Universitatea POLITEHNICA din Bucureşti
Facultatea de Electronică, Telecomunicaţii şi Tehnologia Informaţiei
Departamentul de Telecomunicaţii

Listă publicaţii Alina-Mihaela Bădescu

A. LISTA CELOR MAI RELEVANTE 10 PUBLICAȚII

1) **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, Print ISSN: 1932-8184; DOI: 10.1109/JSYST.2016.2588889; WOS:000417645300031 [ISI, FI (2018) 3,8; Q1]

2) A.M. Badescu, 2017, Limits on the cosmogenic neutrino flux from observational cosmology, Eur. Phys. J. Plus, vol. 132, issue 4, pp. 241-255, DOI: 10.1140/epjp/i2017-11513-x;ISSN: 2190-5444; WOS:000402393700001 [ISI, FI (2018) 1,74, Q2]

3) **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, http://dx.doi.org/10.1155/2014/901434, ISSN 1687-7357, Accession Number: WOS:000330760500001 [ISI, FI (2014) 2,2, Q2]

4) **A.M. Badescu**, 2013, Considerations on an underground neutrino radio detector in salt, J. of Instrumentation, vol 8, P03010 doi:10.1088/1748-0221/8/03/P03010, ISSN 1748-0221, WOS:000316990700035 [ISI, FI (2013)1,52, Q1]

5) **A.M. Badescu**, A.S. Simion, 2016, Array of antennas for cosmic radio observations, Romanian Reports in Physics, vol 68, no 2., ISSN: 1221-145, editura Acad. Romane in press [ISI, FI (2018) 1.46]

6) **A.M. Badescu**, T. Petrescu, 2011, Observational limits of a large scale neutrino detector in a salt dome, Acta Astronautica, Vol. 69, No 7, pag. 375-380, doi:10.1016/j.actaastro.2011.05.001, ISSN: 0094-5765, Accession Number: WOS:000294039500005 [ISI, FI (2018) 1,53, Q1]

7) **A.M. Badescu**, Dragos Matei, 2015, A baseline design for a radio interferometer, Proceedings of IEEE APWC & IEEE-APS Topical Conference on Antennas and Propagation in Wireless Communication, 07-11 September, Torino, Italy; ISBN 978-1-4799-7808-3; pag. 105-108; INSPEC Accession Number: 15525058; DOI:10.1109/APWC.2015.7300145 [IEEE Xplore]

8) **A.M. Badescu**, C.E. Stefan, A. Saftoiu, I. Brancus, B. Mitrica, 2014, Performances of the radio chain in a high energy particle detector, Proceedings of 10th International Conference on Wireless Communications, Networking and Mobile Computing, Beijing, 27-28 Oct, ISBN: 978-1-84919-845-5, pag 316-321, INSPEC Accession Number: 14854201; DOI:10.1049/ic.2014.0120 [IEEE Xplore]

9) **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 Communication, Vehicular Technology, Information Theory and Aerospace & Electronic Systems Technology (Wireless VITAE), 3th International Conference on, 24-28 Jun. 2013, Atlantic City, USA, ISBN: 978-1-4799-0237-8; INSPEC Accession Number: 13826162; WOS:000330140600019 [ISI, FI 0.25]

10) **A.M. Badescu**, The transfer function of a boreholed dipole antenna, IEEE Transactions on Antennas and propagation, Acceptata spre publicare [ISI, FI 2,95, Q1]

B. LISTA LUCRĂRI

I. TEZA DE DOCTORAT (T)

T1. Tehnologii radio utilizate pentru detectia particulelor cosmice- Detectoare de neutrini (prezentare publica octombrie 2011; îndrumător prof. Dr. Ing. Teodor Petrescu)

II. CĂRŢI PUBLICATE (C)

Cb - Cărţi de specialitate publicate în edituri recunoscute (autor, coautor, editor).

Cb1. **A.M. Badescu**, Radio Detection of Cosmic Neutrinos in Salt Mines, LAP Lambert Publishing GmbH & Co. KG, Saarbrücken, ISBN 978-3-659-35097-9, 2013, 170 pagini

Cb2. **A.M. Badescu**, Constraints on cosmological parameters from observational data, LAP Lambert Publishing GmbH & Co. KG, Saarbrücken, ISBN 978-3-8465-8530-6, 2012, 77 pagini

Cb3. **A.M. Badescu**, Introducere in radioastronomie, ed. MatrixRom, Bucharest, ISBN 978-606-25-0177-8, 2015, 315 pagini [cod CNCSIS 39]

III. ALTE MATERIALE PUBLICATE (I,D)

I - Culegeri şi Îndrumare publicate (separate în edituri cu ISBN şi în tipografii locale/de instituţii sau de uz intern).

