Universitatea Tehnică din Cluj-Napoca
Facultatea de Electronică, Telecomunicaţii şi Tehnologia Informaţiei
Departamentul Comunicatii
Ș.l.dr.ing. Andra Elena Iulia PASTRAV

LISTA
lucrărilor ştiinţifice în domeniul disciplinelor din postul didactic

A – Teza de doctorat

„Contribuţii privind analiza performanțelor sistemelor satelitare integrate”
Conducător ştiinţific: Prof.dr.ing. Tudor PALADE
Domeniul: Inginerie Electronică și Telecomunicații
Universitatea Tehnică din Cluj-Napoca
Susţinere publică: *18 decembrie 2015.*

B – Cărţi şi capitole în cărţi publicate

CĂRŢI

1. Rareș Călin Buta, Cristian Codău, **Andra Pastrav**, Emanuel Pușchiță, ***Radiocomunicații celulare – îndrumător de laborator***, Cluj-Napoca, Editura U.T.Press, ISBN 978-606-737-816-0, 165 pagini, 2025.
2. **Andra Pastrav,** Tudor Palade, Emanuel Puschita, Paul Dolea, Paul Dascal, ***Intrebari si probleme din tehnica microundelor***, Cluj-Napoca, Editura U.T.Press, ISBN 978-606-737-250-2, 114 pagini, 2017.
3. Emanuel Puschita, **Andra Pastrav,** Eugeniu Semenciuc, Tudor Palade, ***Calitatea serviciilor în reţele de telecomunicaţii cu acces radio***, ed. a 2-a revizuita şi completată, Cluj-Napoca, Editura U.T.Press, ISBN 978-606-737-189-5, 320 pg., 2016.

CAPITOLE DE CARTE

1. Eugeniu Semenciuc, **Andra Pastrav,** Tudor Palade, Emanuel Puschita, “SDWN for End-to-End QoS Path Selection in a Wireless Network Ecosystem”, Future Access Enablers for Ubiquitous and Intelligent Infrastructures, Lecture Notes of the Institute for Computer Sciences, Social Informatics and Telecommunications Engineering, Volumul 241, p. 134-140, Springer, 2018. (WOS:000481658200020, https://doi.org/10.1007/978-3-319-92213-3_20 , https://link.springer.com/chapter/10.1007/978-3-319-92213-3_20)
2. **Andra Pastrav,** Paul Dolea, Emanuel Puschita, Cristian Codau, Tudor Palade, Iulia Palade, (2019). Exposure to UHF Electromagnetic Radiation in Urban Areas. In: Vlad, S., Roman, N. (eds) 6th International Conference on Advancements of Medicine and Health Care through Technology; 17–20 October 2018, Cluj-Napoca, Romania. IFMBE Proceedings, vol 71. Springer, Singapore. https://doi.org/10.1007/978-981-13-6207-1_16 WOS:000493501100016.
3. Ioana Borz, Tudor Palade, Emanuel Puschita, Paul Dolea, **Andra Pastrav,** (2022). Wireless Sensor Networks for Healthcare Monitoring. In: Vlad, S., Roman, N.M. (eds) 7th International Conference on Advancements of Medicine and Health Care through Technology. MEDITECH 2020. IFMBE Proceedings, vol 88. Springer, Cham. https://doi.org/10.1007/978-3-030-93564-1_26

