PERSONAL INFORMATION

Alexandru Marțian

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Sex Male | Date of birth 13/10/1977 | Nationality Romanian

WORK EXPERIENCE

2024 – present

Professor / Researcher

National University of Science and Technology POLITEHNICA Bucharest, Electronics, Telecommunications and Information Technology Faculty, Telecommunications Department.
Splaiul Independenţei nr. 313, sector 6, Bucharest, Romania

- Research in the area of wireless communications
- Lectures / applications: Software Defined Radio, Radio Communication: Systems and Equipment, Radio and Mobile Communications
- Applications: Mobile Communication Systems, Mobile Communications.

Business or Sector **Education**

2019 – 2024

Associate Professor / Researcher

University Politehnica of Bucharest, Electronics, Telecommunications and Information Technology Faculty, Telecommunications Department.
Splaiul Independenţei nr. 313, sector 6, Bucharest, Romania

- Research in the area of wireless communications
- Lectures / applications: Software Defined Radio, Radio Communication: Systems and Equipment
- Applications: Software Defined Radio Equipment, Mobile Communication Systems, Mobile Communications, Signals and Systems, Analysis and Synthesis of Circuits.

Business or Sector **Education**

2013 – 2019

Lecturer / Researcher

University Politehnica of Bucharest, Electronics, Telecommunications and Information Technology Faculty, Telecommunications Department.
Splaiul Independenţei nr. 313, sector 6, Bucharest, Romania

- Research in the area of wireless communications
- Lectures / applications: Software Defined Radio, Radio Communication: Systems and Equipment
- Applications: Software Defined Radio Equipment, Mobile Communication Systems, Mobile Communications, Signals and systems, Analysis and Synthesis of Circuits.

Business or Sector **Education**

2007 – 2013

Teaching assistant / Researcher

University Politehnica of Bucharest, Electronics, Telecommunications and Information Technology Faculty, Telecommunications Department.
Splaiul Independenţei nr. 313, sector 6, Bucharest, Romania

- Research in the area of wireless communications
- Applications: Software Defined Radio Equipment, Mobile Communication Systems, Radio Communication Systems and Equipment, Mobile Communications, Signals and systems, Analysis and Synthesis of Circuits.

Business or Sector **Education**

2006 – 2011 **Development engineer – hardware and software**

CDE Electronic Consult SRL

8, Valea Ialomiței Str., Bl. D28, App. 24, Bucharest, Romania.

- VOIP module – Hardware and software development
- DSP Software (TI C54x)
- Windows applications for testing and debugging of several hardware modules

Business or Sector **Communication Systems**

2000 – 2006 **Development engineer – hardware and software**

EFE Elektronik– Forschungs- und Entwicklungsgesellschaft mbH

An der Flachsroesse 3, 64367, Muehltal, Deutschland.

- Data and voice communication system using fiber optics and network cable. Design and implementation.
- Windows applications for testing and debugging of several hardware modules
- Design, implementation and testing for programmable logic devices (CPLD)
- Modules for data transmission and reception through fiber optics
- DSP Software (TI C54x)

Business or Sector **Communication, management and security systems for prisons and hospitals**

2000 **Engineer – Radio Relay Department**

Societatea Naţională de Radiocomunicaţii

B-dul Libertăţii nr. 14, sector 5, Bucharest, Romania

Business or Sector **Radiocommunications**

EDUCATION AND TRAINING

2023 – present **Habilitation for coordinating PhD research (HDR)** EQF level 8

National University of Science and Technology POLITEHNICA Bucharest, Electronics, Telecommunications and Information Technology Faculty, Telecommunications Department.
Splaiul Independenţei nr. 313, sector 6, Bucharest, Romania

- Research area: electronic engineering and telecommunications

2014 – 2015 **Postdoctoral studies** EQF level 8

"Politehnica" University of Bucharest, Electronics, Telecommunications and Information Technology Faculty, Telecommunications Department.
Splaiul Independenţei nr. 313, sector 6, Bucharest, Romania