I1. **A. M. Badescu**, T. Petrescu, 2015, Comunicatii prin satelit, ed. Printech, ISBN978-606-23-0368-6; 82 pagini

I2. I. Mocanu, **A. M. Badescu**, 2014, Culegere de probleme de microunde, ed. Printech, ISBN 978-606-23-0189-7; 78 pagini

I3. G. Lojewski, N. Militaru, H. Lupescu, I. Mocanu, **A. M. Badescu**, 2014, Microwave Circuits – Laboratory Guidebook, Editura POLITEHNICA Press, ISBN 978-606-515-563-3, Bucureşti, 65 pagini

I4. **A.M. Badescu**, Antenna Engineering, ed. MatrixRom, Bucharest, ISBN 978-606-25-0307-9, 2016, 194 pagini [cod CNCSIS 39]

IV. ARTICOLE / STUDII IN EXTENSO PUBLICATE (R,V)

Ris - Reviste de specialitate de circulaţie internaţională recunoscute (cotate / indexate ISI Thomson Reuters, sau indexate in alte Baze de Date Internationale - BDI specifice domeniului, care fac un proces de selectie a revistelor pe baza unor criterii de performanta).

Ris1. **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, Print ISSN: 1932-8184; DOI: 10.1109/JSYST.2016.2588889; WOS:000417645300031 [ISI]

Ris2. **A.M. Badescu**, 2016, A radio detector for cosmic particles with energies above 1019eV, Acta Astronomica, acceptat spre publicare [ISI]

Ris3. A.M. Badescu, 2017, Limits on the cosmogenic neutrino flux from observational cosmology, Eur. Phys. J. Plus, vol. 132, issue 4, pp. 241-255, DOI: 10.1140/epjp/i2017-11513-x;ISSN: 2190-5444; WOS:000402393700001 [ISI]

Ris4. **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,

http://dx.doi.org/10.1155/2014/901434, ISSN 1687-7357, Accession Number: WOS:000330760500001 [ISI]

Ris5. **A.M. Badescu**, 2013, Considerations on an underground neutrino radio detector in salt, J. of Instrumentation, vol 8, P03010 doi:10.1088/1748-0221/8/03/P03010, ISSN 1748-0221, Accession Number: WOS:000316990700035 [ISI]

Ris6. **A.M, Badescu**, 2015, On a radio detection system for cosmic observations, Astron. & Geophys. J., vol. 56, no.1, ISSN: 1366-8781, Accession Number: WOS:000351926900030 [ISI]

Ris7. **A.M. Badescu** & A. Saftoiu, 2014, The effects of naturally occurring impurities in rock salt on radio propagation, Pramana, Vol. 83, no 3, pag 435-447, ISSN 0304-4289, DOI: 10.1007/s12043-014-0775-9, WOS:000341883300012 [ISI]

Ris8. **A.M. Badescu**, T. Petrescu, 2011, Observational limits of a large scale neutrino detector in a salt dome, Acta Astronautica, Vol. 69, No 7, pag. 375-380, doi:10.1016/j.actaastro.2011.05. 001, ISSN: 0094-5765, Accession Number: WOS:000294039500005 [ISI]

Ris9. **A.M. Badescu**, O. Fratu, A. Frujină, S. Halunga, I. Marcu, Wireless Sensor Network for wildlife monitoring, 2011, Environmental Engineering and Management Journal; vol. 10, No.11, pag. 1625-1634 [ISI]

Ris10. **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, vol. 64 nr.1, pag. 281–293, Accession Number: WOS:000302105700025; ISSN: 1221-1451 [ISI]

Ris11. **A.M. Badescu**, A.S. Simion, 2016, Array of antennas for cosmic radio observations, Romanian Reports in Physics, vol 68, no 2., ISSN: 1221-145, in press [ISI]

Ris12. **A.M. Badescu**, 2012, A comparison of different modulation techniques performances in an underground multiuser communications scenario, Annales UMCS, Informatica. Vol. 12, no 2, pag. 73–85, ISSN (Online) 2083-3628, ISSN (Print) 1732-1360, DOI: 10.2478/v10065-012-0015-1 [Google Scholar]

Ris13. **A.M. Badescu**, 2015, Studies on solar power satellites with downconverters solar cells, International Journal of Ambient Energy, DOI: 10.1080/01430750.2015.1086672, ISSN 0143-0750; Taylor & Francis Group, UK [Scopus, INSPEC]

Ris14. P. Abreu, … **A. M. Badescu**, ...2012, Antennas for the detection of radio emission pulses from cosmic-ray induced air showers at the Pierre Auger Observatory, Journal of Instrumentation, Volume: 7, P10011, 50 pag., WOS:000310834800021, DOI: 10.1088/1748-0221/7/10/P10011 [ISI]