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

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

1. Sorin Leonte; **Andra Pastrav**; Ciprian Zamfirescu; Emanuel Puschita. „Voice Quality Evaluation in a Mobile Cellular Network: In Situ Mean Opinion Score Measurements". **Sensors.** 2024. 24 (20). https://doi.org/10.3390/s24206630. WOS:001341359000001. **Q2, FI = 4 (2025), FI = 4.1 (5 years).**
2. Cristian Codau; Rares Buta; **Andra Pastrav**; Paul Dolea; Tudor Palade; Emanuel Puschita, "Experimental Evaluation of an SDR-Based UAV Localization System". **Sensors**. 2024; 24(9): 2789. https://doi.org/10.3390/s24092789. WOS:001220021900001. **Q2, FI = 4 (2025), FI = 4.1 (5 years).**
3. Rares Buta; **Andra Pastrav**; Paul Dolea; Cristian Codau; Tudor Palade; Emanuel Puschita. „SDR-Based Ku-Band Multifeed Receiver for SST". **IEEE Access.** 2024; vol. 12, pp. 110626-110641.https://doi.org/10.1109/ACCESS.2024.3430046 WOS:001297221800001. **Q2, FI=4.2 (2025), FI=4.3 (5 years).**
4. Rares Buta; Emanuel Puschita; Botond Kirei; Cristian Codau; Tudor Palade; Paul Dolea; **Andra Pastrav**. „Wireless-SpaceWire bridge for intrasatellite transmissions". **International Journal on Satellite Communication Networks**. 2023. 41(5), pp. 477-498. https://doi.org/10.1002/sat.1479. WOS:000954308100001. **Q3, FI = 1.8 (2025), FI = 1.7 (5 years).**
5. Rares Buta; Martin Drobczyk; Thomas Firchau; Andre Luebken; Tudor Palade; **Andra Pastrav**; Emanuel Puschita. „SpaceWire-to-UWB Wireless Interface Units for Intra-spacecraft Communication Links". Sensors. 2023, 23(3). https://doi.org/10.3390/s23031363. WOS:000931901000001. **Q2, FI = 4 (2025), FI = 4.1 (5 years).**
6. Gheorghe Minteuan; Tudor Palade; Emanuel Puschita; Paul Dolea; **Andra Pastrav**, **„**Monopulse Secondary Surveillance Radar Coverage—Determinant Factors". **Sensors**. 2021; 21(12):4198. https://doi.org/10.3390/s21124198. WOS:000666787600001. **Q2, FI = 3.576 (2020), FI = 3.735 (5 years)**
7. Zoltan Padrah, **Andra Pastrav**, Tudor Palade, Ovidiu Ratiu, Emanuel Puschita, „Development and Validation of an ISA100.11a Simulation Model for Accurate Industrial WSN Planning and Deployment" **Sensors.** 2021; 21(11):3600. https://doi.org/10.3390/s21113600. WOS:000660682900001. **Q2, FI = 3.576 (2020), FI = 3.735 (5 years)**
8. Ioan Domuta, Tudor Palade, Emanuel Puschita, **Andra Pastrav**, „Timestamp Estimation in P802.15.4z Amendment", **Sensors.** 2020; 20(18):5422. https://doi.org/10.3390/s20185422. WOS:000580143100001. **Q2, FI = 3.576 (2020), FI = 3.735 (5 years)**
9. Emanuel Puschita, Ovidiu Ratiu, Martin Drobczyk, Nickolaos Panagiotopoulos, Botond Sándor Kirei, Stefan Vos, Vlad Ratiu, Thomas Gärtner, **Andra Pastrav**, Tudor Palade, „A UWB solution for wireless intra-spacecraft transmissions of sensor and SpaceWire data", **International Journal on Satellite Communication Networks**. 2020; 38: 41– 61. https://doi.org/10.1002/sat.1307. WOS:000609200900004. **Q2, FI = 1.617 (2020), FI = 1.408 (5 years)**

10. Dalia Popescu; Philippe Jacquet; Bernard Mans; Robert Dumitru; **Andra Pastrav;** Emanuel Puschita "Information Dissemination Speed in Delay Tolerant Urban Vehicular Networks in a Hyperfractal Setting," in IEEE/ACM Transactions on Networking, vol. 27, no. 5, pp. 1901-1914, Oct. 2019, https://doi.org/10.1109/TNET.2019.2936636. WOS:000502059800010. **Q1, FI = 3.56 (2020), FI = 3.742 (5 years)**

c2) Studii publicate la conferinţe indexate în baze de date internaţionale de referinţă în domeniul Electronică, Telecomunicaţii şi Tehnologia Informaţiei