- Research field: Spectrum sensing systems for cognitive radio equipment

2007 – 2013 **PhD studies** EQF level 8

"Politehnica" University of Bucharest, Electronics, Telecommunications and Information Technology Faculty, Telecommunications Department.
Splaiul Independenţei nr. 313, sector 6, Bucharest, Romania

- Thesis title: Efficient Use of RF Spectrum based on the Cognitive Radio Technology
- Obtained Title: Magna cum laude

2012 – 2013 **Internship – IXIA Romania**

- Design and implementation of a testing system based on USRP platforms for dynamic spectrum access equipment

2007 – 2008 **Specialization for using Alcatel-Lucent GSM Equipment**

1995 – 2000

Bachelor of Science studies

EQF level 6

"Politehnica" University of Bucharest, Electronics, Telecommunications and Information Technology Faculty, Telecommunications Department.
Splaiul Independenţei nr. 313, sector 6, Bucharest, Romania

- Title of qualification awarded: Dipl. Engineer, Mobile Communications and Satellites specialty

1991 – 1995

High School studies

EQF level 4

"Sfântul Sava" National College, Bucharest.

- Title of qualification awarded: High school diploma, Mathematics-Physics profile

PERSONAL SKILLS

Mother tongue(s): Romanian

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C2	C2	C2	C2	C2
German	B2	B2	B2	B1	B1
French	A2	A2	A2	A1	A1

Levels: A1/2: Basic user - B1/2: Independent user - C1/2 Proficient user
Common European Framework of Reference for Languages

Communication skills

- Good communication skills gained through my teaching and research experience, as well as during the years I worked in the industry.

Job-related skills

- Research interests: Cognitive Radio, Software Defined Radio, Spectrum Sensing Techniques;
- Use of USRP and other different SDR platforms for implementing spectrum sensing and other RF-based applications using GNU Radio and Matlab;
- Design, implementation and testing for telecommunication systems using: C programming, Delphi, Code Composer for TI DSPs, IAR Embedded Workbench for NEC microcontrollers, Xilinx ISE, Mathworks MATLAB, GNU Radio, ATDI HTZ Communications, NI LabView, NI LabView Communications;
- Member in the research teams of 18 research projects, from which 2 were international;
- Project manager for 4 research projects;
- Reviewer for several significant international journals (IEEE, Elsevier, Springer, Wiley, MDPI);
- Member in the technical committee of several national and international conferences.

Computer skills

- Good command of Microsoft Office™ tools

Other skills

October 2012 – February 2013
- Internship – IXIA Romania, Design and implementation of a testing system based on USRP platforms for dynamic spectrum access equipment.

December 2007 – January 2008
- Specialization for using GSM Alcatel-Lucent equipment.

Driving licence

- Cat. B since 2000.

ADDITIONAL INFORMATION

Publications

Books

1. **A. Marțian**, “Utilizarea eficientă a spectrului de radiofrecvență. Evaluarea stadiului actual și perspective”, Ed. Politehnica Press, București, România, 2017. (ISBN 978-606-515-781-1)
2. I. Marcu, C. Oprea, **A. Marțian**, O. Fratu, I. Marghescu, “Comunicații mobile: aspect teoretice și experimentale”, Ed. Politehnica Press, București, România, 2018. (ISBN 978-606-515-837-5)
3. **A. Marțian**, I. Marghescu, “Radio Communications: Systems and Equipment”, Ed. Politehnica Press, București, România, 2022. (ISBN 978-606-9608-05-0)
4. I. Marghescu, **A. Marțian**, “Sisteme și echipamente de comunicații radio”, Ed. Politehnica Press, București, România, 2022. (ISBN 978-606-9608-08-1)
5. C. Oprea, **A. Marțian**, “Comunicații mobile - probleme, întrebări și aplicații”, Ed. Politehnica Press, București, România, 2022. (ISBN: 978-606-9608-20-3)

