Work address: Dept. Telecommunications, Bd. Iuliu Maniu, no 1-3, University, POLITEHNICA of Bucharest, Romania (http://www.telecom.pub.ro/);
E-mail addresses: alinabadescu@radio.pub.ro; alina.badescu@rosa.ro
Researcher Profile: https://publons.com/researcher/2752364/alina-m-badescu/ (Web of Science ResearcherID number B-6087-2012
Personal Webpage: http://campus.pub.ro/lab14/abadescu/

Education

2014-2015: Postdoc researcher, Faculty of Electronics, Telecommunications and Information Technology (E.T.T.I.), University POLITEHNICA of Bucharest
2008-2011: Ph. D. Student, E.T.T.I., Bucharest; Ph. D. thesis: Radio techniques for cosmic particle detection (6 month visit at Karlsruhe Institute of Technology, Karlsruhe, Germany)
2006-2007: M. Sc. in *Advanced Techniques in Radio Astronomy and Space Science*, Chalmers University of Technology, Gothenburg, Sweden
2001-2006: M. Sc. in *Radio and Optic Communications*, E.T.T.I, Bucharest

Work experience

10.2020-ongoing, ESA_Lab@UPB coordinator[1]
03.2017-ongoing, CAMPUS Research Center, coordinator of Systems with Innovative Antennas Laboratory[2]
10.2018-ongoing, European Commission representative for Romania, GNSS Progr. Committee
09.2019-ongoing, European GNSS Interference Task Force
10.2016-ongoing, *associate professor,* University POLITEHNICA of Bucharest, Bucharest (starting with 2019- *Habilitation certificate*)
10.2011-ongoing, *associate professor/lecturer/assistant professor*, University POLITEHNICA of Bucharest, Bucharest
10.2011-10.2014, Researcher (collaboration), "Horia Hulubei" National Institute for R&D in Physics and Nuclear Engineering, Cosmic Rays Dept., Bucharest
12.2008-11.2011, Researcher, Communications and signal processing research center, University POLITEHNICA of Bucharest, Bucharest
09.2005-06.2006, High school no.10 for children with disabilities, Bucharest, volunteer

Awards, Prizes & Fellowships

- Prize *Gheorghe Cartianu* of the Romanian Academy of Science, 2017
- First prize in competition *Researchers in science and Engineering*-organized by Cluj Napoca City Hall, 2016
- *Best paper* award: *International Conference on Electrical, Electronics and Instrumentation Engineering* (ICEEI – 2015), 22 Aug. 2015, Colombo, Sri Lanka
- *Best young scientist* award, 21st International conference Radioelektronika, Brno, Czech Republic, 20th April 2011
- Fellowship, 3rd International Summer school in Astro Particles, Nijmegen, Holland, 2009
- Scholarship within *Guest Scholarship Programme*, Swedish Institute, 2006-2008

[1] https://international.upb.ro/news-and-events/view/event/en-launching-ceremony-of-the-esa_lab-upb?fbclid=IwAR1WL7LySNSA35eCmpQhsSfIY_wavgFrCLmWhxGPOl2EN9nR1lRHMuxnvv4
[2] http://campus.pub.ro/website/systems-with-innovative-antennas

- National prizes for published articles, UEFISCDI Human resources programme, 2013-2019

Teaching activities

- Lecturer (Full course responsibility):
  - *Antennas and propagation* (bachelor studies, International programme, IVth year- starting 2012)
  - *High Frequency Techniques* (bachelor studies, International programme, IVth year starting 2018)
  - *Satellite communications* (International master *Advanced wireless communications*, year II starting 2014)
  - *Introduction in Radio Astronomy* (bachelor studies, Romanian programme IVth year- course introduced in the curricula of the university-starting 2014)
- Assistant professor -laboratory: *Microwaves, Microwave circuits, Transmission media, Satellite Communications, Data transmissions on radio channels, Signal, Circuits and Systems, Communications Systems.*
- Assistant professor -problem resolving classes: *Microwaves, Transmission media, Satellite Communications, Signals and Systems* etc.

