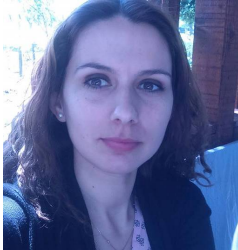



## PERSONAL INFORMATION

## Marcu Ioana Manuela



 Iuliu Maniu Blvd, no. 1-3, 060071, Bucharest, Romania

 +40214024807

 [ioana.marcu@upb.ro](mailto:ioana.marcu@upb.ro)

 [https://www.researchgate.net/profile/Ioana\\_Marcu](https://www.researchgate.net/profile/Ioana_Marcu)

 Skype iomarcu

Gender Feminin | Date of birth 26/06/1979 | Nationality Romanian

## WORK EXPERIENCE

Sept. 2019– nowadays

**Associate Professor**

University Politehnica of Bucharest, Electronics, Telecommunications and Information Technology Faculty, Telecommunications Department, Bd. Iuliu Maniu 1-3, Bucharest, 6, 061071, Spl. Independentei nr. 313, 060042, București, Sector 6, ROMANIA, website: [www.electronica.pub.ro](http://www.electronica.pub.ro)

- Courses, applications and laboratories: Multiple Access Techniques (TAM); Mobile and Personal Communications (CMP); Digital communications (CD); Mobile Communications; Computer Graphics, Animation and Video Editing
- Research project submission (in collaboration with different companies)

Type of business or sector Higher education

Oct. 2009– Sept 2019

**Lecturer**

University Politehnica of Bucharest, Electronics, Telecommunications and Information Technology Faculty, Telecommunications Department, Bd. Iuliu Maniu 1-3, Bucharest, 6, 061071, Spl. Independentei nr. 313, 060042, București, Sector 6, ROMANIA, website: [www.electronica.pub.ro](http://www.electronica.pub.ro)

- Courses, applications and laboratories: Multiple Access Techniques (TAM); Acces and Transportation Technologies; Digital communications; Analog and Digital Communications; System's analysis and Synthesis; Signals and Systems for Communications; Mobile Communications, Measurements in Electronics and Communication
- Research project submission (in collaboration with different companies)

Type of business or sector Higher education

Oct. 2002- Oct. 2009

**Assistant professor**

University Politehnica of Bucharest, Electronics, Telecommunications and Information Technology Faculty, Telecommunications Department, Bd. Iuliu Maniu 1-3, Bucharest, 6, 061071, Spl. Independentei nr. 313, 060042, București, Sector 6, ROMANIA, website: [www.electronica.pub.ro](http://www.electronica.pub.ro)

- Applications: Multiple Access Techniques (TAM); Acces and Transportation Technologies; Digital communications; Analog and Digital Communications; System's analysis and Synthesis; Signals and Systems for Communications; Mobile Communications, Measurements in Electronics and Communication

Type of business or sector Higher education

Aprilie 2002-Oct. 2002

**Team Leader**

NIM IMPEX S.R.L. , Str. Maltopol, Nr. 23 , sector 1, Bucuresti, website: <http://www.nimsite.com/>

- Project development; team activity coordination

Type of business or sector .NET developer

Aprilie 2002-Oct. 2002

### Temporary Assistant professor

University Politehnica of Bucharest, Electronics, Telecommunications and Information Technology Faculty, Telecommunications Department, Bd. Iuliu Maniu 1-3, Bucharest, 6, 061071, Spl. Independentei nr. 313, 060042, București, Sector 6, ROMANIA, website: [www.electronica.pub.ro](http://www.electronica.pub.ro)

- Applications: CDMA systems, Analog and Digital Communications; System's analysis and Synthesis

Type of business or sector Higher education

## EDUCATION AND TRAINING

---

July 2011

### Doctor Diploma

EQF 8 Level

University Politehnica of Bucharest, Electronics, Telecommunications and Information Technology Faculty, Telecommunications Department, Bd. Iuliu Maniu 1-3, Bucharest, 6, 061071, Spl. Independentei nr. 313, 060042, București, Sector 6, ROMANIA, website: [www.electronica.pub.ro](http://www.electronica.pub.ro)

- Thesis title: Contributions to turbo technique usage for improvement of multiuser systems' performances

Noi. 2003 – July 2011

### PhD student

EQF 7 Level

University Politehnica of Bucharest, Electronics, Telecommunications and Information Technology Faculty, Telecommunications Department, Bd. Iuliu Maniu 1-3, Bucharest, 6, 061071, Spl. Independentei nr. 313, 060042, București, Sector 6, ROMANIA, [www.electronica.pub.ro](http://www.electronica.pub.ro)

- Usage of turbocoding technique in multiuser systems

Dec.– Ian. 2008

### Alcatel-Lucent training diploma

At Alcatel-Lucent, Timisoara

- Training course related to Alcatel-Lucent equipments used in communication systems

Oct. 2000- Ian. 2001

### Connex training diploma

University Politehnica of Bucharest, Electronics, Telecommunications and Information Technology Faculty, Telecommunications Department, Bd. Iuliu Maniu 1-3, Bucharest, 6, 061071, Spl. Independentei nr. 313, 060042, București, Sector 6, ROMANIA, website: [www.electronica.pub.ro](http://www.electronica.pub.ro)

- Connex Training Courses (currently Vodafone)

Oct. 2002- July 2003

### Master program, RMCO area

EQF 7 Level

University Politehnica of Bucharest, Electronics, Telecommunications and Information Technology Faculty, Telecommunications Department, Bd. Iuliu Maniu 1-3, Bucharest, 6, 061071, Spl. Independentei nr. 313, 060042, București, Sector 6, ROMANIA, website: [www.electronica.pub.ro](http://www.electronica.pub.ro)

- Master program: RMCO (Radiocommunications, Microwaves and Optical Communications)

Oct. 1997- July 2002

### Engineer Diploma, Mobile and Satellites Communications

EQF 6 Level

University Politehnica of Bucharest, Electronics, Telecommunications and Information Technology Faculty, Telecommunications Department, Bd. Iuliu Maniu 1-3, Bucharest, 6, 061071, Spl. Independentei nr. 313, 060042, București, Sector 6, ROMANIA, website: [www.electronica.pub.ro](http://www.electronica.pub.ro)

- Analog and Digital Transmissions, Data Communications; Mobile Terrestrial Communications, Satellites Communications

Oct. 1993- July 1997

### Highschool Diploma

EQF 4 Level

Economic Highschool in Ploiești (currently Virgil Madgearu Economic Highschool), Rudului 24 Street, Ploiești 100024

- Commerce Domain

## PERSONAL COMPETENCIES

---

Native language Other language(s)	Romanian				
	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C1	C1	C1	C1	C1
French	B2	B2	B2	B2	B2

**Social skills and competences**

- excellent communication skills gained from working with students (coordination degree and dissertation projects)
- teamwork skills, acquired in years of work in teams of different dimensions, from groups of 2-3 up to research teams involved in international projects