Book chapters

1. C.V. Năstase, O. Fratu, **A. Marțian**,I. Marghescu, “Performance Analysis of MUSIC and Capon DOA Estimation Algorithms in Cognitive Radio Networks”, In book: Future Access Enablers for Ubiquitous and Intelligent Infrastructures , Publisher: Springer International Publishing, Editors: Atanasovski, Vladimir and Leon-Garcia, Alberto, pp.142-148, ISSN: 1867-8211, DOI: 10.1007/978-3-319-27072-2_10

Patents

1. C. I. M Marcu, O. Fratu, S. Halunga, R.-A Vulpe, C. Florea, **A. Marțian**, A.-M. Dragulinescu, G. Suciu, C.M. Bălăceanu, A. Drosu, R. Chevereșan, D. Miu, "Telemetry system for intelligent agriculture addressed to farmers and agricultural producers", Patent number RO135499-A2.
2. **A. Marțian**, R.-E. Crăciunescu, F.-L. Chiper, I. Marghescu, C. Vlădeanu, O. Fratu, G.-F. Popescu, B, Gruia, A. Tănăsoiu, "Sistem de detecție, localizare și bruiere a unei drone țintă de către o altă dronă de apărare și de către o stație de sol (DRONEND)", Patent number RO137717-A2.