Supervision of students and graduate students

- Member in the doctoral committes for:
  - Liliana Anchidin (Measuring antenna gain in the near field region, 2018)
  - Madalina Algiu (Detection of electrical discharges in high voltage power line by radio techniques, ongoing)
  - Adrian Andone (Application of frequency selective surfaces for vehicles ID and tracking, 2020)
  - Andreea Constantin (Estimation of interconnections' effects on measurement of antenna patterns, ongoing)
  - Ionut Serbanescu (SAR for radar V/UH systems)
  - Valentin MIHAI, Radar Cross Section Measurements in a Real Environment, Universitatea din Rennes 1, Franța - Institutul de Electronică și Tehnologii Numerice (IETR), teza sustinuta pe 18 noiembrie 2020; referend teza si in comisie doctorala
  - Adelaida Heiman (Smart antenna systems-ongoing)
- PhD supervisor:
  - Bianca Moldoveanu (Antennas for space applications, started 2019)
  - Daiana Tomescu (Atmospheric effects modelling for GNSS systems, started 2019)
  - Marius Marinescu (Radio Frequency Interference Impact on Global Navigation Satellite Systems, started 2020)

Member in the doctoral examination committee for: Alexandru Balaceanu (Advanced detection systems for cosmic rays investigations, 2019); Alexandru Gherghel-Lascu (Studies on the improvement of the reconstruction of extensive air showers, 2019); Mihai Niculescu-Oglinzanu (Cosmic muons investigation using scintillation detectors, 2020)

- Supervisor for more than 25 bachelor & master theses, among which:
  - Florin Buja, Capacity planning and network optimization for 5G backhauling requirements (in collaboration with Nokia Romania)
  - Ioana Iancu, Vulnerabilities in the determination of locations using satellite navigation systems (in collaboration with GMV Romania)

  - Ioana Harabagiu, Measurement and analysis of electromagnetic fields toward safety limit exposure (in collaboration with Orange Romania)
  - Alexandra Costea, 5G Requirements Towards Last Mile Radio Transmission Links
  - Adelaida Heiman, MIMO antennas for automotive applications
  - Florin Ion, Fundamental antennas' properties
  - Diana Petcu, Autotuning UMTS Pilot Power for power congestion avoidance
  - Jalal Hussein, Hybrid Satellite Communication
- Coordinator of student research groups; coordinator of more than 10 papers presented in national competitions for students (*UPB Student communication sessions*)- at least 5 received prizes
- Awarded research scholarships for students (MSc and BSc level) from personal research grants

Research projects

International

- **project coordinator:** "Radiowave propagation in heterogeneous media: implications on the electronics of Cosmic Neutrino Detectors" **–** European Research Council, 2016 Starting Grants, no. 714637 (2016-2018); *first grant awarded to Romania in the PE7 panel (Systems and Communication Engineering)- in 11 years there were only 4 Romanian Starting Grants grantees in all research domains*
- **project coordinator: "**A quintessential Universe" –research grant no 42194, financer: John Templeton Foundation (USA) (2013-2015)
- **grant for individual researchers**, The German Acad. Exchange Service (DAAD), 2013

National

- **partner coordinator: "**Development of security applications based on the complex experimental technologies utilized in the study of cosmic radiation", contract no. 19 PCCDI/2018, UEFISCDI (2018-2020)
- **project coordinator**: "Enhancing Performances Of satellite-based positioning systems by reduction of atmospheric propagation effects", contract no. 15/2020, UEFISCDI (2020-2022)
- **project coordinator:** "Radio frequency Instrumentation for Astroparticles' detection", contract no. 108/2018, UEFISCDI (2018-2020)
- **project coordinator:** "Radiowave propagation in heterogeneous media: implications on the electronics of Cosmic Neutrino Detectors" (PN3-P3-529, contract no. 5/2017, UEFISCDI-Award project-institutional development, in connection with ERC -714637; 2017-2018)
- **coordinator** of Constantin POPA - holder of UEFISCDI "Scholarship for young researcher" (2013 competition)

Research member in:

-AugerNext -contract no. 1 ASPERA2 ERA-NET- FP7 project (2012-2015)

-Detection systems for Cosmic Radiation using new technologies - PN-II P-82-104 (2008-2011)

-Hybrid wireless systems with unique accessing PN-II P -12-126 (2008-2011)