1. Cristian Codau, Rares Buta, Emanuel Puschita, Tudor Palade, Raluca Simedroni, **Andra Pastrav, "Implementation of an SDR-based FMCW Radar Receiver using LabVIEW NXG,"** 2022 International Workshop on Antenna Technology (iWAT), 2022, pp. 114-117, https://doi.org/10.1109/iWAT54881.2022.9811016. WOS:000853691500032.
2. Gheorghe Minteuan, **Andra Pastrav**, Tudor Palade, **"Monopulse Secondary Surveillance Radar – Environment Impact on Target Detection,"** 2022 International Workshop on Antenna Technology (iWAT), 2022, pp. 86-89, https://doi.org/10.1109/iWAT54881.2022.9811020. WOS:000853691500024.
3. Raluca Simedroni, Tudor Palade, Emanuel Puschita, Paul Dolea, Cristian Codau, Rares Buta, **Andra Pastrav, "Short-term Q-band Characteristics and Meteorological Data Statistical Analysis,"** 2022 International Workshop on Antenna Technology (iWAT), 2022, pp. 107-110, https://doi.org/10.1109/iWAT54881.2022.9811087. WOS:000853691500030.
4. Paul Dolea, Tudor Palade, Cristian Codau, Rares Buta, Raluca Simedroni, Emanuel Puschita, Octavian Cristea, **Andra Pastrav, "Parabolic Antenna Retrofit for Operation at 5.84GHz – Preliminary Feedhorn Design,"** 2022 International Workshop on Antenna Technology (iWAT), 2022, pp. 82-85, https://doi.org/10.1109/iWAT54881.2022.9811062. WOS:000853691500023.
5. Rares-Calin Buta; Botond Sandor Kirei; Cristian Codau; **Andra Pastrav;** Calin Farcas; Raluca Simedroni; Paul Dolea; Tudor Palade; Emanuel Puschita, **"Design and Validation of a SpW Converter for Intra-Spacecraft Communications,"** 2021 44th International Conference on Telecommunications and Signal Processing (TSP), 2021, pp. 381-385, https://doi.org/10.1109/TSP52935.2021.9522627. WOS:000701604600081.
6. Cristian Codau; Rares-Calin Buta; Botond Sandor Kirei; **Andra Pastrav;** Raluca Simedroni; Paul Dolea; Tudor Palade; Horia Hedesiu; Emanuel Puschita, **"Design and Validation of a Wireless Bridge for Intra-Spacecraft Communications,"** 2021 44th International Conference on Telecommunications and Signal Processing (TSP), 2021, pp. 386-389, https://doi.org/10.1109/TSP52935.2021.9522609. WOS:000701604600082.
7. Raluca Simedroni; **Andra Pastrav;** Emanuel Puschita; Paul Dolea; Cristian Codau; Rares Buta; Tudor Palade, **"Preparation of the Alphasat Q-band Propagation Campaign in Cluj-Napoca,"** *2021 44th International Conference on Telecommunications and Signal Processing (TSP)*, 2021, pp. 377-380, https://doi.org/10.1109/TSP52935.2021.9522681. WOS:000701604600080.
8. Gheorghe Minteuan; **Andra Pastrav**; Tudor Palade, **„The Impact of Reflections on the Monopulse Secondary Surveillance Radar Performance",** 15th International Conference on Advanced Technologies, Systems and Services in Telecommunications-

TELSIKS, 2021, https://doi.org/10.1109/TELSIKS52058.2021.9606299. WOS:001548423500008.

9. Paul Dolea; Andra Pastrav; Tudor Palade; Emanuel Puschita, „Geomagnetic Storms Forecasting by VLF Radio Waves Monitoring", 2021 Conference on Antenna Measurements and Applications (CAMA), 2021, https://doi.org/10.1109/CAMA49227.2021.9703524. WOS:001416160800041.
10. Rares Buta; Cristian Codau; **Andra Pastrav;** Tudor Palade; Paul Dolea; Emanuel Puschita, **"Performance evaluation of sub-band MVDR beamforming for IEEE 802.11ac wideband signals,"** 2020 International Symposium on Electronics and Telecommunications (ISETC), 2020, pp. 1-4, https://doi.org/10.1109/ISETC50328.2020.9301125. WOS:000612681000087.
11. **Andra Pastrav;** Raluca Simedroni; Tudor Palade; Paul Dolea; Dimitrie Popescu; Emanuel Puschita, **"Evaluation of UWB Transmissions in Highly Reflective Environments,"** 2020 13th International Conference on Communications (COMM), 2020, pp. 527-532, https://doi.org/10.1109/COMM48946.2020.9142043. WOS:000612723900093.
12. Cristian Codau; Rares Buta; **Andra Pastrav;** Tudor Palade; Paul Dolea; Emanuel Puschita, **"An Overview of Digital Beamforming Implemented on SDR Platforms,"** 2020 International Workshop on Antenna Technology (iWAT), 2020, pp. 1-4, https://doi.org/10.1109/iWAT48004.2020.1570609928. WOS:000627803200113.
13. Paul Dolea; Tudor Palade; Emanuel Puschita; Octavian Cristea; **Andra Pastrav, "Conceptual Approach of an SDR-operated Multi-feed Antenna for Space Surveillance and Tracking,"** 2020 International Workshop on Antenna Technology (iWAT), 2020, pp. 1-4, https://doi.org/10.1109/iWAT48004.2020.1570609915. WOS:000627803200060.
14. Raluca Simedroni; Emanuel Puschita; Tudor Palade; Paul Dolea; Cristian Codau; Rares Buta; **Andra Pastrav, "Indoor Positioning using Decawave MDEK1001,"** 2020 International Workshop on Antenna Technology (iWAT), 2020, pp. 1-4, https://doi.org/10.1109/iWAT48004.2020.1570609918. WOS:000627803200107.
15. Zoltan Padrah; Catalin Pop; Eusebiu Jecan; **Andra Pastrav;** Tudor Palade; Ovidiu Ratiu; Emanuel Puschita**, "An ISA100.11a Model Implementation for Accurate Industrial WSN Simulation in ns-3,"** 2020 International Workshop on Antenna Technology (iWAT), 2020, pp. 1-4, https://doi.org/10.1109/iWAT48004.2020.1570616114. WOS:000627803200027.
16. Ioan Domuta; Tudor Petru Palade; Emanuel Puschita; **Andra Pastrav, "Localization in 802. 15.4z Standard,"** 2020 International Workshop on Antenna Technology (iWAT), 2020, pp. 1-4, https://doi.org/10.1109/iWAT48004.2020.1570615511. WOS:000627803200035.
17. Cristian Codau; Rares Buta; **Andra Pastrav**; Tudor Palade; Paul Dolea; Emanuel Puschita, **"ULA Transmit Beamforming on SDR Platform,"** 2020 International Workshop on Antenna Technology (iWAT), 2020, pp. 1-2, https://doi.org/10.1109/iWAT48004.2020.1570616261. WOS:000627803200039.
18. **Andra Pastrav**, Raluca Simedroni, Tudor Palade, Paul Dolea, Dimitrie Popescu, Emanuel Puschita, **"Evaluation of UWB Transmissions in Highly Reflective Environments,"** 2020 13th International Conference on Communications (COMM),