Journal papers

1. **A. Marţian**, C. Vlădeanu, I. Marcu, I. Marghescu, "*Evaluation of Spectrum Occupancy in an Urban Environment in a Cognitive Radio Context",* in International Journal on Advances in Telecommunications, published by IARIA, ISSN 1942-2601, vol. 3 no. 3&4, 2010, pp 172-181.
2. I. Marcu, S. Halunga, I. Pirnog, **A. Marţian**, C. Oprea, "*Convolutional Turbo Encoding Improvements for Different Multiuser Detection Algorithms in Unperferct Reception Conditions*", in Scientific Bulletin UPB, Series C, vol.4, 2011, ISSN 1454-234x.
3. **A. Marțian**, "*Evaluation of Spectrum Occupancy in Urban and Rural Environments of Romania*", in Revue Roumaine des Sciences Techniques - Serie Electrotechnique et Energetique, year 2014, issue 1, pp 87-96.
4. **A. Marțian**, R. Crăciunescu, A. Vulpe, G. Suciu, O. Fratu," *Access to RF White Spaces in Romania: Present and Future*", in Wireless Personal Communications, vol. 82, no. 2, pp. 1-20, Mai 2015.
5. G. Suciu, A. Vulpe, **A. Marțian**, S. Halunga, D.N. Vizireanu, " *Big Data Processing for Renewable EnergyTelemetry Using a Decentralized CloudM2M System* ", in Wireless Personal Communications, vol. 82, no. 1, Mai 2015.
6. G. Suciu, V. Suciu, **A. Marțian**, R. Crăciunescu, A. Vulpe, I. Marcu, S. Halunga, O. Fratu, "*Big Data, Internet of Things and Cloud Convergence - An Architecture for Secure E-Health Applications*", in Journal of Medical Systems, vol. 39, no. 11, pp. 1-8, Springer, September 2015.
7. C. Vlădeanu, C.V. Năstase, **A. Marțian**, "*Energy Detection Algorithm for Spectrum Sensing Using Three Consecutive Sensing Events*", in IEEE Wireless Communications Letters, vol. 5, issue 3, pp. 284-287, June 2016.
8. F. Almajanu, C.V. Năstase, **A. Marțian**, I. Marghescu, "*Radio Coverage Analysis for Mobile Communication Networks using ICS Telecom*", in Scientific Bulletin UPB, Seria C, vol.78, issue 2, pp.177-190, 2016.
9. **A. Marțian**, "*Real-time spectrum sensing using software defined radio platforms*", in Telecommunication Systems, Volume 64, Issue 4, pp 749–761, Springer, April 2017.
10. A. M. Crisan, **A. Marțian**, R. Cacoveanu, D. Coltuc, "Angle-of-Arrival Estimation in Formation Flying Satellites: Concept and Demonstration," in IEEE Access, vol. 7, pp. 114116-114130, 2019.
11. A. M. Crisan, **A. Martian**, R. Cacoveanu, D. Coltuc, "Distance Estimation in OFDM Inter-Satellite Links", in Measurement, vol. 154, pp. 107479, 2020.
12. **A. Martian**, M.J.A. Al Sammarraie, C. Vlădeanu, and D.C. Popescu, "Three-Event Energy Detection with Adaptive Threshold for Spectrum Sensing in Cognitive Radio Systems", in MDPI Sensors, Vol. 20, Issue 13, p.3614, 2020.
13. F.L. Chiper, **A. Martian**, C. Vladeanu, I. Marghescu, R. Craciunescu, O. Fratu, "Drone Detection and Defense Systems: Survey and a Software-Defined Radio-Based Solution.", in Sensors, Vol. 22, Issue. 4, p. 1453, 2022.
14. C. Vladeanu, **A. Martian**, D.C. Popescu, "Spectrum Sensing With Energy Detection in Multiple Alternating Time Slots," in IEEE Access, vol. 10, pp. 38565-38574, 2022, doi: 10.1109/ACCESS.2022.3165556.
15. **A. Martian**, C. Paleacu, I.M. Marcu, C. Vladeanu, "Direction-finding for unmanned aerial vehicles using radio frequency methods", Measurement, 2024, 114883, ISSN 0263-2241, https://doi.org/10.1016/j.measurement.2024.114883.
16. C. Vlădeanu, O. M. K. Al-Dulaimi, **A. Marţian** and D. C. Popescu, "Average Energy Detection with Adaptive Threshold for Spectrum Sensing in Cognitive Radio Systems," in IEEE Transactions on Vehicular Technology, doi: 10.1109/TVT.2024.3427664.
17. K.A. Al-Sammak, S.H. Al-Gburi, I. Marghescu, A.M.C. Dragulinescu, C. Marghescu, **A. Martian**, N.A.H. Al-Sammak, G. Suciu, K.M.A. Alheeti, " Optimizing IoT Energy Efficiency: Real-Time Adaptive Algorithms for Smart Meters with LoRaWAN and NB-IoT," in Energies, vol. 18, Issue 4, p.987, doi: DOI10.3390/en18040987.
18. **A. Martian**, R.F. Trifan, T.C. Stoian, M.C. Vochin, F.Y. Li, " Towards Open RAN in beyond 5G networks: Evolution, Architectures, deployments, spectrum, prototypes, and performance assessment," in Computer Networks, vol. 259, p. 111087, doi: DOI10.1016/j.comnet.2025.111087.
19. K. Alaa Al-Sammak, S. Hussein Al-Gburi, I. Marghescu, A.-M. C. Drăgulinescu, C. Marghescu, **A. Martian**, N. A. M. Alduais and N. Alaa Hussein Al-Sammak, " Optimizing LoRaWAN Gateway Placement in Urban Environments: A Hybrid PSO-DE Algorithm Validated via HTZ Simulations," in Technologies, vol. 13, Issue 6, p. 256, 2025. (ISI, WOS: 001514625000001).
20. V.S. Hociung, M.G. Gheorghe, C. Zamfirescu, M.C. Vochin, R.O. Preda, **A. Martian**, " Analysis of the Radio Coverage for a Mobile Private Network Implemented Using Software Defined Radio Platforms," in Technologies, 2025.

