

Curriculum Vitae

Sándor BILICZ

Electrical engineer MSc, PhD, Dr. habil

Born: Szolnok, Hungary, 1985.

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Affiliation

Department of Broadband Infocommunications and Electromagnetic Theory, Faculty of Electrical Engineering and Informatics, Budapest University of Technology and Economics (BME)

2018– associate professor

2011–2018 assistant professor

Degrees

2021 Habilitation (Dr. habil): Electrical Engineering, BME

2011 PhD: Electrical Engineering/Physics, BME/University of Paris-Sud (cotutel)

2008 MSc: Electrical Engineering, BME

Scholarships, invitations abroad

2018–2019 New National Excellence Program – Scholarship from the Ministry of Human Capacities, Hungary

2016–2019 “János Bolyai” research scholarship of the Hungarian Academy of Sciences

2016 invited assoc. prof. (1 month): GeePs (Gif-sur-Yvette, France)

2015 invited assoc. prof. (1 month): L2S (Gif-sur-Yvette, France)

2013–2014 visiting researcher several times for 1-2 weeks at CEA-LIST (France)

2008–2011 MSc+PhD scholarship (3+18 months), Supelec/University of Paris-Sud, France

Research interest

Computational modeling in electromagnetics, with emphasis on inverse problems, surrogate modeling and sensitivity analysis. Applications: nondestructive evaluation, wireless power transfer, radar-related scattering and propagation phenomena.

Teaching and advisory activities

- regularly gives lectures on electromagnetics and on signal and system theory for electrical engineering students at BSc and MSc levels, mandatory and optional subjects (on numerical simulation of EM fields)
- authored 2 university notes: Problems in Electromagnetics (2010) and Problems in Mathematics for Electrical Engineers (2013)
- advisor of research works for the Students’ Scientific Association Conference, BSc and MSc theses
- advisor of PhD students (two current and one graduated), member of the jury of PhD defenses several times
- organizer of competitions in the subjects “Electromagnetics” and “Signals and Systems” at the Faculty
- chair of the MSc Admission Committee of the Faculty (2019–)

Participation and leadership in R&D activities

As principal investigator:

2015–2017 Multichannel passive ISAR imaging for military applications (MAPIS); European Defence Agency Ad-Hoc Research and Technology Category B Project (BME as consortium member with a team led by S. Bilicz)

2015–2016 Development of Inversion Procedures Based on the Exploitation of Database of Simulated NdT Signals; research project for the CEA-LIST (France)

As co-investigator:

2020–(2024) Massive data structures for describing the physics of millimeter-wave scattering, Hungarian Scientific Research Fund K135307

2020–(2023) Future communications with higher-symmetric engineered artificial materials, COST Action CA18223

2017–2020 Development of complex sensor system for UAV surveillance, GINOP-2.2.1-15-2017-00087

2020–(2023) Development of direction finding system for the detection and positioning of remote controlled devices and radio systems which can be operated without frequency license, 2019-1.1.1-PIACI-KFI-2019-00187

2015–2017 Wireless Power Transmission for Sustainable Electronics, COST Action IC1301

2014–2018 Optimization of a magnetic hysteresis measurement-based nondestructive inspection method and its application in materials science, Hungarian Scientific Research Fund K111987

2012–2015 Surrogate modeling for the solution of electromagnetic inverse problems, Hungarian Scientific Research Fund K105996

2012–2013 Efficient Database Construction of Simulated ECT Signals; research project for the CEA-LIST (France)

Organization duties, editorial/reviewer activities, memberships

Organization of conferences:

2022 25th Int. Workshop on Electromagnetic Nondestructive Evaluation (ENDE) general chair

2013 19th Int. Conference on the Computation of Electromagnetic Fields (COMPUMAG) organizing committee member

Editorial/reviewer activities:

2021– International Journal of Applied Electromagnetics and Mechanics, editorial board member

2015– COMPEL: The international journal for computation and mathematics in electrical and electronic engineering, reviewer

2011– IEEE Transactions on Magnetics, reviewer

Memberships:

2017– Electromagnetic Nondestructive Evaluation (ENDE) standing committee member

2016– Public Body of the Hungarian Academy of Sciences, voting member

2011– International Compumag Society member

Awards

2017-2022 “Top 100 lecturers of BME” (among 1000+), rated by the students at the official evaluation of the university, 4 times

2019 Dean’s Academic Honors (BME, Faculty of El. Eng. and Informatics)

2003 6-8th prize at the national contest in Physics by the *KöMaL – Mathematical and Physical Journal for Secondary Schools*

Publications

The number of scientific publications is 82, from which 29 appeared in journals with impact factor (IF). The number of independent citations is 159, the H-index is 9.

The full list of publications: <https://m2.mtmt.hu/gui2/?type=authors&mode=browse&sel=10041910>

Language and other skills

- intermediate exam in English and French language; English is fluently spoken
- driving license in categories B, C, D + Code 95