-Contributions to development of processing and coding algorithms for video signals in multiuser wireless systems PNCDI II –Idei, CNCSIS 1695 (2009-2011)

-Real time analysis system for risk factors for medium and public health - PN-II P 11-054 (2007-2010)

Invited Lectures & Organization of scientific meetings

Scientific lecture "Orbits and trends", Space Summer Academy, Bucharest, 09.09.2019

Scientific lecture "Antennas for Space Applications", Summer school on Antennas and propagation, Constanta, 22.08.2018

Scientific lecture "Radio detection of cosmic particles", Carpathian summer school of Physics, Sinaia, 07.07.2018

Scientific lecture "Cosmic particles radio detection" (Lebedev Physics Institute-Russian Academy; National Research Nuclear University MEPhI (Moscow Engineering Physics Institute); 16-17 October 2017

Scientific lecture "Detection of cosmic radiation using new technologies", Seikei University (Tokyo, Japan), 14.11.2010

Scientific lecture "Studies on lateral distribution of radio signal", Karlsruhe Institute of Technology (Karlsruhe, Germania), 30.11.2010

Invited presentation: A. Tatomirescu, **A.M. Badescu**, 2018, A Wideband Cross-Polarized Antenna Array Element for Radio Detection of Cosmic Particles, IEEE Conference on Antennas Measurements and Applications (CAMA 2018), Vasteras, Sweden, 3-6 September 2018 (Special Session "Low Frequency Radiation Measurements")

General Vice-Chair International Workshop on Antenna Technology (iWAT) –25-28 February 2020, Bucharest; *Session organizer*: "Innovative Antenna Technologies for Space Applications", http://iwat2020.org/

Organization of the contest "European Satellite Navigation Competition" (2016, 2017) (national phase)

Chair - 2019 IEEE PES Innovative Smart Grid Technologies Europe, 29 September-2 October 2019, Bucharest, Romania**,** Session **"**Information and communication technologies for smart grids, interoperability and cyber-security"

Chair - The 22nd IEEE International Conference on Computational Science and Engineering (IEEE CSE 2019), August 1-3, 2019, New York, USA, Session "Machine Learning and Smart Applications 1"

Chair - IEEE 4th Asia-Pacific Conference on Antennas and Propagation, June 30 – July 3, 2015, Bali, Indonesia; Session "Antenna Arrays and Systems"

Chair - IEEE 10th International Conference on Wireless Communications, Networking and Mobile Computing, Beijing, 27-28 Oct 2014; Session "Wireless networks section"

Technical Programme committee -International conference on localization and GNSS, 8th ed., 26-28 June 2018, Guimaraes, Portugal

Technical Programme committee -International conference on localization and GNSS, 6th ed., 28-30 June 2016, Barcelona

Technical Programme committee -International conference on localization and GNSS, 9th edition, 4-6 June 2019, Nurenberg

Organizer of first Romanian School on "Antennas and propagation" (21-22 August 2018, Constanta[3])

Organizer of the first Romanian School "Space Summer Academy" (9-19 September 2019, Bucharest[4]). As a pilot edition, Chapter 1 concerned CubeSats design and was addressed to students

[3] https://events.vtools.ieee.org/m/172534?fbclid=IwAR22f14u55pNyq2FNASiMTAeIsQfXHUpABmVDWE2mF5wuG0konN6f4xVbFo

[4] http://campus.pub.ro/ssa/school2019/; http://international.upb.ro/space-summer-academy/

from all faculties of University POLITEHNICA of Bucharest, selected on a competition base. The following editions will be extended to international applicants. The school included lectures and hands on activities regarding the subsystems of a CubeSats, allowing attendants to gain knowledge in Structures, Electric power supply, TT&C, Mission analysis, Thermal control etc., but also in the specific applications of satellites (Telecom, Remote sensing, Space Science etc.). The lecturers were selected among the professors of UPB and specialists from the industry.

Commissions of trust

- Special Issue "Antennas and Propagation"[5], 2020, Sensors [IF 3.27(2020)], guest editor
- Reviewer for scientific journal (International Astronomy and Astrophysics Research Journal; International Journal of Communication Systems; Applied Sciences; Sensors; Journal of Electromagnetic Waves and Applications; Revue roumaine des sciences techniques; Physical Science International Journal; IEEE Microwave magazine etc.)

