

LISTA LUCRĂRILOR ȘTIINȚIFICE
în domeniul disciplinelor din postul didactic

A) Teza de doctorat

Regulatoare fuzzy interpolative adaptive și aplicații în construcția vagoanelor de călători. Conducător științific Prof.dr.ing. **Mircea A. Ciugudean**, în domeniul **Inginerie Electronică și de Telecomunicații**. Teza a fost susținută în 7 decembrie **2001** la Universitatea Politehnica din Timișoara, România. Diploma de doctor are seria A Nr. 0001084/1233/15.05.2002, în baza ordinului Ministrului Educației Naționale nr. 3570/19.04.2002

B) Cărți și capitole de cărți publicate

Lucrări didactice

B1) **M.M. Bălaș**, V.E. Bălaș. *Dispozitive si circuite electronice – îndrumător de lucrări de laborator*. Editura Universității “Aurel Vlaicu” din Arad, **2000**, ISBN 973-9361-38-2.

B2) **M. M. Bălaș**, V. E. Bălaș, *Curs de dispozitive electronice*, Editura Universității “Aurel Vlaicu” din Arad, 126 pagini, **2003**. ISBN 973-9361-83-8.

B3) **M.M. Bălaș**, *Introducere în electronica. Circuite electronice liniare*. Editura Universității “Aurel Vlaicu” din Arad, 203 pagini. **2013**. ISBN 978-973-752-673-1.

Cărți și capitole în cărți de specialitate

B4) **M.M. Bălaș**. *Regulatoare fuzzy-interpolative*. Editura Politehnica Timișoara, 110 pagini, **2002**. ISBN 973-625-036-9.

B5) **M.M. Bălaș**, V.E. Bălaș. *World Knowledge for Controllers by Fuzzy-Interpolative Systems*, Lotfi A. Zadeh, Dan Tufiș, Florin Gheorghe Filip, Ioan Dzitac (eds.), From Natural Language to Soft Computing: New Paradigms in Artificial Intelligence, Editing House of Romanian Academy, **2008**, pag.11-21. ISBN:978-973-27-1678-6.

B6) V.E. Bălaș, **M.M. Bălaș**. *A Survey on the Constant Time to Collision Techniques*, Lotfi A. Zadeh, Dan Tufiș, Florin Gheorghe Filip, Ioan Dzitac (eds.), From Natural Language to Soft Computing: New Paradigms in Artificial Intelligence, Editing House of Romanian Academy, **2008**, pp. 23-31. ISBN:978-973-27-1678-6.

B7) **M.M. Balas**, C. Musca and S. Musca. *The Passive Greenhouses*, Chapter 5 in *Paths to Sustainable Energy*, edited by J. Nathwani and A. Ng, InTech Open, **2010**, pp. 75-92. ISBN 978-953-307-401-6. <http://www.intech-open.com/books/paths-to-sustain-able-energy/the-passive-greenhouses> .

B8) V.E. Bălaș, **M.M. Bălaș**, *Fuzzy Systems towards Field Applications*, Rudolf Seising, Enric Trillas, Claudio Moraga, and Settimo Termini (eds.), *On Fuzziness. A Homage to Lotfi A. Zadeh*, Springer Verlag, Berlin, New York, **2013**, Volume 216, Chapter 25, pag. 189-195. Print ISBN: 978-3-642-35640-7, Online ISBN 978-3-642-35641-4. <http://link.springer.com/book/10.1007/978-3-642-35641-4/page/1>

B9) **M.M. Balas.** *A New Generation of Biomedical Equipment Based on FPGA. Arguments and Facts.* Chapter in *Advanced Intelligent Computational Technologies and Decision Support Systems. Studies in Computational Intelligence*, edited by B. Iantovics and R. Kountchev, *Springer*, **2014**, Volume 486, pp. 123-134. Print ISBN 978-3-319-00466-2, Online ISBN 978-3-319-00467-9.