Ris15. V. Badescu; **A.M. Badescu**, 2009, Improved model for solar cells with up-conversion of low-energy photons, Renewable Energy, Vol. 34, Issue: 6, Pag. 1538-1544, DOI: 10.1016/j.renene.2008.11.006, WOS:000264306500016; ISSN: 0960-1481 [ISI]

Ris16. P. Abreu, … **A. M. Badescu**, ..., 2013,Identifying clouds over the Pierre Auger Observatory using infrared satellite data, Astroparticle Physics, Vol. 50-52, Pag. 92-101, WOS:000329271000011, DOI: 10.1016/j.astropartphys.2013.09.004 [ISI]

Rns - Reviste de specialitate de circulaţie naţională recunoscute de CNCSIS.

Rns1. **A.M. Badescu**, T. Petrescu, 2011, On a large-scale radio Cherenkov observatory, Scientific Bulletin UPB, a Series C, Vol. 73, Iss. 3, ISSN 1454-234x, 191-194

Vis- Volumele unor manifestări ştiinţifice internaţionale recunoscute, organizate in ţară şi străinătate, indexate ISI Thomson Reuters sau indexate in alte Baze de Date Internationale - BDI specifice domeniului, care fac un proces de selectie a publicatiilor pe baza unor criterii de performanta.

Vis1. A.M. Badescu, Dragos Matei, 2015, A ten element radio interferometer design, Proceedings of IEEE 4th Asia-Pacific Conference on Antennas and Propagation, June 30 – July 3, Bali, Indonezia, ISBN: 978-1-4799-8896-9, pag. 167-168; DOI: 10.1109/APCAP.2015.7374316 [IEEE Xplore]

Vis2. 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; INSPEC Accession Number: 12086461; DOI: 10.1109/RADIOELEK.2011.5936405 [IEEE Xplore]

Vis3. 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, September 20-25, Valencia, Spain, pag. 268-273, ISBN 978-0-7695-4181-5; INSPEC Accession Number: 11648795 [IEEE Xplore]

Vis4. 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; ISBN: 978-1-4244-2720-8; pag. 377 - 380; INSPEC Accession Number: 11008727; DOI: 10.1109/LAPC.2009.5352370 [IEEE Xplore]

Vis5. A.M. Badescu, Dragos Matei, 2015, A baseline design for a radio interferometer, Proceedings of IEEE APWC & IEEE-APS Topical Conference on Antennas and Propagation in Wireless Communication, 07-11 September, Torino, Italy; ISBN 978-1-4799-7808-3; pag. 105-108; INSPEC Accession Number: 15525058; DOI:10.1109/APWC.2015.7300145 [IEEE Xplore]

Vis6. A.M. Badescu, C.E. Stefan, A. Saftoiu, I. Brancus, B. Mitrica, 2014, Performances of the radio chain in a high energy particle detector, Proceedings of 10th International Conference on Wireless Communications, Networking and Mobile Computing, Beijing, 27-28 Oct, ISBN: 978-1-84919-845-5, pag 316-321, INSPEC Accession Number: 14854201; DOI:10.1049/ic.2014.0120 [IEEE Xplore]

Vis7. 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, pag.156-159, 5-8 October, Nis, Serbia; DOI: 10.1109/TELSKS.2011.6143248 [IEEE Xplore]

Vis8. 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, Lisabona, ISBN: 978-1-4244-7486-8; INSPEC Accession Number: 12075562; DOI: 1109/EUROCON.2011.5929281 [IEEE Xplore]

Vis9. A.M. Badescu; T. Petrescu; O. Fratu, A. Saftoiu; I. Brancus; B. Mitrica; O. Sima; I. Lazanu; S. Halunga; G. Toma, 2012, Radio propagation environment analysis for neutrino radio detection in salt mines, Proc.of the 2nd Int. Conf. on Technology and Instrumentation in Particle Physics (TIPP 2011); Book Series: Physics Procedia; Vol: 37 Pag. 1273-1278; DOI:

10.1016/j.phpro.2012.02.464, Accession Number: WOS:000312408100163; ISSN: 1875-3892; [ISI]

Vis10. G. Iovita, **A.M. Badescu**, M. Niculescu-Oglinzanu, I. Brancus, B. Mitrica, D. Sanca, A. Saftoiu, G. Toma, A. Gherghel, 2014, An advanced MPPC detector for cosmic muons, 37th international Semiconducters Conference, Sinaia, 13-15 Oct., IEEE catalog no. CFP14CASPRT; ISBN: 978-1-4993916-9; ISSN: 1545-827X [ISI]