Organisational skills and competences

- Participant in the faculty schedules committee, secretary for the bachelor and dissertation committees (2007-2019)
- Coordinator of the research team (5 professors, associate professors, lecturers, assistants and PhD students from the Faculty of Electronics, Telecommunications and Information Technology) within the project "Next Generation Internet platform for precision agriculture" (NGI-UAV-AGRO), contract November 2020- October 2022
- Coordinator of the research team (12 professors, associate professors, lecturers, assistants and PhD students from the Faculty of Electronics, Telecommunications and Information Technology) within the project "Telemetry system for intelligent agriculture" (SmartAgro), July 2018-Aug 2020
- Coordinator of the research team (3 members) within the GEX project "Modulation  $\Sigma\Delta$  in 5G systems" (Mod $\Sigma$ s), contract Sept 2017, internal grant UPB (2017-2018).
- Excellent organizational and planning skills
- Analytical thinking

Workplace skills

- Design, testing of telecommunications systems - physical level
- Matlab / Simulink
- Knowledge of IEEE and 3GPP standards

Computer skills and competences

SELF-E				
Information processing	Communication	Content design	Security	Problem solving
Experienced user	Experienced user	Independent user	Experienced user	Experienced user

ADDITION INFORMATION

- Publications
- Presentations
- Projects
- Conferences
- Distincții

- In Publication List Annex
- In Publication List Annex
- In Publication List Annex
- In Publication List Annex
- Award for research results, UEFISCDI competiție PRECISI2020, Dec. 2020: **I. Marcu**, G. Suci, C. Bălăceanu, A. Vulpe, A.M. Drăgulinescu, " Arrowhead Technology for Digitalization and Automation Solution: Smart Cities and Smart Agriculture", Sensors **2020**, 20(5), 1464 (PN-III-P1-1.1-PRECISI-2020-40781)
- Award for Research results, UEFISCDI, Dec. 2015: G. Suci, V. Suci, A. Martian, R. Craciunescu, A. Vulpe, **I. Marcu**, S. Halunga, O. Fratu, „Big Data, Internet of Things and Cloud Convergence – An Architecture for Secure E-Health Applications”, Journal of Medical Systems, Springer Publisher, Online ISSN1573-689X, September 2015 ([https://uefiscdi.gov.ro/userfiles/file/PREMIERE\\_ARTICOLE/ARTICOLE%202015/REZULTATE/Rezultate%20eligibilitate\\_lista%207\\_%20ACTUALIZATA\\_18\\_12\\_2015.pdf](https://uefiscdi.gov.ro/userfiles/file/PREMIERE_ARTICOLE/ARTICOLE%202015/REZULTATE/Rezultate%20eligibilitate_lista%207_%20ACTUALIZATA_18_12_2015.pdf))
- Award for the Contribution to the Industrial Research Excellence for the paper entitled "An End-to-End LoRaWAN-based IoT Platform with Built-in Network Coverage Testing Capability" (authors: A.-M. Drăgulinescu, I. Marcu, C. Zamfirescu) in The 25th International Symposium on Wireless Personal Multimedia Communications, in Herning, Denmark, organised by the Department of Business Development and Technology of Aarhus University (Aarhus BSS - Aarhus University), OCT 2022

Membership

- IEEE member
- EAI member

ANNEXES

- Publication List

**LIST OF PUBLICATIONS**  
**PUBLICATIONS / RESEARCH PROJECTS / AWARDS**  
**Marcu Ioana Manuela**  
**Department of Telecommunications**  
**Polytechnic University of Bucharest**

**BOOKS**

1. **I. Marcu**, O. Fratu " Mobile Communications. Applicative Aspects", Editura Politehnica Press, ISBN 978-606-9608-28-9, 129 pag, 2022 ([http://cr.uk.to/Mobile\\_Communications.pdf](http://cr.uk.to/Mobile_Communications.pdf) )
2. **I. Marcu**, "Noțiuni fundamentale de grafică computerizată și animație", Editura Politehnica Press, ISBN 978-606-9608-25-8, 147 pag, 2022 ([http://cr.uk.to/edi\\_final\\_marcu.pdf](http://cr.uk.to/edi_final_marcu.pdf) )
3. **I. Marcu**, I. Pirnog, A. Vulpe, L. Dogariu, A.-M. Drăgulinescu, "Electronic measurements. Theory and applications", Editura Politehnica Press, ISBN 978-606-515-987-7, 166 pag, 2021
4. **I. Marcu**, C.Oprea, A. Martian, O. Fratu, I. Marghescu, "Comunicații Mobile. Aspecte teoretice și experimentale", Editura Politehnica Press, ISBN 978-606-515-837-5, 109 pag, 2018
5. T. Petrescu, S. Halunga, O. Fratu, **I. Marcu**, C. Voicu, R. Craciunescu, "Analiza și sinteza circuitelor: teorie și aplicații", Editura Politehnica Press, ISBN 978-606-515-641-8, Bucuresti, 2015
6. I. Constantin, S. Halunga, **I. Marcu**, „Comunicații analogice și digitale – Culegere de probleme”, Editura Electronica 2000, București, 2010 (191 pag.), ISBN 978-973-7860-22-4
7. M. Stanciu, S. Obreja, A. Paun, R. U. Mihnea, **I. Marcu**, R. O. Preda, I. Pirnog, "Instrumentație electronică de măsură - Îndrumar de laborator", Electronica 2000, ISBN 978-973-7860-10-1, 130 pag, Bucharest, Romania, 2008
8. S.V. Nicolaescu, I Marghescu, I. Bogdan, S Halunga, **I. Marcu** ș.a. „Accesul Wireless de Bandă Largă ”, vol I (387 pag), Editura Printech 2008, ISBN 978-606-521-080-6, 978-606-521-081-3
9. S.V. Nicolaescu, I Marghescu, I. Bogdan, S Halunga, I. Marcu ș.a. „Accesul Wireless de Bandă Largă ”, vol II (214 pag), Editura Printech 2008, ISBN 978-606-521-080-6, 978-606-521-081-3
10. I. Constantin, S. Halunga, **I. Marcu**, „Semnale și Sisteme - probleme”, Editura Electronica 2000, București, 2007 (149 pag.), ISBN 978-973-7860-07-1

**BOOK CHAPTER**

1. **Ioana Marcu**, Simona Halunga, Octavian Fratu, Dragos Vizireanu, „Multiuser systems implementations in fading environments”, Book title: Matlab / Book 5, InTech - Open Access Publisher, Tadeusz Michalowski (Ed.), ISBN: 978-953-307-708-6, 2011