C) Lucrări publicate în reviste indexate ISI/BDI în ultimii zece ani

Lucrări ISI

C1) **M.M. Balas.** *Seven Passive Greenhouse Synergies.* Acta Politehnica Hungarica, Budapest, vol. 11, no. 4, **2014**, pp. 199-210. ISSN: 1785-8860. WOS:000336555700013, **ISI indexed (impact factor: 1,286), Q3**

C2) Sidharthan Rakesh Kumar, Kannan Ramkumar, Srinivasan Seshadhri, **Balas Marius Mircea.** *A Novel Keep Zero as Zero Polar Correlation Technique for Mobile Robot Localization using LIDAR.* Advances in Electrical and Computer Engineering, vol. 16, issue 4, pp. 15-22, **2016**, DOI: 10.4316/AECE.2016.04003, WOS:000390675900003, **ISI indexed (impact factor: 0,65), Q4**

C3) Chakraborty Sayan, Dey Nilanjan, Samanta Sourav, Ashour Amira, Barna Cornel, **Balas Marius,** *Optimization of Non-rigid Demons Registration Using Cuckoo Search Algorithm.* Cognitive Computation, vol. 9, Issue 6, pp. 817-826, Dec. **2017**, DOI: 10.1007/s12559-017-9508-y, WOS:000417682600007, **ISI indexed (impact factor: 4,287), Q1**

C4) Abbas, Ghulam, Gu Jason, Farooq Umar, Abid Muhammad Irfan, Raza, Ali, Asad, Muhammad Usman, Balas Valentina E.; **Balas, Marius.** *Optimized Digital Controllers for Switching-Mode DC-DC Step-Down Converter,* Electronics, vol. 7, issue 12, Article Number 412, Dec. **2018**, DOI: 10.3390/electronics7120412, WOS: 000455067800071, **ISI indexed (impact factor: 1,764), Q2 in 2018.**

C5) Venkataraman Yegnanarayanan, Gayathri Yegnanarayanan, **Marius M. Balas.** *On Coloring Catalan Number Distance Graphs and Interference Graphs.* Symmetry, vol. 19, issue 10, pp. 468-470, **2018.** ISSN: 2073-8994, Article Number: 468, DOI: 10.3390/sym10100468, WOS:000448561000048, **ISI indexed (impact factor: 2,143) Q2**

C6) Farooq, Umar; Asad, Muhammad Usman; Gu, Jason; Abbas, Ghulam; Balas, Valentina E; **Balas, Marius M.,** *Design of a Single-Master/Multi-Slave Nonlinear Teleoperation System through State Convergence with Time Varying Delays,* Acta Polytechnica Hungarica, Vol.: 15, Issue: 8, Pages: 55-82, **2018**, DOI: 10.12700/APH.15.8.2018.8.3, WOS:000460524600003, **ISI indexed (impact factor: 1,286), Q3**

C7) Asad, Muhammad Usman; Farooq, Umar; Gu, Jason; Balas, Valentina E.; Abbas, Ghulam; **Balas, Marius;** Muresan, Vlad, *An enhanced state convergence architecture incorporating disturbance observer for bilateral teleoperation systems,* Int. Journal of Advanced Robotic Systems, vol. 16, issue 5, Sept. **2019**, Article Number: 1729881419880052, DOI: 10.1177/1729881419880052, WOS: 000491057400001, **ISI indexed (impact factor: 1,223), Q4**

C8) Umair Tahir, Ghulam Abbas, Dan Ovidiu Glavan, Valentina E Balas, Umar Farooq, **Marius M Balas,** Ali Raza, Muhammad Usman Asad, Jason Gu, *Design of Three Phase Solid State Transformer Deployed within Multi-Stage Power Switching Converters,* Applied Sciences, Vol. 9, Nr. 17, Pagini 3545, **2019**, Article Number: 3545, DOI: 10.3390/app9173545, WOS: 000488603600107, **ISI indexed (impact factor: 2,217), Q2**

C9) Abbas, Ghulam, Nazeer, Muhammad Qumar, Balas, Valentina E., Lin, Tsung-Chih, **Balas, Marius M.,** Asad, Muhammad Usman, Raza, Ali, Shehzad, Muhammad Naeem, Farooq, Umar, Gu, Jason, *Derivative-Free Direct Search Optimization Method for Enhancing Performance of Analytical Design Approach-Based Digital Controller for Switching Regulator,* Energies, Volume: 12, Issue: 11, Article

Number: 2183, DOI: 10.3390/en12112183, WOS:000472635900150, 1 June 2019, **ISI indexed (impact factor: 2,707), Q3**