- External evaluator for funding agencies (Ministry of Education-Romania; National Centre for Research and Development, Poland)
- evaluator of projects in the contest "Odysseus II" –April 2016, 2017, Czech Republic

Member of international collaborations and professional associations

- IEEE- Antenna and Propagation Society –Vice-president Romania Section, starting 2017
- Young Academy of Europe (member of the board-starting 2019)
- Pierre Auger Observatory (UPB representative starting 2017)
- EuroScience; ASPERA (member)
- Graduate Women in Science (member, country representative 2014-2016)
- Space Generation Advisory Council (member, country representative 2014-2017)

- Collaboration with national industry: **Alcatel-Lucent** (currently Nokia) (Telecommunication sector)**, GMV** (Space Sector), **Orange Romania** (Telecommunication sector), **HPS** (antennas for space applications) etc.

Public outreach and public appearance

- opening talk in *Investing researchers shaping Europe's future* [6], European Parliament, Brussels, 07.02.2019
- *Round table: "Academic cooperation for supporting European space economy*"[7], Kozmiński University, Poland, 19.02.2021
- main organizer "ERC Starting Grant mentoring event", 21.09.2020 (Young Academy of Europe, 500 registrants)[8]
- "Stories" interview for European Research Council [9]
- nominated in the "Impact researchers" category, University POLITEHNICA of Bucharest[10]

[5] https://www.mdpi.com/journal/sensors/special_issues/iWAT2020

[6] https://erc.europa.eu/event/stoa-erc-event-investing-researchers-shaping-europes-future

[7] https://www.kozminski.edu.pl/pl/node/5275

[8] https://yacadeuro.org/erc-starting-grant-mentoring-event/; https://meetings.yacadeuro.org/event/5/

[9] https://erc.europa.eu/projects-figures/stories/neutrinos-salt-mine-information

[10] https://upb.ro/cercetatori-de-impact/ (accessed 12.04.2019)

- invited guest at National Radio Channel for scientific shows
- organizer of Antenna and Propagation-Society Chapter event for networking between academia & industry (60 participants), 23.11.2017, CAMPUS Research Center, Bucharest [11]
- founder "Space Science and applications" forum [12]

Certificates

Certificate (diploma) in Pedagogy and Psychology, level 1 (Romanian Ministry of Education), 35 Bologna credit points (2016)

Certificate (diploma) in Pedagogy and Psychology, level 2 - *Higher education* (Ministry of Education), 35 Bologna credit points (2016)

Certificate for structural management (2008)

Certificate of internal auditor for management in safety and quality control (2006)

Vocational guidance work

PRACSIS project, POSDRU/161/2.1/G/135813 (2014-2016)- academic and vocational guidance program for students. My tasks concerned coaching and mentoring based on individual sessions and c*areer personality* and aptitude tests.

Publication summary

No. of articles indexed in *Web of Science*[13]	**98**
No. of citations[9]	**2348**
h-index *Web of Science*[9]	**28**
h-index *Google Scholar*	**33**

[11] https://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=8331316

[12] http://campus.pub.ro/ssa/

[13] according to publons.com, 27.11.2019

List of publications

Monographs and text books

A.M. Badescu, 2016, Antenna engineering, MatrixRom, Bucharest, ISBN:978-606-25-0307-9 (English)

A.M. Badescu, 2015, Introduction in Radio Astronomy (second ed.), MatrixRom, Bucharest, ISBN 978-606-25-0177-8 (Romanian)

A.M. Badescu, T. Petrescu, 2015, Satellite Communications, Printech, Bucharest, ISBN978-606-23-0368-6 (Laboratory guidebook, Romanian)

I. Mocanu**, A.M. Badescu,** 2014, Problems in *Microwaves*, Printech, Bucharest, ISBN 978-606-23-0189-7 (Romanian)

G. Lojewski, N. Militaru, H. Lupescu, I. Mocanu, **A.M. Badescu**, 2014, Microwave Circuits – Laboratory Guidebook, POLITEHNICA Press, Bucharest, ISBN 978-606-515-563-3 (Romanian)