2020, pp. 527-532, https://doi.org/10.1109/COMM48946.2020.9142043. WOS:000612723900093.

19. Cristian Codau; Buta Rares; Tudor Palade; **Andra Pastrav;** Paul Dolea; Raluca Simedroni; Emanuel Puschita, **"Experimental Evaluation of a Beamforming-capable System using NI USRP Software Defined Radios,"** 2019 18th RoEduNet Conference: Networking in Education and Research (RoEduNet), 2019, pp. 1-6, https://doi.org/10.1109/ROEDUNET.2019.8909456. WOS:000520513500005.
20. **Andra Pastrav;** Tudor Palade; Paul Dolea; Raluca Simedroni; Cristian Codau; Emanuel Puschita, **"The Alphasat Experiment at Cluj-Napoca – Preliminary Results,"** 2018 International Symposium on Electronics and Telecommunications (ISETC), 2018, pp. 1-4, https://doi.org/10.1109/ISETC.2018.8583877. WOS:000463031500051.
21. **Andra Pastrav;** Paul Dolea; Emanuel Puschita; Cristian Codau; Tudor Palade, **"Evaluating the Electromagnetic Pollution in the 700-1000MHz Frequency Range in Urban Areas,"** 2018 IEEE Conference on Antenna Measurements & Applications (CAMA), 2018, pp. 1-4, https://doi.org/10.1109/CAMA.2018.8530655. WOS:000517563300132.
22. Buta Rares; Cristian Codau; **Andra Pastrav**; Tudor Palade; Horia Hedesiu; Bogdan Balauta; Emanuel Puschita, **"Experimental Evaluation of AoA Algorithms using NI USRP Software Defined Radios,"** 2018 17th RoEduNet Conference: Networking in Education and Research (RoEduNet), 2018, pp. 1-6, https://doi.org/10.1109/ROEDUNET.2018.8514133. WOS:000517570500011.
23. **Andra Pastrav;** Cristian Codau; Emanuel Puschita; Paul Dolea; Tudor Palade, **"Conceptual Architecture of a Retrodirective Antenna System with Beamforming Capabilities,"** 2018 International Conference on Communications (COMM), 2018, pp. 225-230, https://doi.org/10.1109/ICComm.2018.8484740. WOS:000449526000041.
24. Cristian Codău; Alexandru Voina; **Andra Pastrav;** Tudor Palade; Emanuel Puschita; Horia Hedesiu; Claudiu Chirap, **"Experimental evaluation of the IEEE 802.11ac standard using NI USRP 2954R,"** 2017 16th RoEduNet Conference: Networking in Education and Research (RoEduNet), 2017, pp. 1-6, https://doi.org/10.1109/ROEDUNET.2017.8123765. WOS:000425040000037.
25. Alexandru Voina; Cristian Codău; **Andra Pastrav;** Tudor Palade; Emanuel Puschita; Horia Hedesiu; Claudiu Chirap, **"Implementation of a SDR-based redundant access network using NI USRP-RIO,"** 2017 16th RoEduNet Conference: Networking in Education and Research (RoEduNet), 2017, pp. 1-6, https://doi.org/10.1109/ROEDUNET.2017.8123764. WOS:000425040000036.
26. **Andra Pastrav;** Emanuel Puschita; Tudor Palade, **"Ionospheric propagation monitoring and TEC measurements using GPStation-6 GNSS receiver,"** 2017 11th European Conference on Antennas and Propagation (EUCAP), 2017, pp. 3887-3891, https://doi.org/10.23919/EuCAP.2017.7928814. WOS:000403827303152.
27. Ana-Maria Barbulet, **Andra Pastrav**, Paul Dolea, **"Design and Implementation of a Low-Cost SDR-Based Reception System for SST,"** 2026 Advanced Topics on Measurement and Simulation (ATOMS), Cluj-Napoca, Romania, 2026, pp. 1-4. https://doi.org/10.1109/ATOMS69836.2026.11582961. (IEEE)
28. Sorin Leonte, Ciprian Zamfirescu, Daniel Burmaz, Radu Iugulescu, **Andra Pastrav**, Cristian Codau, Rares Buta, Emanuel Puschita, **"Measurement-Based Evaluation of Downlink Transmit Power in 5G NR Urban Deployments,"** 2026 Advanced Topics