Vis11. A.M. Badescu, O. Fratu, S. Halunga, I. Marcu, 2009, Consideration on radio propagation in cavities, Proceedings of papers, vol. II, 9th International Conference on Telecommunications in Modern Satellite, Cable and Broadcasting Services, Serbia, Nis; pag. 388 - 391; IEEE Xplore Digital Library, Accession Number: WOS:000289094600074; ISBN:978-1-4244-4381-9 [ISI]

Vis12. 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 Communication, Vehicular Technology, Information Theory and Aerospace & Electronic Systems Technology (Wireless VITAE), 3th International Conference on, 24-28 Jun. 2013, Atlantic City, USA, ISBN: 978-1-4799-0237-8; INSPEC Accession Number: 13826162; WOS:000330140600019 [ISI]

VI. CONTRACTE ŞI RAPOARTE ŞTIINŢIFICE (P,F)

P – Proiecte de cercetare-dezvoltare – inovare obtinute prin competitie, pe bază de contract/grant, in tara/strainatate (Pn – nationale, Pi - internationale).

Pi1. A.M. Badescu (Director de proiect), "A quintessential Universe", proiect de cercetare nr. 42194 din 01.08.2013 (partener unic UPB), finantator JTF (SUA), 30 luni, urmare apel din octombrie 2012

Pi2. A.M. Badescu (Director de proiect), Radiowave propagation in heterogeneous media: implications on the electronics of Cosmic Neutrino Detectors" - ERC 2016 Starting Grants, nr. 714637/2016 (partener unic UPB), finantator European Research Council, 24 luni,

Pn1. A.M. Badescu (Director de proiect), Radiowave propagatation in heterogeneous media: implications on the electronics of Cosmic Neutrino Detectors –director grant- proiectul nr PN3-P3-529/2017 –oferit de UEFISCDI ca premiere pentru grantul obținut de la ERC (partener unic UPB); 24 luni

Pn2. A. M. Badescu (resposabil partener), Dezvoltarea de aplicatii de securitate pe baza tehnologiilor experimentale complexe utilizate in studiul radiatiei cosmice (DEXTER), contract nr 19 PCCDI/2018; 30 luni

Pn3. A.M. Badescu (director de proiect), Metode in radiofrecventa pentru detectia astro-particulelor, TE 2016, contract nr 108/2018 (partener unic UPB); 24 luni

F – Alte lucrări de cercetare – dezvoltare

F1. A.M. Bădescu, V. Savu, O Fratu, Etapa IV: Măsurători experimentale în salina Slănic Prahova, dec. 2011, Sisteme de DETectie pentru radiatia COSmica folosind noi tehnologii (82-104/2008) [raport de cercetare]

F2. A.M. Bădescu, O Fratu, Etapa III: Pregtirea experimentala, proiectarea si verificarea functionala a elementelor de detectie care vor forma platforma experimentala, 30 nov. 2010, proiect Sisteme de DETectie pentru radiatia COSmica folosind noi tehnologii (82-104/2008) [raport de cercetare]

F3. **A.M. Bădescu**, O Fratu, Etapa II: Pregatiri teoretice pentru detectia radiatiei cosmice in subteran, 11 dec. 2009, proiect Sisteme de DETectie pentru radiatia COSmica folosind noi tehnologii (82-104/2008) [raport de cercetare]

F4. **A.M. Bădescu,** O Fratu, Etapa I Specificare ale conditiilor concrete de masurare a radiatiei cosmice in subteran, (salina Slanic), 22 ian. 2009, proiect Sisteme de DETectie pentru radiatia COSmica folosind noi tehnologii (82-104/2008) [raport de cercetare]

F5. **A.M. Bădescu**, M. Chiba, T. Kamijo, T., Petrescu, A. Săftoiu, O., Fratu, I. Brancus, A. Haungs, H. Rebel, B. Mitrică, O. Sima, I. Lazanu, S. Halunga, G. Toma, 2011, Attenuation length measurements for salt samples from Cantacuzino Mine, Prahova, Interner Bericht KASCADE-Grande 2011-01, Karlsruhe Institute of Technology [raport de cercetare]

VII. COMUNICĂRI ŞTIINŢIFICE NEPUBLICATE (E)

E – Lucrări prezentate la diferite seminarii/expoziţii, conferinţe, etc.

E1. **A.M. Bădescu,** **"**Detection of cosmic radiation using new technologies", Seikei University (Tokyo, Japonia), 24.11.2010 [Prelegere invitată]

E2. **A.M. Bădescu,** **"**Studies on lateral distribution of radio signal", Karlsruhe Institute of Technology (Karlsruhe, Germania), 30.11.2010 [Prelegere invitată]