**PAPERS (ISI conferences/journals)**

1. **I. Marcu (Bercă)**, S. Halunga, Octavian Fratu, Tatiana Mochi, “Software defined radio - Simulation for audio broadcasting applications”, TELSIKS 2003, 6th International Conference on Telecommunications in Modern Satellite, Cable and Broadcasting Services, October 1-3, Nis, Serbia and Montenegro, Vol.2, pp. 238-241 WOS: 000188740300050
2. **I. Marcu**, S. Halunga, O. Fratu, D. Vizireanu, „Fading effects on turbo-encoded data”, Conferința IEEE – TELSIKS 2007, Nis, Serbia, 26-28 Sept 2007, pg. 525-528 WOS: 000251017900104
3. S. Halunga, **I. Marcu**, O. Fratu, A. Badescu, „Conventional and optimal multiuser performance increase by using turbo encoding”, 9th International Conference On Telecommunications In Modern Satellite, Cable And Broadcasting Services (TELSIKS 2009), 7-9 Oct. 2009, Nis, Serbia, pp 414 – 417 WOS: 000289094600079
4. A. Bădescu, O. Fratu, S. Halunga, **I. Marcu**, „Consideration on radio propagation in cavities”, 9th International Conference On Telecommunications In Modern Satellite, Cable And Broadcasting Services (TELSIKS 2009), 7-9 Oct. 2009, Nis, Serbia, pp 388 – 391 WOS: 000289094600074

5. S. Halunga, **I. Marcu**, O. Fratu, I Marghescu, "Orthogonality, amplitude and number of users effects on conventional multiuser detection using turbo decoding", EUROCON 2009, 18-23 May 2009, Sankt Petersburg, Rusia, pp. 2000-2004 WOS: 000272589500327
6. S. Halunga, **I. Marcu**, O. Fratu, D. Vizireanu, "Convolutional encoding effects on conventional multiuser decoding algorithm in imperfect decoding conditions", Wireless Vitae, 17-20 May, 2009, Aalborg, Denmark, pp 238 – 242 WOS:000276233900046
7. C. Vasile, **I. Marcu**, S. Halunga, D. N. Vizireanu, „MMSE Multiuser Detector Performances Improvement with Convolutional and Turbo coding”, 8th International Conference on Communications (COMM 2010), 10-12 June 2010, ISBN: 978-1-4244-6360-2, Bucharest, Romania WOS:000299870700124
8. C. Vasile, S.V. Halunga, **I.M. Marcu**, O. Fratu, A. Badescu, „MMSE Synchronous Systems Behaviour in Different Types/Length of Spreading Sequences Environment”, 9th International Symposium on Electronics and Telecommunications (ISETC), Pages: 191-194, DOI: 10.1109/ISETC.2010.5679358, Published: 2010 WOS:000296356700039
9. A. Bădescu, O. Fratu, A. Frugină, S. V. Halunga, **I. Marcu**, „Wireless sensor network for wildlife monitoring”, ENVIRONMENTAL ENGINEERING AND MANAGEMENT JOURNAL, Volume: 10 Issue: 11 Pages: 1625-1634, Published: NOV 2011, ISSN: 1582-9596 WOS:000298662900003 URL: <http://www.eemj.icpm.tuiasi.ro/issues/vol10/vol10no11.htm>
10. E.-C. Popovici, **I.-M. Marcu**, O. Fratu, S.-V. Halunga, "Location-Based Web System for Geographically Distributed Mobile Teamwork Management", Chapter book in Advances in Intelligent Web Mastering – 3, Advances in Intelligent and Soft Computing Volume 86, DOI: 10.1007/978-3-642-18029-3\_22, ISBN 978-3-642-18028-6, ISSN 1867-5662, pp 217-224, Editura Springer-Verlag Berlin, Heidelberg, Berlin, Germania, 2011 WOS: 000290421700022
11. E. Zainea, A. Marțian, **I. Marcu**, O. Fratu, "Transition from Analog to Digital Broadcasting", în Proc. 10th International Symposium on Electronics and Telecommunications (ISETC12), Timisoara, November 2012, pp. 171-175, ISBN: 978-1-4673-1175-5 WOS:000318702700040
12. **I. M. Marcu**, S. V. Halunga, "LDPC vs turbocodes behavioral analysis in multiuser DS-CDMA systems", Proceedings of "International Symposium on Electronics and Telecommunications ETC 2014 Eleventh Edition", ISBN 978-1-4799-7265-4, pp. 135-139, Timișoara, November 14-15, 2014 WOS:000366633300032
13. **I. Marcu**, C. Voicu, S. V. Halunga, "Superimposed effects of signature sequences and LDPC technique in faded CDMA multiuser systems", Proceedings of ISSCS 2015, ISBN: 978-1-4673-7487-3, Iasi, Romania, 2015 WOS:000380451600037
14. R. O. Preda, **I. Marcu**, A. Ciobanu, „Image authentication and recovery using wavelet-based dual watermarking”, Scientific Bulletin of the University Politehnica of Bucharest, Series C: Electrical Engineering and Computer Science, Vol. 77, Issue 4, pp. 119-130, ISSN: 2286-3540, 2015 WOS:000421811300017
15. G. Suci, V. Suci, A. Martian, R. Craciunescu, A. Vulpe, **I. Marcu**, S. Halunga, O. Fratu, „Big Data, Internet of Things and Cloud Convergence – An Architecture for Secure E-Health Applications”, Journal of Medical Systems, Springer Publisher, Online ISSN 1573-689X, September 2015 WOS:000363557500011
16. **I. Marcu**, S. V. Halunga, "Implication of LDPC Technique in Non-ideal Multiuser Communication System", Wireless Personal Communications, Volume 87, Issue 3, pp 797–814, April 2016 DOI: 10.1007/s11277-015-2627-4 WOS: 000372271400012
17. **I. Marcu**, C. Voicu, S. V. Halunga, "Combined-coding effects over multiple access transmissions", U.P.B. Sci. Bull., Series C, Vol. 78, Iss. 3, pp. 127-136, ISSN 2286-3540, 2016 WOS:000393326700012
18. **I. Marcu**, C. Voicu, R. Crăciunescu, S. Halunga, „LDPC Performances in Multi-Carrier Systems”, IEEE 11th International Conference on Communications (COMM 2016), ISBN:978-1-4673-8197-0, pp. 209-212, Bucharest, Romania, June 2016 WOS:000383221900044
19. A.-M. C. Drăgulescu, **I. Marcu**, S. Halunga, O. Fratu, "Sensors system design for discrimination between humans and animals", 8th International Conference on Advanced Topics in Optoelectronics, Microelectronics and Nanotechnologies (ATOM-N), Constanta, Romania, Aug. 2016 WOS:000391359600038
20. A. Vulpe, Ș. C. Arseni, **I. Marcu**, C. Voicu, O. Fratu, „Building a Unified Middleware Architecture for Security in IoT”, In WorldCIST 2017: Recent Advances in Information Systems and Technologies, vol 570, pp.105-114. Springer, Cham, DOI: 10.1007/978-3-319-56538-5\_11, Apr 2017 WOS: 000425541200011