Posters/Presentations

1. **A. Marţian**, R. Crăciunescu, B.T. Sandu, O. Fratu, *"UHF Broadcasting in Romania",* 3rd IEEE BTSGOLD WORKSHOP, 19-20 May 2014, Brașov, România.
2. **A. Marțian**, R. Crăciunescu, A. Vulpe, O. Fratu, *"Access to RF White Spaces in Romania: Present and Future",* 3rd Annual CTIF-SEE Meeting, 11-12 September 2014, Bucharest, Romania.
3. **A. Martian**, Prototyping of a system for synchronization, positioning and communication of two satellites that fly in formation, NIDays, October 2016, Bucharest, Romania
4. A. Rusu-Casandra, A. Paun, B. Mocanu, R. Tapu, **A. Martian**, C. Stanciu, R. Badea, "Comparison of software-defined Galileo E1 receiver architectures", 6th International Colloquium - Scientific and Fundamental Aspects of GNSS / Galileo, 25-27 October 2017, Valencia, Spain.

Projects

1. "*Cognitive Radio Technology and the efficient use of RF spectrum*," CNCSIS-UEFISCSU research project, PN-II-IDEI, no. 116/01.10.2007, project manager Ion Marghescu (2007-2010);
2. *"Evolution, implementation and transition arrangements for DVB digital broadcasting in terms of efficient use of the frequency spectrum (DVB),"* Reference Terms contract no. 106/08.08.2011, project manager Octavian Fratu (2011-2014).
3. *"New convolutional coding schemes with reduced complexity operating over higher order Galois fields for channel error correction,"* CNCSIS-UEFISCSU research project, PN-II-RU-TE, no. 18/12.08.2010, project manager Călin Vlădeanu (2010-2013);
4. *"Hybrid wireless access system with unique addressing (SAWHAU),"* PNCDI II Partnerships research project no. 12-126/01.10.2008, project manager Octavian Fratu (2008-2011);
5. *"Detection systems for cosmic radiation using new technologies (DETCOS),"* UEFISCDI PNCDI II contract no. 82-104/01.10.2008, project manager Octavian Fratu (2008-2011);
6. *"eWall for Active Long Living (eWALL),"* FP7 project nr. 610658, financed by the European Commission, project manager Ramjee Prasad (2013-2016).
7. *"Scalable Radio Transceiver for Instrumental Wireless Sensor Networks (SaRaT-IWSN),"* PCCA UEFISCDI research project, project manager Simona Halunga (2012-2016);
8. *"Advanced antennas for space communications (ADANSPACE),"* CDI research project no. 240-2013 financed by the Romanian Space Agency (ROSA), project manager Mihai Banciu (2013-2016).
9. *"Modeling hybrid communication-navigation systems for formation flying satellites (HybridNAVCOM),"* CDI research project no. 363-2013 financed by the Romanian Space Agency (ROSA), project manager Remus Cacoveanu (2014-2016).
10. *"Galileo Vector Processing for Difficult Signal Conditions (GavPro)"*, ESA EGEP programme, project manager Alexandru Rusu (2015-2016).
11. "Platforma Software integrata pentru analiza malware a terminalelor mobile (ToR-SIM)" - contract PN3 tip "Solutii" nr. 5Sol/2017, project manager Octavian Fratu (2017-2020);
12. *"System for RF spectrum detection (DET-RF)",* UPB-GEX-2017 research project no. 34/2017, project manager **Alexandru Martian** (2017-2018).
13. "Sistem informatic integrat pentru managementul activităților (SIIMA)", Contract nr.8Sol/2018, UEFISCDI Solutions project, project manager Octavian Fratu (2018-2021);
14. "Platforma de sisteme inteligente multiagent pentru monitorizarea calitatii apei pe sectorul romanesc al Dunarii si Deltei Dunarii (MultiMonD2)", Contract nr. 33PCCDI/2018, CDI UEFISCDI Project, project manager Octavian Fratu (2018-2020);
15. "SISTEM de TELEMETRIE pentru AGRICULTURA INTELIGENTĂ (SmartAgro)", proiect POC 2014-2020 "Ecosistem de cercetare, inovare și dezvoltare de produse și servicii TIC pentru o societate conectată la Internet of Things – NETIO", project manager Ioana Marcu (2018-2020);
16. "RF spectrum occupancy evaluation system for the introduction of 5G networks (Spectrum-5G)", UEFISCDI Research Project, PN-III P1-1.1-PD-2016, no. PD154/10.10.2018, project manager **Alexandru Marțian** (2018-2020).
17. "Drone Defence System based on Software Defined Radio Platforms (DronEnd)", UEFISCDI Research Project, PN-III-P2-2.1-PED-2019-1951, no. 410PED/01.11.2020, project manager **Alexandru Marțian** (2020-2022).
18. "A Massive MIMO Enabled IoT Platform with Networking Slicing for Beyond 5G IoV/V2X and Maritime Services (SOLID-B5G)", financed through the Norwegian Financiar Mechanism (Norway Grants), cod RO-NO-2019-0499, project manager Marius Vochin (2021-2024).
19. "Sistem de acces dinamic la spectru bazat pe baze de date de geolocație (DronEnd)", Proiect UEFISCDI, PN-IV-P7-7.1-PED-2024-0741, no. 103PED/13.05.2025, director de proiect **Alexandru Martian** (2025-2027).
20. "Platformă robotică de precizie pentru agricultura eficientă (PROTECT-Agri)", contract 113PED/2025, cod proiect: PN-IV-P7-7.1-PED-2024-0571 din cadrul competiției " Programul Parteneriate pentru Inovare, Subprogramul Parteneriate pentru competitivitate - "Proiect experimental demonstrativ (PED 2024)" (UEFISCDI), project period: June 2025- June 2027 (partener: SC BEAM INNOVATION SRL), director de proiect Ioana Marcu

