



Listă de lucrări

As. Dr. Ing. Rareș-Călin BUTA

a) Listă de 10 lucrări relevante:

1. Cristian Codău, **Rareș Buta**, Andra Păstrăv, Paul Dolea, Tudor Palade, Emanuel Puschita, „Experimental Evaluation of an SDR-Based UAV Localization System”. *Sensors* 2024, 24, 2789. <https://doi.org/10.3390/s24092789> WOS:001220021900001 (Q2)
2. **Rares-Calin Buta**, Andra Pastrav, Paul Dolea, Cristian Codau, Tudor Palade and Emanuel Puschita, "SDR-based Ku-band multifeed receiver for SST," in *IEEE Access*, vol. 12, pp. 110626-110641, 2024, <https://doi.org/10.1109/ACCESS.2024.3430046> WOS:001297221800001 (Q2)
3. **Rares-Calin Buta**, Emanuel Puschita, Botond Sandor Kirei, Cristian Codau, Tudor Palade, Paul Dolea, Andra Pastrav. "Wireless-SpaceWire bridge for intrasatellite transmissions", *Int J Satell Commun Network*. 2023; 41(5): 477-498. <https://doi.org/10.1002/sat.1479> WOS:000954308100001 (Q3)
4. **Rares-Calin Buta**, Martin Drobczyk, Thomas Firchau, Andre Luebken, Tudor Petru Palade, Andra Pastrav, Emanuel Puschita. „SpaceWire-to-UWB Wireless Interface Units for Intra-spacecraft Communication Links,” *Sensors*, 2023, 23, 1363. <https://doi.org/10.3390/s23031363> WOS:000931901000001 (Q2)
5. Cristian Codau, **Rares Buta**, Emanuel Puschita, Tudor Palade, Paul Dolea, Raluca Simedroni, Andra Pastrav, "Implementation of an SDR-based FMCW Radar Receiver using LabVIEW NXG," *2022 International Workshop on Antenna Technology (iWAT)*, Dublin, Ireland, 2022, pp. 114-117, <https://doi.org/10.1109/iWAT54881.2022.9811016>. WOS:000853691500032
6. **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)*, Brno, Czech Republic, 2021, pp. 381-385, <https://doi.org/10.1109/TSP52935.2021.9522627>. WOS:000701604600081.
7. Cristian Codau, **Rares-Calin Buta**, Botond Sandor Kirei, Andra Pastrav, Raluca Simedroni, Paul Dolea, Tudor Palade, Emanuel Puschita, Horia Hedesiu, "Design and Validation of a Wireless Bridge for Intra-Spacecraft Communications," *2021 44th International Conference on Telecommunications and Signal Processing (TSP)*, Brno, Czech Republic, 2021, pp. 386-389, <https://doi.org/10.1109/TSP52935.2021.9522609>. WOS:000701604600082.
8. **Rares Buta**, Cristian Codau, Andra Pastrav, Tudor Palade, Paul Dolea and Emanuel Puschita, "Performance evaluation of sub-band MVDR beamforming for IEEE 802.11ac wideband signals," *2020 International Symposium on Electronics and Telecommunications (ISETC)*, Timisoara, Romania, 2020, pp. 1-4, <https://doi.org/10.1109/ISETC50328.2020.9301125>. WOS:000612681000087

9. 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), Galati, Romania, 2019, pp. 1-6, <https://doi.org/10.1109/ROEDUNET.2019.8909456>. WOS:000520513500005.
10. **Buta Rares**, Cristian Codau, Andra Pastrav, Tudor Palade, Horia Hedeshiu, 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), Cluj-Napoca, Romania, 2018, pp. 1-6, <https://doi.org/10.1109/ROEDUNET.2018.8514133>. WOS:000517570500011

b) Teza de doctorat:

„Contributions to the implementation of SDR-based Systems in Satellite Communications”,
Profesor coordonator prof.dr.ing. Emanuel-Dumitru PUȘCHIȚĂ

c) Brevete de invenție

1. Cerere brevet înregistrată la OSIM: "Punte SpaceWire - IEEE 802.11 pentru comunicații cu debit ridicat pe bordul vehiculelor spațiale", PATENT OSIM NR. 9335 A/00200/31.03.2022.

d) Cărți și capitole în cărți

1. **Rareș-Călin Buta**, Cristian Codău, Andra Pastrav, Emanuel Pușchiță, *Radiocomunicații Celulare – Îndrumător de laborator*. Cluj-Napoca: UTPRESS, 2025, ISBN: 978-606-737-816-0.

e) Articole publicate în reviste de jurnal din fluxul științific internațional principal:

1. **Rares-Calin Buta**, Emanuel Puschita, Botond Sandor Kirei, Cristian Codau, Tudor Palade, Paul Dolea, Andra Pastrav. "Wireless-SpaceWire bridge for intrasatellite transmissions", *Int J Satell Commun Network*. 2023; 41(5): 477-498. <https://doi.org/10.1002/sat.1479> WOS:000954308100001 (Q3)
2. **Rares-Calin Buta**, Martin Drobczyk, Thomas Firchau, Andre Luebken, Tudor Petru Palade, Andra Pastrav, Emanuel Puschita. „SpaceWire-to-UWB Wireless Interface Units for Intra-spacecraft Communication Links,” *Sensors*, 2023, 23, 1363. <https://doi.org/10.3390/s23031363> WOS:000931901000001 (Q2)
3. Cristian Codău, **Rareș Buta**, Andra Păstrăv, Paul Dolea, Tudor Palade, Emanuel Puschita, „Experimental Evaluation of an SDR-Based UAV Localization System”. *Sensors* 2024, 24, 2789. <https://doi.org/10.3390/s24092789> WOS:001220021900001 (Q2)
4. **Rares-Calin Buta**, Andra Pastrav, Paul Dolea, Cristian Codau, Tudor Palade and Emanuel Puschita, "SDR-based Ku-band multifeed receiver for SST," in *IEEE Access*, vol. 12, pp. 110626-110641, 2024, <https://doi.org/10.1109/ACCESS.2024.3430046> WOS:001297221800001 (Q2)

5. Bianca Bota, **Rares Buta**, Botond Sandor Kirei, Calin Fărcaș, Sorin Hintea, "A Numerical Model for I/Q Modulation/Demodulation for an FPGA-Enabled SDR Platform", *Acta Technica Napocensis Electronics and Telecommunications*, vol. 63, no. 1, 2023, pp.1-5, ISSN 1221-6542.

f) Articole apărute în lucrări ale principalelor conferințe internaționale de specialitate

1. **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)*, Cluj-Napoca, Romania, 2018, pp. 1-6, <https://doi.org/10.1109/ROEDUNET.2018.8514133>. WOS:000517570500011
2. 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)*, Galati, Romania, 2019, pp. 1-6, <https://doi.org/10.1109/ROEDUNET.2019.8909456>. WOS:000520513500005.
3. 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)*, Bucharest, Romania, 2020, pp. 1-4, <https://doi.org/10.1109/iWAT48004.2020.1570609918>. WOS:000627803200107.
4. 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)*, Bucharest, Romania, 2020, pp. 1-2, <https://doi.org/10.1109/iWAT48004.2020.1570616261>. WOS:000627803200039.
5. 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)*, Bucharest, Romania, 2020, pp. 1-4, <https://doi.org/10.1109/iWAT48004.2020.1570609928>. WOS:000627803200113
6. **Rares Buta**, Cristian Codau, Andra Pastrav, Tudor Palade, Paul Dolea and Emanuel Puschita, "Performance evaluation of sub-band MVDR beamforming for IEEE 802.11ac wideband signals," *2020 International Symposium on Electronics and Telecommunications (ISETC)*, Timisoara, Romania, 2020, pp. 1-4, <https://doi.org/10.1109/ISETC50328.2020.9301125>. WOS:000612681000087
7. **Rares-Calina 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)*, Brno, Czech Republic, 2021, pp. 381-385, <https://doi.org/10.1109/TSP52935.2021.9522627>. WOS:000701604600081.
8. Cristian Codau, **Rares-Calina Buta**, Botond Sandor Kirei, Andra Pastrav, Raluca Simedroni, Paul Dolea, Tudor Palade, Emanuel Puschita, Horia Hedesiu, "Design and Validation of a Wireless Bridge for Intra-Spacecraft Communications," *2021 44th International Conference*

- on *Telecommunications and Signal Processing (TSP)*, Brno, Czech Republic, 2021, pp. 386-389, <https://doi.org/10.1109/TSP52935.2021.9522609>. WOS:000701604600082.
9. 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)*, Brno, Czech Republic, 2021, pp. 377-380, <https://doi.org/10.1109/TSP52935.2021.9522681>. WOS:000701604600080
 10. 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)*, Dublin, Ireland, 2022, pp. 82-85, <https://doi.org/10.1109/iWAT54881.2022.9811062>. WOS:000853691500023.
 11. Cristian Codau, **Rares Buta**, Emanuel Puschita, Tudor Palade, Paul Dolea, Raluca Simedroni, Andra Pastrav, "Implementation of an SDR-based FMCW Radar Receiver using LabVIEW NXG," *2022 International Workshop on Antenna Technology (iWAT)*, Dublin, Ireland, 2022, pp. 114-117, <https://doi.org/10.1109/iWAT54881.2022.9811016>. WOS:000853691500032
 12. 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)*, Dublin, Ireland, 2022, pp. 107-110, <https://doi.org/10.1109/iWAT54881.2022.9811087>. WOS:000853691500030
 13. Ștefan Mihai Știrbu and **Rareș Călin Buta**, "Application for Modulation Classification Based on Deep Learning Techniques Using PlutoSDR Modules," *2024 International Conference on Advanced Scientific Computing (ICASC)*, Cluj-Napoca, Romania, 2024, pp. 1-6, <https://doi.org/10.1109/ICASC63229.2024.10784927>.