- 21.** M. Popescu, R. Bărtușică, A. Boitan, **I. Marcu**, S. Halunga, „Considerations on Estimating the Minimal Level of Attenuation in TEMPEST Filtering for IT Equipments”, 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. Springer, Cham WOS: 000481658200002
- 22.** A.-M. C. Dragulinescu, A. Dragulinescu, **I. Marcu**, S. Halunga, O. Fratu, “SmartGreeting: A new smart home system which enables context-aware services”, 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. Springer, Cham WOS: 000481658200023
- 23.** **I. Marcu**, C. Voicu, A.M.D. Drăgulinescu, O. Fratu, G. Suciu, C. Bălăceanu, M.M Andronache, “Overview of IoT basic platforms for precision agriculture”, FABULOUS 2019: Future Access Enablers for Ubiquitous and Intelligent Infrastructures, Publisher: Springer, ISBN: 978-3-030-23975-6, pp 124-137, March 2019 WOS: 000552334400013
- 24.** M. Vochin, A. Vulpe, **I. Marcu**, G. Suciu, "Low-power intelligent displaying system with indoor mobile location capability", FABULOUS 2019: Future Access Enablers for Ubiquitous and Intelligent Infrastructures, Publisher: Springer, ISBN: 978-3-030-23975-6, pp 146-153, March 2019 WOS: 000552334400015
- 25.** G. Suciu, **I. Marcu**, C. Bălăceanu, M. Dobrea, E. Botezat, “Efficient IoT system for Precision Agriculture”, 15th International Conference on Engineering of Modern Electric Systems (EMES), ISBN: 978-1-7281-0773-8, Pages: 173-176 Oradea, Romania, June 2019 WOS:000503434500044
- 26.** **I. M. Marcu**, G. Suciu, C. M. Bălăceanu, A. Banaru, "IoT based System for Smart Agriculture", 11th International Conference on Electronics, Computers and Artificial Intelligence (ECAI), ISBN: 978-1-7281-1624-2, Pitesti, Romania, June 2019 WOS: 000569985400006
- 27.** C. M. Bălăceanu, **I. Marcu**, G. Suciu, "Telemetry System for Smart Agriculture", International Conference on Business Information Systems (BIS 2019: Business Information Systems Workshops), Part of the Lecture Notes in Business Information Processing book series (LNBIP, volume 373), ISBN 978-3-030-36690-2, pp 573-584, June 2019, Sevilla, Spain WOS: 000611408800048
- 28.** A.-E. Marcu, G. Suciu, E. Olteanu, D. Miu, A. Drosu, **I. Marcu**, “IoT System for Forest Monitoring”, 42nd International Conference on Telecommunications and Signal Processing (TSP), ISBN: 978-1-7281-1864-2, pp. 629-632, Budapest, Hungary, July 2019, WOS: 000493442800138
- 29.** C. Bălăceanu, **I. Marcu**, G. Suciu, C. Dantas, P. Mayer, “ Developing a Smart Toilet System for ageing people and persons with disabilities”, ECBS 2019, ISBN:978-1-4503-7636-5, WOS: 000525376600016, Romania, Sept 2019
- 30.** **I. M. Marcu**, A. Țigănuș, A. M. Dragulinescu, “A new approach on Smart-Parking concept”, ECBS 2019, ISBN:978-1-4503-7636-5, WOS: 000525376600015, Bucharest, Romania, Sept 2019
- 31.** I. Pirmog, **I. Marcu**, A.M.C. Drăgulinescu, C. Oprea, “Digital Filters for Sigma-Delta Modulation in Wireless Communications”, 2019 International Semiconductor Conference (CAS 2019), Electronic ISBN: 978-1-7281-1888-8, pp.111-114, WOS: 000514295300022, Sinaia, Romania, Oct. 2019
- 32.** C. Oprea, I. Pirmog, **I. Marcu**, M. Udrea, “Robust Pose Estimation Using Time-of Flight Imaging”, 2019 International Semiconductor Conference (CAS 2019), Electronic ISBN: 978-1-7281-1888-8, pp.301-304, Sinaia, Romania, Oct. 2019 WOS: 000514295300063
- 33.** I. Pirmog, **I. Marcu**, C. Oprea, “Automated Segmentation of Pigmented Skin Lesions Images for Smartphone Applications”, 2019 International Semiconductor Conference (CAS 2019), Electronic ISBN: 978-1-7281-1888-8, pp.107-110, Sinaia, Romania, Oct. 2019 WOS: 000514295300021
- 34.** **I. Marcu**, G. Suciu, C. Bălăceanu, A.-M. Drăgulinescu, M. A. Dobrea, “IoT Solution for Plant Monitoring in Smart Agriculture”, 2019 IEEE 25th International Symposium for Design and Technology in Electronic Packaging (SIITME), Electronic ISBN: 978-1-7281-3330-0, Cluj-Napoca, Romania, Oct. 2019 WOS: 000564733700038
- 35.** **I. Marcu**, G. Suciu, C. Bălăceanu, A. Vulpe, A.M. Dragulinescu, „Arrowhead Technology for Digitalization and Automation Solution: Smart Cities and Smart Agriculture”, SENSORS, Volume: 20, Issue: 5, Article Number: 1464, DOI: 10.3390/s20051464, WOS: 000525271500226, Published: MAR 2020 (Q1)
- 36.** **I. Marcu**, I. Pirmog, C. Voicu, A.-M.-C. Drăgulinescu, “Delta-Sigma Modulation for noise cancellation in 5G-compliant network”, WIRELESS PERSONAL COMMUNICATIONS, DOI: 10.1007/s11277-020-07327-w, ISSN: 0929-6212, WOS: 000526247100009, APR 2020 (ISI Q4)