C10) Umar Farooq, Jason Gu, Mohamed El-Hawary, Valentina E. Balas, **Marius M. Balas**, Ghulam Abbas, Muhammad Usman Asad, Jun Luo. *State convergence-based control of a multi-master-single-slave non-linear teleoperation system*. Acta Polytechnica Hungarica, Vol. 15, Issue 4, pp. 7-26. 2018. ISSN: 1785-8860, DOI: 10.12700/APH.15.4.2018.4.1, WOS: 000442389300001, **ISI indexed (impact factor: 1,286), Q3**

C11) Ashraf, Naveed, Izhar, Tahir, Abbas, Ghulam, Balas, Valentina E., **Balas, Marius M.**, Lin, Tsung-Chih, Asad, Muhammad Usman, Farooq, Umar, Gu, Jason, *A Single-Phase Buck and Boost AC-to-AC Converter with Bipolar Voltage Gain: Analysis, Design, and Implementation*, Energies, Volume: 12, Issue: 7, Article Number: 1376, DOI: 10.3390/en12071376, WOS: 000465561400193, Published: April 1, 2019, **ISI indexed (impact factor: 2,707), Q3**

C12) Asad, Muhammad Usman; Farooq, Umar; Gu, Jason; Balas, Valentina E.; Abbas, Ghulam; **Balas, Marius M.**: *Design of a Composite State Convergence Controller for a Nonlinear Telerobotic System*. Acta Polytechnica Hungarica, Vol. 16, Issue 10, pp: 157-172, WOS: 000506635900010, Published: 2019, **ISI indexed (impact factor: 1,286), Q3**

C13) Farooq, Umar; Gu, Jason; Balas, Valentina E.; Abbas, Ghulam; Asad, Muhammad Usman; **Balas, Marius M.**, *A Hybrid Time Series Forecasting Model for Disturbance Storm Time Index using a Competitive Brain Emotional Neural Network and Neo-Fuzzy Neurons*, Acta Polytechnica Hungarica, Volume: 16, Issue: 4, Pages: 213-229, 2019, DOI: 10.12700/APH. 16.4.2019.4.11, WOS:000476902300011, **ISI indexed (impact factor: 1,286), Q3**

Lucrări publicate în volume de conferințe indexate ISI Proceedings în ultimii zece ani

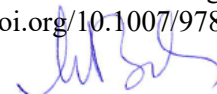
C14) **Marius M. Bălaș**, Valentina E. Bălaș, *Adaptive Rule-Based Reasoning by Qualitative Analysis*, 13 International Conference on Information Processing and Management of Uncertainty, IPMU 2010, Dortmund, Germany, June 28- July 2, Proceedings, Part I, [Communications in Computer and Information Science](#), 2010, Volume 80, Part 3, Part 11, pag. 553-560, E. Hullermeier, R. Kruse, F. Hoffman (Eds.), Springer-Verlag, 2010, ISSN 1865-0929, ISBN-10 3-642-14054-8 Springer Berlin Heidelberg NewYork, (Factor impact: 0,25) <http://www.springerlink.com/content/u50w1n1652815147/>, (ARC Cat. C)

C15) **Marius M. Bălaș, Mircea Ciugudean**, *CMOS-Integrated Temperature Relay Based on Widlar Mirror*. Chapter in *Proceedings of the 5th International Workshop on Soft Computing Applications SOFA'12*, Szeged, Hungary, Aug. 22-24. Series: *Advances in Intelligent and Soft Computing*, edited by V.E. Balas, J. Fodor, A. Varkonyi-Koczy, J. Dombi and L.C. Jain, Springer, 2013, pp. 319-330. ISBN 978-3-642-33941-7. **ISI Proc. (impact fact.: 0,25)**

C16) **M.M. Balas**, M. Socaci, O. Olaru. *A FPGA Floating Point Interpolator*. Chapter in *Proceedings of the 5th International Workshop on Soft Computing Applications SOFA'12*, Szeged, Hungary, August 22-24. Series: *Advances in Intelligent and Soft Computing*, edited by V.E. Balas, J. Fodor, A. Varkonyi-Koczy, J. Dombi and L.C. Jain, Springer, 2013, pp. 331-336. ISBN 978-3-642-33941-7. **ISI Proc. (impact factor: 0,25)**