on Measurement and Simulation (ATOMS), Cluj-Napoca, Romania, 2026, pp. 1-4. https://doi.org/10.1109/ATOMS69836.2026.11583142 (IEEE)

29. Raluca Simedroni, Tudor Palade, **Andra Pastrav**, Emanuel Puschita, Paul Dolea, **"A Comprehensive Pipeline for the Integration, Evaluation, and Correction of Heterogeneous Data Sources for Enhanced Q-Band Satellite Signal Analysis,"** 2024 Advanced Topics on Measurement and Simulation (ATOMS), Constanta, Romania, 2024, pp. 15-18, https://doi.org/10.1109/ATOMS60779.2024.10921612 (IEEE)
30. Teodora Murariu, **Andra Pastrav**, Carmen Tripon, Cristian Morari, Emanuel Puschita, Liviu Zarbo, **"A roadmap for building quantum key distribution devices,"** 2022 21st RoEduNet Conference: Networking in Education and Research (RoEduNet), Sovata, Romania, 2022, pp. 1-6. https://doi.org/10.1109/RoEduNet57163.2022.9921102

D – Lucrări publicate în reviste şi volume de conferinţe neindexate

E – Brevete

1. Cerere brevet RO20200000081 / 20200218 (A/00081/18.02.2020) "**Sistem și metodă de localizare a unui terminal WiFi folosind ancore echipate cu antene retro-directive"**, Autori: T. Palade, **A. Pastrav**, E. Pușchiță, O. Rațiu, P. Dolea, O. Cristea, P. Dascăl.
2. Cerere brevet RO20200000082 / 20200218 (A/00082/18.02.2020) "**Sistem radiant compact cu diagramă de radiație omnidirecțional deformabilă"**, Autori: T. Palade, **A. Pastrav**, E. Pușchiță, P. Dolea, O. Cristea, P. Dascăl, O. Rațiu.
3. Cerere brevet A/00200/19.04.2022 **"Punte SpaceWire – IEEE 802.11 pentru comunicații cu debit ridicat pe bordul vehiculelor spațiale"**, Autori: E. Pușchiță, S. Kirei, T. Palde, **A. Pastrav**, R. Buta, C. Codau, C. Fărcaș.

F – Contracte de cercetare (2021-2026)

1. Sistemul RoSSA-extinderea solutiei informationale si dezvoltarea sistemului electro-optic; dezvoltarea capabilitatilor romanesti pentru supravegherea domeniului spatial (SSA) (ROSSA2). Competitie SOL 2024. Cod proiect PN-IV-P6-6.3-SOL-2024-2-0220. Numar contract 14Sol(T14)/2024. Finantator UEFISCDI. Buget UTCN 600 000.00 lei. Buget total 10 775 000.00 lei. Perioada implementare 29-07-2024 / 20-07-2027. Pagina web https://rossa2.rosa.ro/. Rol UTCN partener. **Responsabil UTCN – Andra Pastrav**.

2. Sistem inteligent de monitorizare a emisiilor radio (SIMoRF). Competitie PSCD 2022. Numar contract 5 PSCD/2022. Program Planul sectorial de cercetare-dezvoltare al MApN 2022-2025. Finantator UNITATEA MILITARA 02550 C BUCURESTI. Buget UTCN 810 000.00 lei. Buget total 6 000 000.00 lei. Perioada implementare 01-11-2022 / 30-04-2025. Rol UTCN partener. **Responsabil UTCN – Andra Pastrav.**

Data: 09.10.2026 **Semnătura**