37. C. Mărculescu, A. Machedon, A.-M. C. Drăgulinescu, **I. Marcu**, C. Zamfirescu, "LoRa and Bluetooth-based IoT alarm clock device for hearing-impaired people", IEEE 26th International Symposium for Design and Technology in Electronic Packaging (SIITME), Electronic ISSN: 2642-7036, Pitesti, Romania, Oct. 2020 WOS: 000651085100028
38. C. Bălăceanu, G. Suci, M. Balanescu, A. Iosif, M. Dobra, O. Orza, **I. Marcu**, "Assessment of climate change effects on the viticulture using ADCON telemetry station", Journal of Environmental Protection and Ecology, 2020, 21(2), pp. 471–480 (Scopus) URL: <https://www.scopus.com/authid/detail.uri?authorId=24473143100> WOS: 000566784600010
39. R. Roșcăneanu, C. Bălăceanu, R. Streche, F. Osiac, E. Hanganu, **I. Marcu**, A. Drăgulinescu, G. Suci Jr., "Advanced precision farming techniques employing WSN and UAV", In: Proc. SPIE 12493, Advanced Topics in Optoelectronics, Microelectronics, and Nanotechnologies XI, 124930Z (2 March 2023); doi: 10.1117/12.2643125, 25 - 28 August 2022, Constanța, Romania
40. A.-M. C. Drăgulinescu, **I. Marcu**, M. Vochin, „Selecting multiple communication technologies in IoT platforms”, In: Proc. SPIE 12493, Advanced Topics in Optoelectronics, Microelectronics, and Nanotechnologies XI, 124930Z (2 March 2023); doi: 10.1117/12.2643296, 25 - 28 August 2022, Constanța, Romania
41. **I. Marcu**, A.-M. C. Drăgulinescu, C. Oprea, G. Suci, C. Bălăceanu, "Predictive analysis and wine-grapes disease risk assessment based on atmospheric parameters and precision agriculture platform", Sustainability 2022, 14(18), 11487; <https://doi.org/10.3390/su141811487>, WOS: 000856715900001, Sept 2022
42. A.-M. Drăgulinescu, **I. Marcu**, C. Zamfirescu, „An End-to-End LoRaWAN-based IoT Platform with Built-in Network Coverage Testing Capability”, 25th International Symposium on Wireless Personal Multimedia Communications (WPMC 2022), DOI: 10.1109/WPMC55625.2022.10014713, October 30-November 2, 2022, Herning, Denmark WOS:000947852500075

### **PAPERS (BDI and other databases conferences/journals)**

1. Cristina-Claudia Oprea, Ana-Maria Claudia Drăgulinescu, **Ioana-Manuela Marcu**, Ionuț Pirnog, "Evaluating Critical Disease Occurrence in Grapevine Leaves using CNN: Use-Case in Eastern Europe", 2023 17th International Conference on Engineering of Modern Electric Systems (EMES), Electronic ISBN:979-8-3503-1063-4, DOI: 10.1109/EMES58375.2023.10171678, Oradea, Romania, Iunie 2023
2. George Craioveanu, **Ioana M. Marcu**, Terolaviu F. Popescu, "Integrative Therapeutic Music-Based Application For Alzheimer's Disease", 2023 17th International Conference on Engineering of Modern Electric Systems (EMES), Electronic ISBN:979-8-3503-1063-4, DOI: 10.1109/EMES58375.2023.10171678, Oradea, Romania, Iunie 2023
3. R. Roșcăneanu, R. Streche, F. Osiac, C. Bălăceanu, G. Suci, A. Drăgulinescu, **I. Marcu**, "Detection of Vineyards Diseases using Internet of Things Technology and Machine Learning Algorithms", International Conference "Air and Water Components of the Environments", pp. 128-139, Cluj-Napoca, Romania, DOI: 10.24193/AWC2022\_13, 2022
4. A. Drăgulinescu, A.-M. Drăgulinescu, **I. Marcu**, „Optical correlator based on the Hilbert transform for image recognition”, 13th International Conference on Electronics, Computers and Artificial Intelligence (ECAI), Electronic ISBN:978-1-6654-2534-6, Pitesti, Romania, July 2021 DOI: 10.1109/ECAI52376.2021.9515064
5. **I. Marcu**, A.-M. Drăgulinescu, C. Florea, C. Bălăceanu, M. A. Dobra, G. Suci, "Agricultural data fusion for Smartagro telemetry system", Advances in Science, Technology and Engineering Systems, Volume 5, Issue 5, 2020, Pages 1266-1272, Dec. 2020 (**Scopus- Open Access**) DOI: 10.25046/aj0505152
6. C. Bălăceanu, G. Suci, R. Cheveresan, M. Dobra, A. Iosif, R. Iosu, **I. Marcu**, "Monitoring Solutions for Smart Agriculture", 11th Edition of the International Conference "Air and Water Components of the Environments", pp. 173-180, Cluj-Napoca, Romania, DOI: 10.24193/AWC2019\_17, 2019
7. C. Bălăceanu, G. Suci, **I. Marcu**, "Libelium-based IoT Monitoring Solution for Precision Agriculture", Journal of E – Technology, open access journal, Volume: 10, Issue: 1, Feb. 2019 DOI:10.6025/jet/2019/10/1/1-9
8. **I. Marcu**, I. Pirnog, "SCL-Based Analysis for 4G-Compliant System in Indoor Pedestrian Environments" in Advances in Intelligent Systems and Computing book series (AISC, volume 747), Editors: Á. Rocha, H. Adeli, L. P. Reis, S. Costanzo, pp. 108-118, ISBN: 9783319777009, Springer, 2018 DOI [https://doi.org/10.1007/978-3-319-77700-9\\_11](https://doi.org/10.1007/978-3-319-77700-9_11)
9. **I. Marcu**, C. Voicu, S. V. Halunga, R. Preda, „LDPC encoding performances for fading suppression in MIMO-CDMA wireless networks”, ICST Trans. Mobile Communications Applications, DOI:10.4108/eai.10-7-2018.155052, 2018



10. G. Suci, C. Burlă, **I. Marcu**, S. Halunga, C. Voicu, „Decentralized Mobile Cloud Computing using 5G Networks”, accepted and presented at Global Wireless Summit “Technology for the Betterment of Human Communication”, Aarhus, Denmark, 2016

11. A.-M. C. Drăgulescu, **I. Marcu**, S. Halunga, O. Fratu, “Persons Counting and Monitoring System based on Passive Infrared Sensors and Ultrasonic Sensors (PIRUS)”, 2nd EAI International Conference on Future Access Enablers of Ubiquitous and Intelligent Infrastructures (FABULOUS 2016), pervasive Computing Paradigms for Mental Health. FABULOUS 2016, MindCare 2016, IIOT 2015. Lecture Notes of the Institute for Computer Sciences, Social Informatics and Telecommunications Engineering, vol 207. Springer, Cham, October 24–25, 2016, Belgrade, Serbia

12. **I. M. Marcu**, S. V. Halunga, O. Fratu, “Implementation of different behaviours of DS-CDMA systems with multiuser detectors”, 10th International Conference on Telecommunication in Modern Satellite Cable and Broadcasting Services (TELSIKS), 5-8 Oct. 2011, DOI: 10.1109/TELSIKS.2011.6143240, Nis, Serbia

13. **I. Marcu**, S. Halunga, I. Pirnog, A. Marțian, C. Oprea, „Convolutional /turbo encoding improvements for different multiuser detection algorithms in unperfect reception conditions”, U.P.B. Sci. Bull., Series C, Vol. 73, Iss. 4, 2011, ISSN 1454-234x

14. A. Bădescu, **I. Marcu**, T. Petrescu, S. Halunga, O. Fratu, „Facilities of Digital Modulation Techniques and Conversion Schemes in Underground Multiuser Systems”, International Conference on Computer as a Tool (EUROCON 2011), April 27-29, 2011, ISBN: 978-1-4244-7486-8, IST Congress Center, Lisabona, Portugalia