C17) **M.M. Balas**, N.A. Chira, S.A. Matisan and F.M. Suci. *Using License Plates Recognition for Automate Cruise Control*. Chapter in *Proc. of the 5th International Workshop on Soft Computing Applications SOFA'12*, Szeged, Hungary, August 22-24. Series: *Advances in Intelligent and Soft Computing*, edited by V.E. Balas, J. Fodor, A. Varkonyi-Koczy, J. Dombi and L.C. Jain, Springer, 2013, pp. 605-609. ISBN 978-3-642-33941-7. **ISI indexed (impact factor: 0,25)**

C18) **Marius M. Balas**, Martin Buchholz, Sanda Balas. *Expert Control for the Coupled Tanks Greenhouse*. In: Balas V., Jain L., Kovačević B. (eds.) *Soft Computing Applications. Advances in Intelligent Systems and Computing*, Springer Cham, 2016, vol. 357, pp. 939-947. https://doi.org/10.1007/978-3-319-18416-6_74. **ISI Proc. (impact factor: 0,25)**



C19) **Marius M. Balas**, Robert A. Boran. *Basic Expert System*. International Workshop Soft Computing Applications SOFA 24-26 Aug. **2016**. In: Balas V., Jain L., Balas M. (eds.) *Advances in Intelligent Systems and Computing book series* (AISC, volume 633), Springer Cham, 2018, vol. 1, pp. 10-17. ISSN 2194-5357. https://doi.org/10.1007/978-3-319-62521-8_2. **ISI Proc. (impact factor: 0,25)**

C20) **Marius M. Balas**, Adelin Sofrag. *Multi Framing HDR for MRI Brain Images*. International Workshop Soft Computing Applications SOFA 24-26 Aug. **2016**. In: Balas V., Jain L., Balas M. (eds.) *Advances in Intelligent Systems and Computing book series* (AISC, volume 633), Springer Cham, 2018, vol. 1, pp. 290-297. ISSN 2194-5357. https://doi.org/10.1007/978-3-319-62521-8_23. **ISI Proc. (impact factor: 0,25)**

C21) **Marius M. Balas**, Emanuela V. Muller, Ramona Lile. *Fuzzy-Expert System for Investments in Winemaking*. International Workshop Soft Computing Applications SOFA 24-26 Aug. **2016**. In: Balas V., Jain L., Balas M. (eds.) *Advances in Intelligent Systems and Computing book series* (AISC, volume 634), Springer Cham, 2018, vol. 2, pp. 278-285. ISSN 2194-5357. https://doi.org/10.1007/978-3-319-62524-9_22. **ISI Proc. (impact factor: 0,25)**

Lucrări publicate în volume de conferințe indexate BDI în ultimii zece ani

C22) **M.M. Balas**, J. Nikolic, R. Lile, M. Popa, R. Beiu. *Integrated Rooftop Greenhouses and Green Skyline Cities*. Proc. of 18th International Multidisciplinary Scientific GeoConference SGEM'18, 3-5 Dec. **2018**, Wien, vol. 18, issue 6.4, pp. 435-443. ISBN: 978-619-7408-71-3. ISSN: 1314-2704. DOI: 10.5593/sgem2018/6.4. DOI: 10.5593/sgem2018V/6.4/S09.055. **Scopus**

C23) **M.M. Balas**. *Adaptive and Fast HDR Image Sensors - Resources of the CMOS Multiple Exposure*. Proc. of 8th International Conf. on Computing Technology and Information Management ICCM'12, Seoul, Korea, 24-26 April **2012**, pp. 643-647. IEEE Conf. Record Number 20416, ISBN 978-1-4673-0893-9. <https://ieeexplore.ieee.org/document/6268578>. **IEEE Xplore**

C24) **M.M. Balas**, B.A. Sajgo, P. Belean. *On the FPGA Implementation of the Fuzzy-Interpolative Systems*. Proc. of 5th International Symposium on Computational Intelligence and Intelligent Informatics ISCIII'11, Floriana, Malta, Sept. 15-17, **2011**, pp. 139-142. ISBN 978-1-4577-1859-5. <https://ieeexplore.ieee.org/document/6069757>. **IEEE Xplore**

C25) **M.M. Balas**, A. Sarbu, M. Socaci. *Internal Model Expert control for Slow Cooling Rate Bronze Casting*. Proc. of 4th International Workshop on Soft Computing Applications SOFA'10, pp. 243-248, 15-17 July **2010**, Arad, Romania. ISBN: 978-1-4244-7982-5. <https://ieeexplore.ieee.org/document/5565590>. **IEEE Xplore, Scopus**

