

Curriculum Vitae

Sándor Bilicz

Electrical Engineer, PhD, Dr. habil.

Born in Szolnok, Hungary, 1985

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Academic Positions

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

2018– Associate Professor

2011–2018 Assistant Professor

Education and Academic Degrees

2021 Habilitation (Dr. habil.) in Electrical Engineering, Budapest University of Technology and Economics

2011 PhD in Electrical Engineering / Physics, Budapest University of Technology and Economics / University of Paris-Sud, jointly supervised doctoral programme (cotutelle)

2008 MSc in Electrical Engineering, Budapest University of Technology and Economics

Fellowships and Visiting Research Positions

2024 Visiting researcher (1 month), Sondra – CentraleSupélec, Gif-sur-Yvette, France

2022 Visiting researcher (2 weeks), L2S, Gif-sur-Yvette, France

2018–2019 New National Excellence Programme, Bolyai+ Fellowship, Ministry of Human Capacities, Hungary

2016–2019 János Bolyai Research Fellowship, Hungarian Academy of Sciences; final research report rated “outstanding”

2016 Visiting researcher (1 month), GeePs, Gif-sur-Yvette, France

2015 Visiting researcher (1 month), L2S, Gif-sur-Yvette, France

2013–2014 Visiting researcher (several visits of 1–2 weeks), Commissariat à l’énergie atomique et aux énergies alternatives (CEA-LIST), Saclay, France

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

Research Interests

Electromagnetic field modelling and simulation; inverse problems and optimization; sensitivity analysis. Applications include electromagnetic nondestructive evaluation of carbon-fibre-reinforced polymer (CFRP) composites, wireless power transfer, and electromagnetic scattering and wave-propagation problems in radar applications.

Teaching and Supervision

- Lecturer and instructor in courses on electromagnetic fields, including introductory electromagnetics and elective courses on numerical electromagnetic field computation, as well as courses on signals and systems.
- Author of university textbooks and course materials: *Problem Book on Electromagnetic Fields* (2010, 2023) and *Applications of Mathematics in Electrical Engineering through Examples* (2013).
- Supervisor of undergraduate research projects (TDK), BSc theses, and MSc theses.
- Supervisor and co-supervisor of PhD students, three of whom have successfully obtained their doctoral degrees; regular member of PhD evaluation and defence committees.
- Organizer of Faculty-level student academic competitions.
- Chair of the MSc Admissions Committee at the Faculty of Electrical Engineering and Informatics, BME (2019–2023).

Participation in Research and Development Projects

As principal investigator / leader of the BME research team:

- 2015–2017 *Multichannel Passive ISAR Imaging for Military Applications (MAPIS)*; European Defence Agency Ad-Hoc Research and Technology Category B Project; leader of the BME research team as a consortium partner
- 2015–2016 *Development of Inversion Procedures Based on the Exploitation of Database of Simulated NdT Signals*; research project for the Commissariat à l'énergie atomique et aux énergies alternatives (CEA), France

As researcher:

- 2020–2024 Massive Data Structures for Describing the Physics of Millimeter-Wave Scattering, Hungarian Scientific Research Fund (OTKA), Grant K135307
- 2020–2023 *Future Communications with Higher-Symmetric Engineered Artificial Materials*, COST Action CA18223
- 2017–2020 Development of a Complex Sensor System for the Detection of UAVs, GINOP-2.2.1-15-2017-00087
- 2020–2023 Development of a Direction-Finding System for the Detection and Localization of Radio Emissions from Licence-Exempt Radio-Controlled Devices and Radio Equipment, 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 (OTKA), Grant K111987
- 2012–2015 Surrogate Modeling for the Solution of Electromagnetic Inverse Problems, Hungarian Scientific Research Fund (OTKA), Grant K105996
- 2012–2013 *Efficient Database Construction of Simulated ECT Signals*; research project for the Commissariat à l'énergie atomique et aux énergies alternatives (CEA), France

Professional Service

Conference organization:

- (2027) 23rd International Symposium on Applied Electromagnetics and Mechanics (ISEM), Conference Chair (successful bid)
- 2022 25th International Workshop on Electromagnetic Nondestructive Evaluation (ENDE), Conference Chair
- 2013 19th International Conference on the Computation of Electromagnetic Fields (COMPUMAG), Organizing Committee Member

Editorial and peer-review 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

Professional memberships and committee service:

- 2025– IEEE Member
- 2025– Member of the Faculty Council, Faculty of Electrical Engineering and Informatics, BME
- 2025– Member of the Standing Committee of the International Symposium on Applied Electromagnetics and Mechanics (ISEM)
- 2017– Member of the Standing Committee of Electromagnetic Nondestructive Evaluation (ENDE)
- 2016– Public Body Member of the Hungarian Academy of Sciences; voting member of the Scientific Committee on Electrotechnics
- 2011– Member of the International Compumag Society

Awards and Distinctions

2023	Outstanding Educator of the Budapest University of Technology and Economics
2023	Outstanding Educator of the Faculty of Electrical Engineering and Informatics, BME
2017–2022	Listed among the “Top 100 Lecturers at BME” on four occasions, based on student evaluations of teaching
2019	Dean’s Commendation, Faculty of Electrical Engineering and Informatics, BME
2003	6th–8th place in the KöMaL National Physics Competition

Publications

Author of 107 scientific publications, including 41 papers published in journals with an impact factor. The publications have received 289 independent citations; H-index: 11.

Full list of publications: <https://m2.mtt.mt.hu/gui2/?type=authors&mode=browse&sel=10041910>

Languages and Other Qualifications

- English and French: intermediate-level language certificates; regularly gives scientific and academic presentations in English.

Budapest, September 2026

Sándor Bilicz