *2017 40th International Conference on Telecommunications and Signal Processing, TSP 2017*, Barcelona, Spain.

- [33] "Voltage gain-controlled third-generation current conveyor and its all-pass filter verification", *2017 European Conference on Circuit Theory and Design, ECCTD 2017*, Catania, Italy.
- 2016 [32] "First-order multifunction filter design using current amplifiers", *2016 39th International Conference on Telecommunications and Signal Processing, TSP 2016*, Vienna, Austria.
- [31] "New tunable resistorless CM first-order filter based on single CBTA and grounded capacitor", *IEEE Midwest Symposium on Circuits and Systems (MWSCAS)*, Abu Dhabi, UAE.
- 2015 [30] "Voltage-mode all-pass filter passive scheme based on floating negative resistor and grounded capacitor", *2015 European Conference on Circuit Theory and Design, ECCTD 2015*, Trondheim, Norway.
- [29] "Pole frequency and pass-band gain tunable novel fully-differential current-mode all-pass filter", *IEEE International Symposium on Circuits and Systems (ISCAS)*, Lisbon, Portugal.
- 2014 [28] "Voltage-mode all-pass filter design using simple CMOS transconductor: Non-ideal case study", *2014 37th International Conference on Telecommunications and Signal Processing, TSP 2014*, Berlin, Germany.
- [27] "Low-voltage fully cascable resistorless transadmittance-mode all-pass filter", *IEEE Midwest Symposium on Circuits and Systems (MWSCAS)*, College Station, USA.
- [26] "New low-voltage low-power VM All-Pass Filter using Current Follower with non-unity gain", *IEEE Midwest Symposium on Circuits and Systems (MWSCAS)*, College Station, USA.
- 2013 [25] "Low-voltage CMOS-RC fully cascable transadmittance-mode all-pass filter", *2013 36th International Conference on Telecommunications and Signal Processing, TSP 2013*, Rome, Italy.
- [24] "VDDDA - New 'voltage differencing' device for analog signal processing", *ELECO 2013 - 8th International Conference on Electrical and Electronics Engineering*, Bursa, Turkey.
- [23] "New current-mode all-pass filter with grounded capacitor based on gain-variable CCIII", *IEEE AFRICON Conference*, Pointe-Aux-Piments, Mauritius.
- 2012 [22] "Fully cascable dual-mode all-pass filter based on single DBTA", *2012 35th International Conference on Telecommunications and Signal Processing, TSP 2012*, Prague, Czech Republic.
- [21] "New floating lossless inductance simulator using Z-copy current follower transconductance amplifiers", *22nd International Conference, Radioelektronika 2012*, Brno, Czech Republic.
- [20] "Novel dual-mode electronically tunable all-pass filter using voltage gain-controlled MCFOA", *International Conference on Optimisation of Electrical and Electronic Equipment, OPTIM*, Brasov, Romania.
- 2011 [19] "Novel voltage conveyor with electronic tuning and its application to resistorless all-pass filter", *2011 34th International Conference on Telecommunications and Signal Processing, TSP 2011*, Budapest, Hungary.
- [18] "Electronically tunable MOSFET-C voltage-mode all-pass filter based on universal voltage conveyor", *2011 International Conference on Computer and Communication Devices (ICCCD 2011)*, Bali Island, Indonesia.
- [17] "A new compact CMOS realization of sinusoidal oscillator using a single modified CBTA", *21st International Conference, Radioelektronika 2011*, Brno, Czech Republic.
- [16] "Novel resistorless dual-output VM all-pass filter employing VDIBA", *ELECO 2011 - 7th International Conference on Electrical and Electronics Engineering*, Bursa, Turkey.
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RESULTS AT A GLANCE

Publications

Journal	115
Articles with IF	
Conference Proceedings	122
Papers	
Editorial Materials	10
Press Release & Other Articles	4
Textbooks	2

Citations

Web of Science	2442
Scopus	3090
Google Scholar	3924

Web of Science 27 / 78 / 35
Scopus 30 / 97 / 45
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