C26) **M.M. Balas**, M. Ciugudean, M. Lobont. *Custom High Dynamic Range Characteristics Developed by Fuzzy-Interpolative Methodology*. Proc. of 4th International Workshop on Soft Computing Applications SOFA '10, pp. 185-190, 15-17 July **2010**, Arad, Romania. ISBN: 978-1-4244-7982-5. <https://ieeexplore.ieee.org/document/5565602>. **IEEE Xplore**

C27) **M.M. Balas**, V.E. Balas. *Adaptive Rule Based-Reasoning by Qualitative Analysis*. Conference: Information Processing and Management of Uncertainty in Knowledge-Based Systems. Theory and Methods - 13th International Conference, IPMU 2010, Dortmund, Germany, June 28 - July 2, **2010**. Proceedings, Part I. DOI: [10.1007/978-3-642-14055-6_58](https://doi.org/10.1007/978-3-642-14055-6_58). **Scopus**

D) Lucrări publicate în reviste sau volume de conferințe neindexate în ultimii zece ani

D1) **M.M. Balas**. *CMOS Image Sensors and the Perspective of the sequential Cumulative Exposure*, Proc. of ISREIE 2010, *International Symposium Research and Education in Innovation Era*, 3rd Ed., Aurel Vlaicu Univ. of Arad, Romania, Nov. 11-12, **2010**, Series: Engineering, pp. 231-237. ISSN 2065-2569.

D2) G. Hutiu, C. Dragos, **M.M. Balas**. *Controlling the Cooling Rate of the Bronze Bell Casting by Adjustable Coating*, Proc. of ISREIE 2010, *International Symposium Research and Education in Innovation Era*, 3rd Ed. Aurel Vlaicu University of Arad, Romania, November 11-12, **2010**, Series: Engineering, pp. 127-135. ISSN 2065-2569.