Conference proceedings (selection)

1. **A. Marţian,** I. Marcu, I. Marghescu, "*Analysis of Frequency Spectrum Usage from a Cognitive Radio Perspective*", in Proc. 6th Advanced International Conference on Telecommunications, AICT 2010, ISBN 978-1-4244-6748-8, Barcelona, Spain, May 2010, pp 25-29.
2. **A. Marţian,** A. Achim, O. Fratu, I. Marghescu, "*Spectrum Occupancy in an Urban Environment: A Cognitive Radio Approach*", in Proc. 3rd International Workshop on Cognitive Radio and Advanced Spectrum Management, COGART 2010, ISBN 978-1-4244-8131-6, Rome, Italy, November 2010.
3. O. Fratu, S. Halunga, C. Perju**, A. Marţian,** I. M. Marcu, "*On the Availability of CDMA Channels for Secondary Users*", in Proc. 3rd International Workshop on Cognitive Radio and Advanced Spectrum Management, COGART 2010, ISBN 978-1-4244-8131-6, Rome, Italy, November 2010.
4. A.F. Păun, C. Vlădeanu, I. Marghescu, S. El Assad, **A. Marţian**, "*On the QAM Parallel Turbo-TCM Schemes using Recursive Convolutional GF(2N) Encoders*", in Proc. 18th European Signal Proc. Conf., EUSIPCO 2010, Aalborg, Denmark, August 2010.
5. C. Vlădeanu, **A. Marţian**, S. El Assad, "*EXIT Charts Analysis for Turbo-TCM Schemes Using Non-Binary RSC Encoders",* in Proc. 8th Advanced International Conference on Telecommunications (AICT 2012), Stuttgart, Germany, May 2012, pp. 150-155, ISBN: 978-1-61208-199-1.
6. C. Vlădeanu, **A. Marţian**, A.F. Păun, S. El Assad, "*A New ML Detector for Trellis-Coded Spatial Modulation Using Hard and Soft Estimates*", in Proc. 10th International Symposium on Electronics and Telecommunications (ISETC12), Timișoara, November 2012, pp. 143-147, ISBN: 978-1-4673-1175-5.
7. E. Zainea, **A. Marțian**, I. Marcu, O. Fratu,"*Transition from Analog to Digital Broadcasting: A spectral efficiency review*", in Proc. 10th International Symposium on Electronics and Telecommunications (ISETC12), Timișoara, November 2012, pp. 171-175, ISBN: 978-1-4673-1175-5.
8. **A. Marţian**, C. Vlădeanu, O. Fratu, I. Marghescu, S. El Assad, "*Spectral Occupancy Measurements in Rural and Urban Environments: Analysis and Comparison*", in Proc. 9th Advanced International Conference on Telecommunications, AICT 2013, ISBN 978-1-61208-279-0, Rome, Italy, June 2013, pp 78-83.
9. **A. Marțian**, R. Crăciunescu, A. Vulpe, O. Fratu, I. Marghescu, "*Perspectives on Dynamic Spectrum Access Procedures in TV White Spaces*", in 16th International Symposium on Wireless Personal Multimedia Communications (WPMC), ISSN 1347-6890, Atlantic City, NJ, USA, June 2013, pp 1-5.
10. **A. Marțian**, L. Petrică, O. Radu, "*Cognitive radio testing framework based on USRP*", in Proc. 21st Telecommunications Forum (TELFOR) 2013, ISBN 978-1-4799-1419-7, INSPEC 14044037, Belgrade, Serbia, November 2013, pp.212-215.
11. G. Suciu, C. Voicu, G. Todoran, **A. Marțian**, S. Halunga, C. Butca, " *Network Cloud simulator for modelling trust in Cognitive Radio applications*", in Proc. 21st Telecommunications Forum (TELFOR) 2013, ISBN 978-1-4799-1419-7, INSPEC 14043991, Belgrade, Serbia, November 2013, pp.345-348. (ISI Web of Knowledge WOS:000349857500081, ISBN:978-1-4799-1420-3, IEEE Xplore)
12. **A. Marţian**, "*Real-time Spectrum Sensor based on USRP*", in Proc. 10th International Conference on Communications COMM2014, Bucharest, Romania, May 2014, pp 429-432.
13. V.C. Stanciu, **A. Marţian**, C. Socoteanu, I. Marghescu, "*Data Collection for Spectrum Sensing Algorithms based on USRP*", in Proc. 10th International Conference on Communications COMM2014, Bucharest, Romania, May 2014, pp 403-406.