A.M. Badescu, 2013, Radio Detection of Cosmic Neutrinos in Salt Mines, LAP Lambert Academic Publishing GmbH & Co. KG, Saarbrücken, ISBN 978-3-659-35097-9 (English)

A.M. Badescu, 2012, Constraints on cosmological parameters from observational data, LAP Lambert Academic Publishing GmbH & Co. KG, Saarbrücken, ISBN 978-3-8465-8530-6 (English)

Articles published in *Web of Science* indexed journals (selection)

A.Tatomirescu, **A.M. Badescu**, 2020, Wideband Dual-Polarized VHF Antenna for Space Observation Applications, Sensors 2020, 20(15), 4351; https://doi.org/10.3390/s20154351- Special Issue Antennas and Propagation

A.M. Badescu, 2020, A large scale characterization of the dielectric properties of heterogeneous layered rock salt, IEEE Transactions on Geoscience and Remote Sensing, Vol. 58, no. 6, pp. 3854 - 3863

A.M. Badescu, 2018, The transfer function of a boreholed dipole antenna, IEEE Transactions on Antennas and propagation, vol. 66, no 11, pp 5757-5763

A.M. Badescu, 2017, Simulation of Event Reconstruction of Cosmic Particles With a Radio Network, IEEE Systems Journal, vol 11, issue 4, pp. 2239-2246

A.M. Badescu, 2017, Studies on solar power satellites with downconverters solar cells, International Journal of Ambient Energy, International Journal of Ambient Energy, Volume 38, Issue 2, pp 193-201

P. Abreu, M. Aglietta, **A.M. Badescu**,…(Pierre Auger Collaboration), 2017, Calibration of the Logarithmic-Periodic Dipole Antenna (LPDA) Radio Stations at the Pierre Auger Observatory using an Octocopter", JINST, vol. 12, T10005

A.M. Badescu, 2017, Limits on the cosmogenic neutrino flux from observational cosmology, Eur. Phys. J. Plus, vol. 132, 241

A.M. Badescu, A.S. Simion, 2016, Array of antennas for cosmic radio observations, Romanian Reports in Physics, vol 68, no 1.

A.M. Badescu, L. Cotofana, 2015, A wireless sensor network to monitor and protect tigers in the wild, Ecological Indicators, vol 57, pag 447–451

A.M, Badescu, 2015, On a radio detection system for cosmic observations, Astron. & Geophys. J., vol. 56, no.1

A.M. Badescu & A. Saftoiu, 2014, The effects of naturally occurring impurities in rock salt on radio propagation, Pramana, Volume 83, Issue 3, pp 435-447

A.M. Badescu & A. Saftoiu, 2014, Radio-Wave Propagation in Salt Domes: Implications for a UHE Cosmic Neutrino Detector, Advances in High Energy Physics, Vol. 2014,

P. Abreu, M. Aglietta, **A.M. Badescu**,…(Pierre Auger Collaboration), 2014, Reconstruction of inclined air showers detected with the pierre Auger Observatory, Journal of Cosmology and Astroparticle Physics, Issue 8

P. Abreu, M. Aglietta, **A.M. Badescu**,…(Pierre Auger Collaboration), 2014, Probing the radio emission from air showers with polarization measurements, Physical Review D, Volume: 89, Issue: 5, Article Number: 052002

A.M. Badescu, 2013, Considerations on an underground neutrino radio detector in salt, J. of Instrumentation, vol. 8 P03010

P. Abreu, M. Aglietta, **A.M. Badescu**,…(Pierre Auger Collaboration), 2013, Constraints on the origin of cosmic rays above 10^{18} eV from large scale anisotropy searches in data of the Pierre Auger Observatory, Astrophysical Journal Letters, Vol. 762, Issue: 1

P. Abreu, M. Aglietta, **A.M. Badescu**,….(Pierre Auger Collaboration), 2013, Interpretation of the depths of maximum of extensive air showers measured by the Pierre Auger Observatory, Journal of Cosmology and Astroparticle Physics, Issue 2

A.M. Badescu, T. Petrescu, A.Saftoiu, O.Fratu, I. Brancus, B. Mitrica, O. Sima, S. Halunga, G. Toma, I. Lazanu. 2012, Considerations on a large scale neutrino detector in a salt dome, Romanian Reports in Physics, vol. 64, no. 3, 815–824