- D3) **M.M. Balas**, L. Csorba. *Using Fuzzy Logic for a Production Line Investment Decision. Case Study*. Proc. of ISREIE 2010, *International Symposium Research and Education in Innovation Era*, 3rd Edition, Aurel Vlaicu University of Arad, Romania, November 11-12, **2010**, Series: Engineering, pp. 252-259. ISSN 2065-2569.
- D4) **M.M. Balas**, V.E. Balas, *Java Development Interface for Fuzzy-Interpolative Systems*, ECIT 2010, 6th European Conference on Intelligent Systems and Technologies, 7-9 October **2010**, Iași, CD, ISSN 2069-036X.
- D5) V.E. Balas, **M.M. Balas**. *Fuzzy Control for Climate Controlled Spaces*, Proceedings ECIT 2010, 6th European Conference on Intelligent Systems and Technologies, October 7-9, **2010**, Iași, CD, ISSN 2069-036X.
- D6) V.E. Bălaș, **M.M. Bălaș**. *Fuzzy-Interpolative Linguistic Controllers for Custom HDR Photo Cameras*, Proc. of the *World Conference on Soft Computing, WConSC'11*, San Francisco, 23-26 May **2011**, edited by R. Yager, M. Reformat, S.N. Shabazova, and S. Ovchinnikov. <http://www.ece.ualberta.ca/~reform/WConSC/>.
- D7) **M.M. Balas**. *Arguments for a New Generation of Medical Equipment Based on FPGA*. Proc. of *International Workshop on Next Generation Intelligent Medical Decision Support Systems, MedDec-Sup 2011*, Tg. Mureș, 18-19 September **2011**.
- D8) **M.M. Bălaș**. *A potential Solution for a Cleaner future: the Laser Disposal of Harmful Residues*. Proc. of *International Symposium ISREIE 2012*, University Aurel Vlaicu of Arad, **2012**, Volume: Engineering, pp. 127-132. ISBN 978-973-752-652-6.
- D9) **M.M. Bălaș** and R. Han: *Flood Warning Color Code Decisions Assisted by Expert Systems*. Proc. of *International Symposium ISREIE 2012*, Univ. Aurel Vlaicu of Arad, **2012**, Volume: Engineering, pp. 133-138. ISBN 978-973-752-652-6.
- D10) V.K. Madan, **M.M. Balas**, S. Radhakrishnan. *Fermat Number Applications and Fermat Neuron*. Proceedings of *International Workshop on Soft Computing and Applications SOFA'14*, vol.1, Timisoara, Romania, July **2014**, pp. 403-412. ISBN 978-3-319-18296-4.
- D11) **M.M. Balas**, V.E. Balas. *The Parallel Shift. A Fundamental Challenge for the Information Technology after 2008*. Presented at the *Congress on Information Technology, Computational and Experimental Physics 2015 CITCEP'15*, Krakow, Poland, 18-20 Dec. **2015**.
- D12) V.K. Madan, **M.M. Balas**. *On Nuclear Spectrometry*. Proceedings of the *Congress on Information Technology, Computational and Experimental Physics 2015 CITCEP'15*, Krakow, Poland, 18-20 Dec. **2015**, pp. 194-198.
- D13) D. Balas-Timar, V.E. Balas, **M.M. Balas**, Vijay Rao. *Fuzzy Scoring of Behavioral Interviews Based on Storytelling Approach*, 6th World Conference on Soft Computing - WConSC 2016, Volume dedicated to the 50th Anniversary of Fuzzy Logic and Its Applications and 95th Birthday Anniversary of Lotfi A. Zadeh, Berkeley, 23-25 May **2016**, paper 341.
- D14) **M.M. Balas**. *On the nodes of the Moore-Shannon hammock networks - generic MOS transistor nodes*. Proc. of *6th Edition of the International Symposium Research and Education in an Innovation Era ISREIE 2016*, Aurel Vlaicu University, Arad, 8-10 December **2016**. In press.
- D15) **M.M. Balas**, E. Muller, R. Lile. *Fuzzy expert system for investing in winemaking*. Proc. of 7th International Workshop of Fuzzy Applications, SOFA'16, Arad, 24-26 August 2016. *Advances in Intelligent Systems and Computing*, vol. 2, pp. 278-285. Springer, **2017**. ISSN 2194-5357.
- D16) **M. Bălaș**, C. Sîrghie, M. Pustianu, M. Dochia, S. Gavrița, D. Tomescu. *Fuzzy Method Applied on the Control of Textiles Biotechnologies*. Proc. of 7th International Workshop of Fuzzy Applications SOFA '16, Arad, 24-26 August, 2016. *Advances in Intelligent Systems and Computing*, vol. 2, pp. 605-612. Springer, **2018**. ISSN 2194-5357.
- D17) Mahmood Hosseini Imani, Mojtaba Jabbari Ghadi, Shahaboddin Shamshirband, **M. M. Balas**. *Impact Evaluation of Electric Vehicle Parking on Solving Security-Constrained Unit Commitment Problem*. *Mathematical and Computational Applications*. vol. 23, issue 1, 13 pages, **2018**.

D18) **M. Balas**, J. Nikolic, R. Lile, M. Popa, R. Beiu. *Intelligent Rooftop Greenhouses and Green Skyline Cities*. SWS Journal of Earth and Planetary Sciences, vol.1, issue 2, 10 Ian. **2019**, pp. 15-28. <https://eps.sgemworld.at/index.php/eps/article/view/eps2019.2.2.balas> (Primul număr al revistei).

E) Brevete de invenție

- E1) I. Puie, I. Rubinstein, **M. Bălaș**, V. Crișan. *Dispozitiv de supraveghere selectivă a rețelelor trifazate cu nul izolat*. Brevet OSIM nr. 91329.
- E2) A. Barz, **M. Bălaș**, G. Dumitrescu. *Echipament electric de alimentare la tensiunea de 220V/50Hz a iluminatului fluorescent din vagoanele de călători, de la bateria de acumulatori*. Brevet OSIM nr. 91984.
- E3) **M. Bălaș**, C. Nicolescu, I. Rubinstein. *Dispozitiv de optimizare a funcționării iluminatului în vagoane de călători*. Brevet OSIM nr. 97546.
- E4) I. Puie, **M. Bălaș**. *Echipament de alimentare de la linia de înaltă tensiune a trenului*. Brevet OSIM nr. 98962.
- E5) I. Puie, **M. Bălaș**. *Metodă directă de măsură și control în timp real a gradului de tasare a amestecurilor de formare*. Brevet OSIM nr. 100838.
- E6) D. Piscoi, **M. Bălaș**. *Metodă de măsurare a vitezei vagonului izbitor în cazul probelor de tampotare*. Brevet OSIM nr. 101267.
- E7) **M. Bălaș**, A. Aromânesei, C. Pleșu. *Invertor pt. iluminatul fluorescent al vag. de călători, cu stabilizarea iluminării*. Brevet OSIM nr. 105756.