14. **A. Marţian**, B.T. Sandu, O. Fratu, I. Marghescu. R. Crăciunescu, "*Spectrum Sensing based on Spectral Correlation for Cognitive Radio Systems*", in Proc. Global Wireless Summit WirelessVitae2014, Aalborg, Denmark, May 2014, pp.1-4.
15. C.V. Năstase, **A. Marțian**, C. Vlădeanu, I. Marghescu, "*An Accurate Average Energy Detection Algorithm for Spectrum Sensing in Cognitive Radio Systems*", in Proc. 11th International Symposium on Electronics and Telecommunications (ISETC14), Timișoara, November 2014, pp.131-134.
16. O. Fratu, **A. Marţian**, R. Crăciunescu, A. Vulpe, S. Halunga, P. Lazaridis, Z. Zaharis, S. Kasampalis, "*Comparative study of Radio Mobile and ICS Telecom propagation prediction models for DVB-T*", in Proc. 10th IEEE International Symposium on Broadband Multimedia Systems and Broadcasting (BMSB 2015), Ghent, Belgium, June 2015.
17. E.I. Dobre, **A. Marțian**, C. Vlădeanu, "*USRP-based Experimental Platform for Energy Detection in Cognitive Radio Systems*", accepted for 11th International Conference on Communications COMM2016, Bucharest, Romania, June 2016.
18. AM. Crișan, **A. Marțian**, R. Cacoveanu, D. Coltuc, "*Evaluation of Synchronization Techniques for Inter-Satellite Links*", accepted for 11th International Conference on Communications COMM2016, Bucharest, Romania, June 2016.
19. P. Bajenaru, C. Chitu, R. Cacoveanu, A. Crisan, **A. Marţian**, "*Design and development of a satellite on-board communication system with navigation capabilities*", în Proc.67th International Astronautical Congress, IAC 2016; Guadalajara; Mexico; September 2016, ISSN: 00741795 (Scopus)
20. **A. Martian**, C. Vladeanu, "*On the Compromise between Delay and Performance of the Three-Event Energy Detection Algorithm in Cognitive Radio Systems*" in Proc. 12th International Symposium on Electronics and Telecommunications (ISETC16), Timișoara, October 2016.
21. A. M. Crisan, **A. Martian** and D. Coltuc, "*Relative orientation estimation in formation flying satellites*," in Proc. 2017 International Symposium on Signals, Circuits and Systems (ISSCS), Iasi, 2017, pp. 1-4.
22. M. G. Banciu, N. Militaru, A. Martian, I. Nicolaescu, L. Tuta, D. C. Geambasu, L. Nedelcu, L. Trupina, R. Ramer, "Microwave antenna array using new dielectric resonator antenna elements," in Proc. 2017 International Semiconductor Conference (CAS), Sinaia, Romania, 2017, pp. 129-132.
23. **A. Martian**, M. Dambeanu, C. Oprea, C. Vladeanu and I. Marghescu, "*DVB-T2 radio coverage analysis in Romania*," in Proc. 25th Telecommunication Forum (TELFOR2017), Belgrade, Serbia, 2017, pp. 1-4. (ISI Web of Knowledge WOS:000427782600039, IEEE Xplore, DOI: 10.1109/TELFOR.2017.8249310).
24. G. Suciu, A. Ganaside, L. Bezdedeanu, R. Coanca, S. Secu, C. Nădrag, A. Marțian, "Pesticide Telemetry Using Potentiostat". In: Fratu O., Militaru N., Halunga S. (eds) Future Access Enablers for Ubiquitous and Intelligent Infrastructures. FABULOUS 2017. Lecture Notes of the Institute for Computer Sciences, Social Informatics and Telecommunications Engineering, vol 241, 2018, Springer (Springerlink, DOI: https://doi.org/10.1007/978-3-319-92213-3_9)
25. M. J. Ahmad Al Sammarraie, **A. Martian** and C. Vlădeanu, "*Adaptive IED Spectrum Sensing Algorithm for Different Duty Cycle Values*," 2018 International Conference on Communications (COMM), Bucharest, 2018, pp. 51-54. (IEEE Xplore, doi: 10.1109/ICComm.2018.8484767)