P. Abreu, **A.M. Badescu**….(Pierre Auger Collaboration), 2012, Antennas for the Detection of Radio Emission Pulses from Cosmic-Ray induced Air Showers at the Pierre Auger Observatory, JINST, vol 7, P10011

A. Saftoiu, O., Sima, I., Lazanu, **A.M. Badescu**, I., Brancus, O. Fratu, S. Halunga, G. Toma, B. Mitrica, 2012, Simulation of electromagnetic showers in salt performed with GEANT4, Romanian Reports in Physics, vol. 64, no.1. pp. 314-324

P. Abreu, **A.M. Badescu**….(Pierre Auger Collaboration), 2012, The Rapid Atmospheric Monitoring System of the Pierre Auger Observatory, JINST, vol. 7, P09001, doi: 10.1088/1748-0221/7/09/P09001, ISSN 1748-0221

P. Abreu, **A.M. Badescu**….(Pierre Auger Collaboration), 2012, Description of Atmospheric Conditions at the Pierre Auger Observatory using the Global Data Assimilation System (GDAS), Astropart. Phys. 35, 591-607

A.M. Badescu, A. Saftoiu, O. Fratu, I., Brancus, B., Mitrica, O., Sima, S., Halunga, G., Toma, I, Lazanu, 2012, Radio technique for investigating high energy cosmic neutrinos, Rom. Rep. Phys, RRP-vol. 64 nr.1, P. 281–293

A. Saftoiu, O. Sima, I.M. Brancus, I. Lazanu, **A.M. Badescu**, 2012, Radio emission from neutrino induced showers in salt using simulations performed with GEANT4 and AIRES codes, Romanian Reports in Physics, vol. 64, no. 3

A.M. Badescu, T. Petrescu, 2011, Observational limits of a large scale neutrino detector in a salt dome, Acta Astronautica, Volume 69, Issue 7, p. 375-380

P. Abreu, **A.M. Badescu**….(Pierre Auger Collaboration), 2011, A search for ultra-high energy neutrinos in highly inclined events at the Pierre Auger Observatory, Phys. Rev. D 84, 122005

A. M. Badescu, C. Horrelou, 2011, Constraints on the quintessence from observational data, Romanian Reports in Physics, vol. 63, no. 3, 852–861

A.M. Badescu, O. Fratu, A. Frujină, S. Halunga, I. Marcu, Wireless Sensor Network for wildlife monitoring, 2011, Environmental Engineering and Management Journal; volume 10, No.11, pp.1625-1634

V. Badescu, **A.M. Badescu**, 2009, Solar cells with down-converters for space applications, JBIS, vol. 62, no. 2, ISSN 007-084X, pp 42-46

V. Badescu, **A.M. Badescu**, 2009, Improved model for solar cells with up-conversion of low-energy photons, Renewable Energy, Volume 34, Issue 6, pp. 1538-1544

V.Badescu, A. De Vos, **A.M. Badescu**, A.Szymanska, 2007, Improved model for solar cells with down-conversion and down-shifting of high-energy photons, J. Phys. D: Appl. Phys. 40, pp. 341–352

Articles published in other journals (selection)

A.M. Badescu, 2015, A radio detector for cosmic rays in the Northern Hemisphere, International Journal of Conceptions on Electrical and Electronics Engineering, Vol. 3, Issue. 21

V. Savu, I. Marghescu, O. Fratu, S. Halunga, **A.M. Badescu**, 2013, Antenna design for electromagnetic waves propagation studies through the salt ore, U.P.B. Sci. Bull., Series C, Vol. 75, Iss. 2

A.M. Badescu, 2012, A comparison of different modulation techniques performances in an underground multiuser communications scenario, Annales UMCS, Informatica. Volume 12, Issue 2, Pages 73–85

A.M. Badescu, T. Petrescu, 2011, On a large-scale radio Cherenkov observatory, U.P.B. Sci. Bull., Series C, Vol. 73, Iss. 3

Articles published in proceedings of international conferences (*IEEE Xplore/Web of Science*) (selection)

Adelaida Heiman, Alina Badescu, „Circularly Polarized Pyramidal Horn Antenna for Ku Band", The 8th Annual IEEE International Conference on Wireless for Space and Extreme Environments (WISEE 2020), 12-14 October 2020.

