Universitatea Tehnică din Cluj-Napoca
Facultatea de Electronică, Telecomunicaţii şi Tehnologia Informaţiei
Departamentul Comunicații
Conf.dr.ing. Zsolt Alfred POLGAR

LISTA
lucrărilor științifice în domeniul disciplinelor din postul didactic

A – Teza de doctorat

„Studiu și contribuții la dezvoltarea modulațiilor digitale”

Conducător ştiinţific: Prof.dr.ing. Gavril TODEREAN
Domeniul: Inginerie electronică și telecomunicații
Universitatea: Universitatea Tehnică din Cluj Napoca
Susţinere publică: 29 iulie 2002

B – Cărţi și capitole în cărţi

CĂRŢI

1. Z. I. Kiss, **Z. A. Polgar**, *Telefonie. Teorie și aplicații*, U.T.Press, Cluj Napoca, 2016, ISBN 978-606-737-193-2, 248 pag.
2. **Z. A. Polgar**, *Telefonie digitală*. Risoprint, Cluj-Napoca, 2006, ISBN 978-973-751-143-0, 228 pag.
3. V. Bota, **Z. A. Polgar**, *Procesoare digitale de semnale în transmisiunile numerice*, Editura Politehnica, Timișoara, 2001, ISBN 973-8247-06-3, 190 pag.

CAPITOLE DE CARTE

4. L. Correia, H. Abramowicz, M. Johnsson, K. Wunstel (editors), A. B. Rus, A. Botos, G. Lazar, G. Boanea, M. Barabas, V. Dobrota, **Z. A. Polgar**, Z. I. Kiss (included in list of contributors), “Architecture and Design for the Future Internet - 4WARD Project”, Chapter 12 Prototype Implementations, Springer, 1st Edition, Signals and Communications Technology Series, 2011, pp. 270-273, ISBN: 978-90-481-9345-5, e-ISBN: 978-90-481-9346-2.
5. **Z. A. Polgar**, A. C. Hosu, Z. I. Kiss, A. B. Rus, G. Lazar, V. Dobrota, “Platformă de conectivitate permanentă pentru transportul public inteligent” în „Cum să construiești un produs IT”, editor O. Matan, ITday Software magazine, Cluj-Napoca, 2014, pp. 111-121, ISBN 978-973-0-17970-5.

C – Lucrări indexate ISI/BDI publicate în ultimii 10 ani

c1) Articole / studii publicate în reviste de specialitate de circulaţie internaţională recunoscute (cotate ISI/BDI)

1. R. Nelega, M.-M. Mezei, **Z. A. Polgar**, G. Kovacs, E. Puschita, “Deep Learning-Based Automatic Modulation Classification for OFDM Signals: From Synthetic Training to OTA Evaluation”, *Sensors*, Vol. 26, No. 10, 2026, 2945; https://doi.org/10.3390/s26102945, ISSN: 1424-8220 [ISI].
2. M. P. Stef, **Z. A. Polgar**, “Software Platform for the Comprehensive Testing of Transmission Protocols Developed in GNU Radio”, *Information*, Vol. 15, No. 1, 2024, 62; https://doi.org/10.3390/info15010062, eISSN 2078-2489 [ISI].

3. **Z. A. Polgar**, M. Varga, "Game Theory-Based Load-Balancing Algorithms for Small Cells Wireless Backhaul Connections", *Applied Sciences*, Vol. 13, No. 3, 2023, 1485; https://doi.org/10.3390/app13031485, eISSN 2076-3417 [ISI].
4. **Z. A. Polgar,** Z. I. Suta, "Computing Coding Solutions for Opportunistic Network Coding Used in Wireless Mesh Networks", *Wireless Personal Communications*, Vol. 107, No. 4, 2019, pp. 2019-2045, ISSN 0929-6212 [ISI].
5. M. Varga, **Z. A. Polgar**, "Game Theory Based Radio Resource Management Algorithm for Packet Access Cellular Networks", *Acta Universitatis Sapientiae, Electrical and Mechanical Engineering*, Vol. 6, 2017, pp. 19−32, ISSN 2065-5916 [DBLP].

c2) Studii publicate la conferinţe indexate în baze de date internaţionale de referinţă în domeniul ..... (DBLP, ACM, IEEE, SCOPUS)[1]