Conference proceedings (selection)

26. C. Năstase, **A. Marţian**, C. Vlădeanu and I. Marghescu, "*Spectrum Sensing Based on Energy Detection Algorithms Using GNU Radio and USRP for Cognitive Radio*," 2018 International Conference on Communications (COMM), Bucharest, 2018, pp. 381-384. (IEEE Xplore, doi: 10.1109/ICComm.2018.8484763).
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Honours and awards

▪ Best paper award for the paper: **A. Marţian**, C. Vlădeanu, O. Fratu, I. Marghescu, S. El Assad, "Spectral Occupancy Measurements in Rural and Urban Environments: Analysis and Comparison", in Proc. 9th Advanced International Conference on Telecommunications, AICT 2013, ISBN 978-1-61208-279-0, Rome, Italy, June 2013, pp 78-83.
▪ Best paper award for the paper: **A. Marţian**, C. Vlădeanu, M.J. Ahmad Al Sammarraie, "On the Introduction of 5G Networks in Romania", in Proc. 14th International Conference on Digital Telecommunications, ICDT 2019, ISBN: 978-1-61208-693-4, Valencia, Spain, March 2019, pp 8-11.

Memberships

▪ IEEE Member since 2008, IEEE Senior Member since 2024
▪ IEEE Communications Society
▪ IEEE Broadcasting Technology Society
▪ IEEE Signal Processing Society
▪ Secretary of the IEEE Romania Broadcasting Technology Society

References

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- Research Gate profile: https://www.researchgate.net/profile/Alexandru-Martian