15. S. V. Halunga, O. Fratu, **I. M. Marcu**, A. Bădescu, E. C. Popovici, D. N. Vizireanu, „Performance Evaluation of Conventional and MMSE Multiuser Detection Algorithms with Different Spreading Signature Codes”, International Conference on Computer as a Tool (EUROCON 2011), ISBN: 978-1-4244-7486-8, IST Congress Center, Lisabona, Portugalia, April 2011

16. O. Fratu, E.-L. Niederhäuser, S. V. Halunga, **I. M. Marcu**, „Cognitive Underwater Wireless Sensor Network Approach for Green Energy Production Optimization”, Invited presentation, CTIF Symposium on Green ICT, 31 May – 1 June 2011, Aalborg, Denmark

17. E.-L. Niederhäuser, O. Fratu, S. V. Halunga, **I. M. Marcu**, “Innovative Concept Study of a Wireless Multimedia Mechanical Sensor Networks for Industrial Energy Production Control”, The 13th International Symposium on Wireless Personal Multimedia Communications (WPMC 2010), October 11-14, 2010, Recife, Brazil

18. A. Bădescu, O. Fratu, S. V. Halunga, A. Frujina, **I. Marcu**, „Analysis of Sensor Networks for Poachers’ and Wildlife Monitoring”, Proceedings of Ninth Edition International Symposium on Electronics and Telecommunications ETC 2010, pag. 187-190, ISBN 978-1-4244-8458-4, November 11-12 2010, Timisoara, Romania

19. A.M. Bădescu, S. Halunga, N. Vizireanu, O. Fratu, **I. Marcu**, „A comparison between Performances of QPSK and 16QAM signals for A Underground Multiuser Scenario”, Proceedings of The Fifth International Multi-Conference on Computing in the Global Information Technology ICCGI 2010, pag. 268-273, ISBN 978-0-7695-4181-5, September 20-25 2010, Valencia, Spain

20. O. Fratu, S. Halunga, C. Perju, A. Martian, **I. M. Marcu**, „On the Availability of CDMA Channels for Secondary Users”, 3rd International Workshop on Cognitive Radio and Advanced Spectrum Management, COGART 2010, November 08-10, 2010, Rome, Italy

21. A. Marțian, **I. Marcu**, I. Marghescu, “Spectrum Occupancy in an Urban Environment: A Cognitive Radio Approach”, Proc. 6th Advanced International Conference on Telecommunications (AICT 2010), pp 25-29, ISBN: 978-1-4244-6748-8, Barcelona, May 2010

22. A Marțian, C. Vlădeanu, **I Marcu**, I. Marghescu, „Evaluation of Spectrum Occupancy in an Urban Environment in a Cognitive Radio Context”, International Journal on Advances in Telecommunications, IARIA, vol. 3, no. 3&4, Dec. 2010, pp. 172-181

23. A. Bădescu, O. Fratu, S. Halunga, **I. Marcu**, „Consideration on wave propagation in underground dielectrics”, Antennas & Propagation Conference (LAPC 2009), pp 377 – 380, ISBN: 978-1-4244-2720-86-17, 2009, Loughborough, Anglia

24. S Halunga, **I. Marcu**, O. Fratu, “Performance increase in multiuser detection systems using convolutional encoding”, Buletinul Științific al Universității Politenica din Timișoara, Tom 53(67), Fascicula 2, 2008, pp. 206-211. (ISSN 1583-3380)

25. B. Petrus, O Fratu, S. Halunga, S Obreja, **I Marcu**, „Service development in a multicast hybrid wireless environment”, Buletinul Științific al Universității Politehnice din Timișoara, Tom 53(67), Fascicula 2, 2008, pp. 218-223. (ISSN 1583-3380)
26. **I. Marcu**, S Halunga (2008) „Cognitive radio architecture”, 7th International Conference Communications 2008-Workshop on Cognitive Radio and Reconfigurable Communication Systems, Bucharest 5-7 June, p 7-10 (ISBN 978-606-521-008-0)
27. P. Manoilov, **I. Marcu**, S. Halunga, O. Fratu (2007), „EEG Eye-Blinking Artefacts Duration Analysis”, Proceedings of the workshop “Services and Software Architectures, Infrastructures and Engineering for enhancing EU Citizen’s Quality of Life, May 18, 2007, Bucharest, Romania, pg.108-116
28. **I. Marcu**, S. Halunga, O. Fratu, I. Constantin, „Turbo coding Performances with and without Fading”, ECAI 2007 - International Conference – Second Edition, Electronics, Computers and Artificial Intelligence, pp. 20-27, ISSN - 1453 – 1119, 29th – 30th June, 2007, Pitești, România
29. **I. Marcu**, S. Halunga, O. Fratu, „Turbo coding Performances on Fading Channels”, ET’2006 Conference, ISBN 954-438-564-9, pp. 100-106, Sozopol, Bulgaria
30. C. Braga, O. Fratu, S. Halunga, **I. Marcu**, Ș. Obreja, "Videoconference application implementable in wireless hybrid communications systems", Simpozion internațional "Sisteme inteligente si interactive de management pentru imbunatatirea relatiei administratiei cu cetatenii si mediul de afaceri", pg. 130-148, Ed. ASE, Buc 2006, ISBN 973-594-871-0
31. Ș. Obreja, O. Fratu, **I. Marcu**, A. Enescu, S. Halunga, M. Bucur, "Radio communication hybrid system for various accesses of citizens to online IP services", Simpozionul Internațional "Servicii publice inteligente pentru cetatenii din UE in societatea moderna bazata pe TIC", pg.333-354, Ed. ASE, Buc 2006, ISBN 973-594-8729
32. **I. Marcu (Bercă)**, S. Halunga, O. Fratu, “Turbo coding Performances in small signal to noise radio”, Proceeding of 40-th International Scientific Conference on Information, Communication and Energy Systems and Technologies, ICEST 2005, Nis, Serbia and Muntenegro, June 29 –July 1, 2005, pp. 3-6, ISBN 86-85195-26-8
33. S. Obreja, O. Fratu, S. Halunga, **I. Marcu (Bercă)**, “Interactive Broadcasting: Solution for a DVB-T / WCDMA hybrid wireless access”, Proceeding of 40-th International Scientific Conference on Information, Communication and Energy Systems and Technologies, ICEST 2005, pp. 403-406, ISBN 86-85195-26-8, Serbia and Muntenegro, June 29 –July 1, 2005
34. **I. Marcu (Bercă)**, S. Halunga, O. Fratu, "Interleaver design effects on turbocodes performances", Communications 2004 Proceedings, Bucharest 3-5 Iunie, Romania, Bucharest, Romania.pp. 541-544
35. S. Halunga, O. Fratu, D. Păun, **I. Marcu (Bercă)**, “Turbo codes Bit Error Rate Performances with Different Correlator Structures”, ELECTRONICS ET’2003, the 12th International Scientific and Applied Science Conference, September 24-26, 2003, Sozopol Bulgaria, Book3. pp. 43-48