A.C. Heiman, **A.M. Badescu**, 2020, Design of a conventional horn antenna for Ku band, 2020 International Workshop on Antenna Technology, iWAT 2020, Bucharest; Romania; 25-28 February 2020

A. C. Heiman; **A. M Badescu**, 2019, A Novel Design and Simulation of a Ku Broadband Double Ridged Guide Horn Antenna for Satellite Communications, 2019 Photonics & Electromagnetics Research Symposium - Spring (PIERS-Spring), DOI: 10.1109/PIERS-Spring46901.2019 (WOS)

D. Tomescu, **A.M. Badescu**, A. Heiman, 2019, An automatic remote monitoring system for large networks, The 22nd IEEE International Conference on Computational Science and Engineering (IEEE CSE 2019), August 1-3, 2019, New York, USA (WOS)

A.M. Badescu, I. Mocanu, 2018, The scattering parameters of boreholed antennas in the UHF band, International Conference on Electromagnetics in Advanced Applications (ICEAA), 10-14 Sept. 2018, Cartagena, pp. 99 – 102,

A.C. Heiman, **A.M. Badescu**, A. Saftoiu, 2018, A new Multiple Input Multiple Output V2V automotive antenna for Long Term Evolution band applications, Proc. International Symposium on Fundamentals of Electrical Engineering 2018, Bucharest, November 1-3 2018(WOS)

V. Moise, **A.M. Badescu**, 2018, An amplifier design for cosmic particles radio detectors, Proc. The 18th Mediterranean Microwave Symposium, Istanbul, pp. 369 - 371, 31 October - 2 November 2018 (WOS)

A. Tatomirescu, **A.M. Badescu**, 2018, A Wideband Cross-Polarized Antenna Array Element for Radio Detection of Cosmic Particles, IEEE Conference on Antennas Measurements and Applications (CAMA 2018), Vasteras, Sweden, Sept. 2018 (WOS)

F. Rosu, **A.M. Badescu**, B. Rusu, 2018, Analysis and Optimization of an Inductive Wireless High Power Transfer System, 9th SPIE Conference on Advanced Topics in Optoelectronics, Microelectronics, and Nanotechnologies (ATOM-N 2018), August 2018, Constanta

A.M. Badescu, A. Saftoiu, I. Brancus, D. Stanca, B. Mitrica, 2017, Results on radio attenuation length recorded in a Romanian salt mine, Volume 301 - 35th International Cosmic Ray Conference (ICRC2017)

A.M. Badescu, Dragos Matei, 2015, A baseline design for a radio interferometer, IEEE APWC IEEE-APS Topical Conference on Antennas and Propagation in Wireless Communication, 07-11 September, Torino, Italy; ISBN 978-1-4799-7808-3

A.M. Badescu, Dragos Matei, 2015, A ten element radio interferometer design 2015 IEEE 4th Asia-Pacific Conference on Antennas and Propagation, June 30 – July 3, 2015, Bali, Indonesia, pp. 167-168

A.M. Badescu, C.E. Stefan, A. Saftoiu, I. Brancus, B. Mitrica, 2014, Performances of the radio chain in a high energy particle detector, 10th International Conference on Wireless Communications, Networking and Mobile Computing, Beijing, 27-28 Oct 2014

A.M. Badescu, A Saftoiu, I Brancus, G Toma, O Fratu, S Halunga, 2013, A radio detector for UHE cosmic neutrinos, 33rd International Cosmic Rays Conference, Rio de Janeiro, 2-9 July 2013

A.M. Badescu, V. Savu, O. Fratu, S. Halunga, A. Saftoiu, I. Brancus, G. Toma, D. Stanca, 2013, A wireless network in an unconventional media, Wireless VITAE, Atlantic City, 24-27 June 2013

A.M. Badescu, C. Stefan, E. Nicolae, A. Mingheras, A. Saftoiu, I. Brancus, 2012, A radio detector for cosmic rays in the Northern Hemisphere, Second European Nuclear Physics Conference, 17-21 September 2012 Bucharest