1. M. M. Mezei**,** Z. I. Suta, **Z. A. Polgar**, „Single Carrier Modulated Signal Time-Domain Denoising with Deep-Learning Algorithms" 2026 Emerging Trends in Networks and Computer Communications (ETNCC), Windhoek, Namibia, 2026 [IEEE].
2. M. M. Mezei, **Z. A. Polgar**, „OFDM Symbol Synchronization Solution with Artificial Intelligence Based Fine Timing Correction", 2026 Advanced Topics on Measurement and Simulation (ATOMS), Cluj-Napoca, Romania, 2026, pp. 1-4, doi: 10.1109/ATOMS69836.2026.11583131, Electronic ISBN:979-8-3315-6252-6 [IEEE].
3. M. M. Mezei, Z. I. Suta, **Z. A. Polgar**, "APT Signal Denoising Solution for SDR Receivers", Proc. of 2025 International Conference on Emerging Trends in Networks and Computer Communications (ETNCC), 05-07 August 2025, Windhoek, Namibia, pp. 39-45, Electronic ISBN:979-8-3315-2565-1 [IEEE].
4. R. Nelega, **Z. A. Polgar**, G. Kovacs, M. Gordan, E. Puschita, "Generation and Deep Learning-Based Classification of RF Signals Represented as I/Q Time Series", Proc. of 2025 IEEE International Mediterranean Conference on Communications and Networking (MeditCom), 07-10 July 2025, Nice, France, pp. 1-6, Electronic ISBN:979-8-3315-2965-9 [IEEE] [ISI].
5. M. M. Mezei, **Z. A. Polgar**, "A Quality-Improving Method for APT-Type NOAA Meteorological Satellite Signals", Proc. of 2024 International Symposium on Electronics and Telecommunications (ISETC), 07-08 November 2024, Timisoara, Romania, pp. 1-7, Electronic ISSN: 2475-7861 [IEEE].
6. **Z. A. Polgar**, Z. I. Suta, "Algorithms for Synchronization of the Weather Satellites Automatic Picture Transmissions", Proc. of 2024 47th International Conference on Telecommunications and Signal Processing (TSP), 10-12 July 2024, Prague, Czech Republic, pp. 58-63, Electronic ISSN: 2768-3311 [IEEE] [ISI].
7. **Z. A. Polgar**, M. P. Stef, "OFDM Transceiver with Adaptive Modulation Implemented in GNU Radio", Proc. of 46th International Conference on Telecommunications and Signal Processing (TSP) 2023, 12-14 July 2023, Prague, Czech Republic, pp. 37–42, Electronic ISBN:979-8-3503-0396-4 [IEEE] [ISI].
8. **Z. A. Polgar**, "Algorithms for Mode S Secondary Surveillance Radar Reply Signal Receiver", *Proc. of 45th International Conference on Telecommunications and Signal*

[1] indexate în:
[IEEE] - IEEE Xplore (http://ieeexplore.ieee.org/Xplore/guesthome.jsp)
[ACM] - ACM portal (http://portal.acm.org)
[DBLP] - (http://www.informatik.uni-trier.de)
[SCOPUS] - (http://www.scopus.com)

Processing (TSP) 2022, 13-15 July 2022, Prague, Czech Republic, pp. 31-35, Electronic ISBN: 978-1-6654-6948-7 [IEEE] [ISI].

9. **Z. A. Polgar**, M. Varga, "Game Theory Based Load Balancing Algorithms Over Multiple Virtual Tunnels", *Proc. of 45th International Conference on Telecommunications and Signal Processing (TSP) 2022*, 13-15 July 2022, Prague, Czech Republic, pp. 110-115, Electronic ISBN: 978-1-6654-6948-7 [IEEE] [ISI].
10. **Z. A. Polgar**, "Reliable Data Transport Protocol with FEC Mechanism for Erasure Channels", *Proc. of International Conference on Telecommunications and Signal Processing (TSP) 2021*, 26-28 July 2021, Brno, Czech Republic, pp. 114-119, Electronic ISBN:978-1-6654-2933-7 [IEEE] [ISI].
11. **Z. A. Polgar**, A. C. Hosu, "Load Balancing Mechanism in Heterogeneous Networks for Intelligent Transportation Systems Based on Network Level Context Information", *Proc. of 39th International Conference on Telecommunications and Signal Processing (TSP) 2016*, 27-29 June 2016, Vienna, Austria, pp. 20-26, Electronic ISBN: 978-1-5090-1288-6 [IEEE] [ISI].
12. **Z. A. Polgar**, A. C. Hosu, "Advanced Mobile Router Platform with Load Balancing Capabilities in Heterogeneous Networks", *Proc. of 39th International Conference on Telecommunications and Signal Processing (TSP) 2016*, 27-29 June 2016, Vienna, Austria, pp. 133-139, Electronic ISBN: 978-1-5090-1288-6 [IEEE] [ISI].

D – Lucrări publicate în ultimii 10 ani în reviste şi volume de conferinţe cu referenţi (neindexate)

1. - **Z. A. Polgar**, Z. I. Kiss, "Mobile Router Platform with Advanced RRM Capabilities for Heterogeneous Wireless Networks", *Proc. of. 6th International Conference on Recent Achievements in Mechatronics, Automation, Computer Science and Robotics*, 27-28 Oct. 2017, Târgu Mureș, Romania.

E – Brevete obținutete pentru întreaga activitate

F – Contracte de cercetare (2021-2026)

1. Proiect INCDTIM Cluj Napoca (cod proiect 05 PSCD/2022) - membru.
2. Proiect național Ro-Green Sustainable Electric Mobility Solutions", cod SMIS 336225 - membru

Data
06.10.2026

Semnătura