## RESEARCH PROJECTS

### Project manager / manager won by competition:

1. **I. Marcu** (project director), I. Pirnog, A.-M. Drăgulescu, C. Zamfirescu, “Rețea ad-hoc optimizată pentru agricultura de precizie (RomAgrar)”, contract 24.10.2023, din cadrul competiției National Program for Research of the National Association of Technical Universities - GNAC ARUT 2023, project period: october 2023- december 2024
2. **I. Marcu** (project director), O. Fratu, et al, “Platforma Next Generation Internet bazată pe 5G și UAV-uri pentru agricultura de precizie (NGI-UAV-AGRO)”, contract 461PED/2020, cod proiect: PN-III-P2-2.1-PED-2019-1945 din cadrul competiției ” Programul 2 - Creșterea competitivității economiei românești prin cercetare, dezvoltare și inovare, Subprogramul 2.1. Competitivitate prin cercetare, dezvoltare și inovare - ”Proiect experimental demonstrativ (PED 2019)” (UEFISCDI), project period: november 2020- october 2022
3. **I. Marcu** (project responsible), O. Fratu, S. Halunga, et al “Sistem de telemetrie pentru agricultura inteligentă (SmartAgro)”, contract subsidiar nr. 8592 / 08.05.2018 din cadrul proiectului ”Ecosistem de cercetare, inovare și dezvoltare de produse și servicii TIC pentru o societate conectată la Internet of Things – NETIO” cod MySms1 105976, Programul Operațional Competitivitate 2014-2020, Axa prioritară 1: Cercetare, dezvoltare tehnologică și inovare (CDI) în sprijinul

competitivității economice și dezvoltării afacerilor, Domeniul major de intervenție: Parteneriate pentru transfer de cunoștințe, contract nr. 53/05.09.2016, durata proiect: iulie 2018- august 2020

**4. I. Marcu** (project manager), C. Voicu, A.M.C. Drăgulescu “ Modulația ΣΔ în sistemele 5G (ModΣs)”, contract sept 2017, grant intern UPB (2017-2018)

**Member of the research teams within the following national / international projects:**

**1.** A.M.C. Drăgulescu, et al, “Viticultura inteligentă bazată pe tehnici IoT – premisă de gestionare a schimbărilor climatice”, Planul sectorial pentru cercetare – dezvoltare al Ministerului Agriculturii și Dezvoltării Rurale pe anii 2023-2026, Agricultură și Dezvoltare Rurală – ADER 2026, contract ADER 6.3.13/27.0.2023, 2023-2026.

**2.** A. Bădescu, I. Marcu, et al, "Radiowave propagation in heterogeneous media: implications on the electronics of Cosmic Neutrino Detectors", proiectul nr PN3-P3-529/2017 –UEFISCDI, partener unic UPB, desfășurat prin centrul de cercetare UPB; domeniu PE7, 24 luni

**3.** A. Bădescu, I. Marcu, et al, "Dezvoltarea de aplicatii de securitate pe baza tehnologiilor experimentale complexe utilizate in studiul radiatiei cosmice (DEXTER)", contract nr 19 PCCDI/2018, UEFISCDI, desfasurat prin centrul de cercetare UPB; domeniu "Spatiu si securitate"; 2020-2022

**4.** A. Vulpe, I. Marcu et al, ""Platformă de test pentru Studiul Securității în IoT (PaSS-IoT)" nr. 96/2016, grant GEX, 2016-2017

**5.** O. Fratu, ... I. Marcu, ..., „Sistem informatic integrat pentru managementul activităților (SIIMA)", Planul Național de Cercetare - Dezvoltare și Inovare pentru perioada 2015 - 2020 (PNCDI III - Soluții), nr. contract 8SOL/2018, (coordonator ICI, participanți: UNAp, UPB, SC Safetech Innovations SRL, GREENSOFT SRL), 2018-2021

**6.** O. Fratu, ... I. Marcu, ..., „Platforma de sisteme inteligente multiagent pentru monitorizarea calității apei pe sectorul românesc al Dunării și Deltei Dunării (MultiMonD2)", contract numărul 33PCCDI / 2018 din cadrul Programului Programul 1 - Dezvoltarea sistemului național de cercetare-dezvoltare, Tip proiect: Proiecte Complexe realizate în consorții CDI (coordonator INFLPR , parteneri: AFA, CCSACBRNE, UPB, RA-IMSAR), 2018-2020

**7.** O. Fratu, ... I. Marcu, ..., „Platforma Software integrata pentru analiza malware a terminalelor mobile (ToR-SIM)", contract nr. 5SOL/2017, Planul Național de Cercetare - Dezvoltare și Inovare pentru perioada 2015 - 2020 (PNCDI III - Soluții) (coordonator UPB, participanți BEIA, UNAp, SC Safetech Innovations SRL), 2017-2020

**8.** O. Fratu (coord) “Sisteme de detecție pentru radiația cosmică folosind noi tehnologii (DETCOS)", contract nr.1282-104/01.10.2008, proiect de cercetare PNCDI II de tip parteneriat, 2008-2011

**9.** O. Fratu (Director de proiect și coord. UPB), S. Halunga, I. Marghescu, E. Popovici, I.Marcu, etc. "Evolutia, modalitatile de implementare si de tranzitie pentru radiodifuziunea digitala DVB in conditiile de utilizare eficienta a spectrului de frecvente", proiect nr. 106/08.08.2011, proiect de cercetare PNCDI II de tip parteneriat "Termeni de referinta", beneficiar MCSI (coordonator UPB, participant ICI) (2011-2013)

**10.** S Halunga (coord, UPB). D Vizireanu, I Marcu, “Contributii la dezvoltarea algoritmilor de prelucrare si codare a semnalelor video in sistemele wireless multiutilizator prin optimizarea parametrilor de calitate psihoperceptuala”, contract de cercetare UPB-CNCSIS, cod CNCSIS 1695/2009, 2009-2011

**11.** I. Marghescu, O. Fratu, C. Vlădeanu, I. Marcu ș.a. „Tehnologia Radio Cognitiv și utilizarea eficientă a spectrului RF”, Contract UEFISCSU, PN-II-PCE-Idei, 2007-2011

**12.** O. Fratu (proiect director, coord. UPB), S. Halunga, S. Ciochina, I. Marghescu, I. Constantin, I.Marcu, etc. "Sistem de acces wireless hibrid cu adresare unica (SAWHAU)", proiect no. 12-126/01.10.2008, proiect de cercetare PNCDI II de tip parteneriat (coordonator: UPB, participant: ICI, Beia Consult International SRL, Agentia Spatiala Româna, Universitatea Pitesti) (2008-2011).