A.M. Badescu, Petrescu, T; Fratu, O; Saftoiu, A; Brancus, I; Mitrica, B; Sima, O; Lazanu, I; Halunga, S; Toma, G, 2011, Radio propagation environment analysis for neutrino radio detection in salt mines, TIPP 2011, Physics Procedia; Vol: 37, pp. 1273-1278

A.M. Badescu, T. Petrescu, I. Marcu, O. Fratu, S. Halunga, 2011, Propagation Effects in Synchronous Underground CDMA Systems, Proceedings of 10th International Conference On Telecommunications in Modern Satellite, Cable and Broadcasting Services, vol. 1, ISBN 978-1-4577-2016-1, pp.156-159, 5-8 October, Nis, Serbia

A.M. Badescu, I. Marcu, T. Petrescu, S. Halunga, O. Fratu, 2011, Facilities of Digital Modulation Techniques and Conversion Schemes in Underground Multiuser Systems, Proceedings of International Conference EUROCON 2011 and CONFTELE 2011, April 27-29, 2011, IST Congress Center, Lisbon

A.M. Badescu, T. Petrescu, O. Fratu, A. Săftoiu, I. Brâncuş, B. Mitrică, O. Sima, I. Lazanu, S.Halunga, G. Toma, 2011, Propagation Effects on Radio Signals Emitted in Salt by Neutrino-Induced Electromagnetic Showers, Proceedings of the 21st International Conference Radioelektronika 2011, 19-20 April, Brno, Czech Republic, ISBN: 9781612843223

A.M. Badescu, V. Badescu, 2010, On a large-scale radio Cherenkov observatory, 6th International colloquium "Mathematics and Physics in Engineering, Numerical Physics and Complexity", 8 oct 2010 Bucuresti

A.M. Badescu, O. Fratu, S. V. Halunga, A. Frujina, I. Marcu, 2011, 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

S. V. Halunga, O. Fratu, I. Marcu, **A.M. Badescu**, E. Popovici, D. N. Vizireanu, 2011, Performance Evaluation of Conventional and MMSE Multiuser Detection Algorithms with Different Spreading Signature Codes, Proceedings of International Conference EUROCON 2011 and CONFTELE 2011, April 27-29, 2011, IST Congress Center, Lisbon

C. Vasile, S.V. Halunga, I. Marcu, O. Fratu, **A. M. Badescu**, 2010, MMSE Synchronous System Behaviour in Different Length/Types of Spreading Sequences Environment, Proceedings of Ninth Edition International Symposium on Electronics and Telecommunications ETC 2010, pag. 191-194, November 11-12 2010, Timisoara, Romania

A.M. Badescu, S. Halunga, N. Vizireanu, O. Fratu, I. Marcu, 2010, A comparison beteween 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

A.M. Badescu, O. Fratu, S. Halunga, I. Marcu, 2009, Consideration on Wave Propagation in Underground Dielectrics, Proceedings of Loughborough Antennas & Propagation Conference, Loughborough, UK; pag. 377 - 380

S. Halunga, I.M. Marcu, O. Fratu, **A.M. Badescu**, 2009, Conventional and Optimal Multiuser Performance Increase by Turbo Encoding, Proceedings of papers, vol. II, 9th International Conference on Telecommunications in Modern Satellite, Cable and Broadcasting Services, Serbia, Nis; pag. 388 - 391

A.M. Badescu, O. Fratu, S. Halunga, I. Marcu, Consideration on radio propagation in cavities, 2009, Proceedings of papers, vol. II, 9th International Conference on Telecommunications in Modern Satellite, Cable and Broadcasting Services, Serbia, Nis, pag. 388 - 391

Patent

- A dual band directional coupler, with 3 coupling braches (translated from Romanian language), I. Mocanu, **A.M Badescu**, publication no. 134417 A0, 28/08/2020 (State Office for Inventions and Trademarks- Romania)

Patent applications (ongoing evaluation)

- A VHF amplifier for cosmic particle detection (translated from Romanian language), A. Ilie, **A.M Badescu**; a201800830, Oct. 2018 (State Office for Inventions and Trademarks- Romania)
- An inductive power transfer system using resonant methods (translated from Romanian language), F. Rosu, **A.M Badescu**; a201900188, March 2019 (State Office for Inventions and Trademarks- Romania)