F) contracte de cercetare

- F1) *Dispozitiv de menținere a succesiunii fazelor în rețele trifazate*. Cod: 1.4.0728. Șef de temă. Executant: C.C.S.I.T. Vagoane Arad. Beneficiar: I. Vagoane Arad. Valorificare: export Irak.
- F2) *Dispozitiv de optimizare a funcționării iluminatului în vag. de călători*. Cod: 1. 6. 0901. Șef de temă. Executant: C.C.S.I.T.V. A. Beneficiar: I.V.A. Valorificare: omologare.
- F3) *Dispozitiv de diagnosticare automată*. Cod: 1.6.0900. Șef de temă. Executant: Executant: C.C.S.I.T.V.A. Beneficiar: I.V.A. Valorificare: omologare.
- F4) *Invertor pentru iluminatul fluorescent de 20W de la 110Vcc*. Cod: 1.6. 1096. Șef de temă. Executant: C.C.S.I.T.V.A. Beneficiar: I.V.A. Valorificare: export Sry-Lanka.
- F5) *Dispozitiv de blocare a ușilor de acces în vagoane de călători*. Cod: 1.0.1292. Șef de temă. Executant: C.C.S.I.T.V.A. Beneficiar: Minist. Învăț. și Științei. Valorificare: omologare.
- F6) *Instalație de radioficare și sonorizare pentru vagoane RIC*. Cod: 1.0.1293. Șef de temă. Executant: C.C.S.I.T.V.A. Beneficiar: M.Î.Ș. Valorificare: omologare.
- F7) *Sistem automat de blocare a ușilor în vagoanele de călători*. Cod: 1.0.1468. Șef de temă. Executant: I.C.P.V.A. Vagoane Arad. Beneficiar: M.Î.Ș. Valorificare: omologare.
- F8) *Noi componente ale ale instalației de iluminat din vagoanele de călători*. Cod: 1.2.1471. Șef de temă. Executant: I.C.P.Vagoane Arad. Beneficiar: M.Î.Ș. Valorificare: omologare.
- F9) Grant CNCISIS tip PREC ISI” *Premierea rezultatelor în cercetare “ PN-II-RU-PRECISI-2008, martie 2008, Șef de proiect, 2000 RON, poziția 167.*
- F10) Proiecte de Cooperare Bilaterală/Multilaterală, Programul: Capacități/Modul III, Cooperare Bilaterală între România și Bulgaria. Titlu: *Electronic Health Records for the Next Generation Medical Decision Support in Romanian and Bulgarian National Healthcare Systems*. Acronim: NextGenElectroMed Support. Instituția conducătoare în țară: Univ. Petru Maior din Târgu Mureș (conf.dr.ing. Barna Iantovics), Instituția conducătoare în Bulgaria: Univ. Tehnică din Sofia (prof. dr. Roumen Kountchev). Membru în echipă: **M.M. Bălaș**, august 2010-august 2012.

F11) Planul Național pentru Cercetare Dezvoltare și Inovare 2007-2013-PN II, Capacități /Modul III, Proiecte de Cooperare Bilaterală/Multilaterală, Cooperare Bilaterală între România și Slovacia. Titlu: *Hybrid Medical Complex Systems*. Acronim: ComplexMediSys. Instituția conducătoare în țară: Univ. Petru Maior din Târgu Mureș (conf.dr.ing. Barna Iantovics), Instituția conducătoare în Slovacia: Academia Slovacă de Științe, Bratislava (prof.dr.ing. Ladislav Hluchý). Membru în echipă: **M.M. Bălaș**, ian. 2011-ian. 2013.

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F13) Transfer la operatorul economic. PN-III-CERC-CO-PTE-2016.

F14) Subprogram 1.1 - Resurse Umane - Proiecte de mobilitate pentru cercetători cu experiență din diaspora, Competiția 2019. Cod: PN-III-P1-1.1-MCD-2019-01. Cercetător invitat: Anca Luminița Ralescu (SUA). Șef de program: **Marius M. Bălaș**, Sept. 2019.

12.01.2020

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