**13.** S Halunga (coord, științific UPB), O Fratu (coord. administrativ), S Ciochină, I Marghescu, Ș Obreja, M Udrea, I Marcu: SIUM „Sistem integrat pentru utilizatorul mobil”, Contract de cercetare de excelență, nr 80/03.10.2005 (coordonator general: ICI, director coordonator mat. Emil Stănescu, 3 participanți: UPB, ASE, UPIT), subcontract UPB-ICI nr 832/10.10.2005 (2005-2008)

14. 2004-2007: S. Halunga, (coord) I. Bercă, O Fratu. ș.a. "Tehnici optimale și cvasioptimale de diseminarea rezuoare și prelucrare a datelor pentru sistemele de generația a 3a și a 4a" contract de cercetare tip A UPB – ANSTI, nr 1389/2004, tema 33.

15. O. Fratu (coord. UPB), S. Halunga, S. Ciocină, I. Marghescu, I. Constantin, ș.a. "Sistem informatic pentru analiza in timp real a factorilor de risc pentru mediu si sanatate publica (TERRA-RO)", contract nr. 11-054 / 18.09.2007, proiect de cercetare PNCDI II de tip parteneriat (coordonator: Beia Consult International SRL, participanți: UPB, ICPE-CA, Agenția Spațială Română, CEPROCIM, OMG, GTZ) (2007-2010).

16. O. Fratu (coord. UPB), S. Halunga, S. Ciocină, I. Marghescu, I. Constantin, I. Marcu ș.a. "Aplicatii si servicii noi de navigatie si localizare satelitara bazate pe tehnologia WiMAX - LOCOMAX", contract nr. 81-026/14.09.2007, proiect de cercetare PNCDI II de tip parteneriat (coordonator: Agenția Spațială Română, participanți: UPB, Beia Consult International SRL, UTI, AccessNet) (2007-2010).

17. O Fratu (coord UPB), S. Halunga, I. Marcu ș.a. , «NEM-RO (Platforma tehnologica integrata, in domeniul networked and electronic media, sustenabila pe termen lung si racordata la platforma tehnologica europeana NEM) în cadrul programului de cercetare de excelență (CEEX) al MEdC, Modul III, cod MEC 12433

18. I Marghescu, S Halunga, O Fratu, I Marcu „PICABAL – Platformă Integrată de Comunicații cu Acces Flexibil, de Bandă Largă II (Integrated Communication Platform with flexible access) research contract, CeeX, Responsabil: Prof. I. Marghescu, 2007-2009

19. O. Fratu (coord.), S. Halunga, I. Bercă ș.a. "Aplicarea tehnologiei software radio în dezvoltarea interfețelor de comunicație digitale mobile de bandă largă și foarte largă", contract de cercetare tip A UPB – CNCSIS, nr 40528/05.11.2003, tema 29, cod CNCSIS 9 (2003)

20. Ramjee Prasad (Aalborg University), Vladimir Poulkov (TECHNICAL UNIVERSITY OF SOFIA), Liljana Gavrilovska (Ss. CYRIL AND METHODIUS UNIVERSITY IN SKOPJE), O. Fratu (director UPB), etc., " eWall for Active Long Living" (eWALL), Proiect European de tip integrat FP7, no. 610658, 2013-2016 (<https://cordis.europa.eu/project/id/610658>)

21. S. Halunga (coord. UPB), O.Fratu (responsabil științific UPB), I. Marcu, ș.a. „REDICT—Regional Economic Development by ICT/New media clusters”, proiect FP7 tip CSA nr. 206480, acceptat în cadrul apelului FP7-REGIONS-2007-1, (coord. City of Amsterdam, 17 parteneri din Olanda, Germania, Franța, România, Irlanda și Danemarca) (2008-2009).

22. O. Fratu (PPD, coord. UPB), S. Halunga, I. Marghescu, I. Marcu ș.a., „Reconfigurable Interoperability of Wireless Communications Systems (RIWCoS)”, Contract NATO de tip „Știință pentru Pace” nr. SfP-982469 (coordonatori: O. Fratu – PPD, A.C. Boucouvalas – NPD, participanți din România, Grecia, Macedonia și Danemarca) (2007-2010).

23. S. Ciocină (director), ș.a. "ATHENA - Digital Switchover: Developing Infrastructures for Broadband Access", contract de cercetare tip STREP (FP6), nr FP6-507312 (2004-2006).

24. S. Ciocină (director), ș.a. "Enthroned - End-to-End QoS through Integrated Management of Content, Networks and Terminals", contract de cercetare tip IP (FP6), nr FP6-507637 (2003-2007).

## **AWARDS**

1. Award for research results, UEFISCDI competiție PRECISI2020, Dec. 2020: **I. Marcu**, G. Suci, C. Bălăceanu, A. Vulpe, A.M. Dragulinescu, "Arrowhead Technology for Digitalization and Automation Solution: Smart Cities and Smart Agriculture", Sensors **2020**, 20(5), 1464 (PN-III-P1-1.1-PRECISI-2020-40781)

2. Award for research results, UEFISCDI, Dec. 2015: G. Suci, V. Suci, A. Martian, R. Craciunescu, A. Vulpe, **I. Marcu**, S. Halunga, O. Fratu, "Big Data, Internet of Things and Cloud Convergence – An Architecture for Secure E-Health Applications", Journal of Medical Systems, Springer Publisher, Online ISSN1573-689X, September **2015**

3. Award for the Contribution to the Industrial Research Excellence for the paper entitled "An End-to-End LoRaWAN-based IoT Platform with Built-in Network Coverage Testing Capability" (authors: A.-M. Drăgulinescu, **I. Marcu**, C. Zamfirescu) in The 25th International Symposium on Wireless Personal Multimedia Communications, in Herning, Denmark, organised by the Department of Business Development and Technology of Aarhus University (Aarhus BSS - Aarhus University), OCT 2022

**PATENT**

**1. I.-M. Marcu**, O. Fratu, S. V. Halunga,; A.-R. Vulpe, C. Florea, A. Marțian, A.M.C. Drăgulinescu, G. Suci, C. M. Bălăceanu, A. Drosu, R.-N. Chevereșan, D. Miu, „Telemetry system for intelligent agriculture addressed to farmers and agricultural producers, has component set for monitoring, warning and supporting decisions in cloud, which provides for visualization and analysis of data, notifications or recommendations resulting from data analysis”, Derwent Primary Accession Number 2022-495358, Patent Number RO135499-A2, Main IPC G16Y-010/05, Patent Assignees: UNIV POLITEHNICA DIN BUCURESTI (UYPO-Non-standard), BEIA CONSULT INT SRL(BEIA-Non-standard), Indexed 2022-04-24