

**LISTA DE LUCRĂRI**  
**a cadrului didactic SERBAN GHEORGHE**

**A. Teza de doctorat**

Procesare paralelă în controlul și securitatea proceselor industriale și nucleare (1998).

**B. Cărți și capitole în cărți publicate în perioada 1985 - 2022**

**B1. Cărți și capitole în cărți de specialitate internaționale ca autor (cu ISBN extern)**

1. Laurentiu Ionescu, Emil Sofron, Gheorghe Șerban, Alin Mazare, *Evolved synthesis of digital circuit*, Encyclopedia of Artificial Intelligence, chapter "Evolved synthesis of digital circuit", Information Science Reference (an imprint of IGI Global), Edited by: Juan Rabunal, Alejandro Sierra, University of La Coruna, Spain, 2007, ISBN 978-1-59904-849-9, 2007
2. Laurentiu Ionescu, Alin Mazare, Gabriel Iana, Gheorghe Serban, Ionel Bostan, *Intrinsic Evolvable Hardware Structures*, Soft Computing: Methods for Practical Environment Solutions, chapter 11 Intrinsic Evolvable Hardware Structures, Ed. Marcos Gestal Pose & Daniel Rivero Cebrian, ISBN 978-1-61520-893-7, p. 160-186, IGI Global, 2010, 26p., 2010
3. Laurentiu Ionescu, Alin Mazare, Gheorghe Serban, *Intrinsic Evolvable Hardware Used for Fault Tolerance Systems*, Book International Journal of Organizational and Collective Intelligence , IGI Global, Vol. 3, Issue 2, Article 2, (pp.43-80), 3(2), 43-80, April-June 2012, DOI: 10.4018/joci.2012040102, DOI:10.4018/IJOCI, ISSN: 1947-9344, EISSN: 1947-9352, 2012, 2012, (TC\_9\_2012\_DECIE, TC\_9\_2012\_DECIE)
4. Florentina Magda Enescu, Nicu Bizon, Adrian Onu, Maria Simona Raboaca, Phatiphat Thounthong, Alin Gheorghita Mazare, Gheorghe Serban, *Implementing Blockchain Technology in Irrigation Systems That Integrate Photovoltaic Energy Generation Systems*, Book: Efficiency and Sustainability of the Distributed Renewable Hybrid Power Systems Based on the Energy Internet, Blockchain Technology and Smart Contracts Editor: Nicu Bizon Editorial Office: MDPI ISBN 978-3-0365-1834-3 (Hbk) ISBN 978-3-0365-1833-6 (PDF) ISBN/ISSN: 978-3-0365-1834-3, 2021, (TC\_8\_2021\_DECIE)

**B2. Cărți și capitole în cărți de specialitate naționale ca autor (cu ISBN intern)**

1. E. Sofron, Gheorghe Șerban, Șt. Oprea, Fl. Bălțeanu, I. Gheorghe, *SPICE - Simularea circuitelor analogice. O nouă eră în inginerie*, Editura Militară, București, ISBN 973 - 32 - 0379 – 3, 1994, 1994
2. Alexandru Șerbănescu, Gheorghe Șerban, Gabriel Iana, Teofil Orian, *Prelucrarea digitală a semnalelor Aplicații și implementări in FPGA*, Editura Universității din Pitești, 2009, ISBN 978-973-690-828-6, 507p., 2009
3. Gabriel Iana, Gheorghe Șerban, Laurențiu Ionescu, Petre Angheliescu, *Programarea cu limbaje de descriere hardware – Aplicații în limbajul VHDL*, Editura Matrix ROM, 2009, ISBN 978-973-755-562-5, 2009
4. Laurențiu Ionescu, Alin Mazăre, Gheorghe Șerban, Gabriel Iana, Petre Angheliescu, *Aplicații cu sisteme in timp real*, Editura Matrix ROM, București, 2010, ISBN 978-973-755-611-0, 200p, 2010
5. Gheorghe Șerban, Marian Răducu, Ionel Bostan, Alin Mazăre, Ioan Liță, Alexandru Ene, Luminița Mirela Constantinescu, Valeriu Ionescu, Adrian Zafiu, Daniel, Alexandru Vișan, Constantin Stoica, Mariana Iorgulescu, *Intrebări de verificare a cunostintelor pentru finalizarea studiilor*, 194 pg. , e-ISBN: 978-606-560-383-7, Ed. Universitatii din Pitesti, Pitesti, 2014, 2014, (TC\_6\_2014\_DECIE, TC\_6\_2014\_DECIE)

**B5. Manuale didactice, suport de curs**

1. E. Sofron, Gheorghe Șerban, Șt. Oprea, Fl. Bălțeanu, I. Gheorghe, *SPICE: Un ghid pentru simularea circuitelor electronice*, Editura Universității din Pitești, 1992, 1992
2. Gheorghe Șerban, *Sisteme electronice programabile*, Editura Universității din Pitesti, 1998, 1998

3. Gheorghe Șerban, *Microprocesoare*, Editura Universității din Pitesti, 1998, 1998
4. Gheorghe Serban, *Arhitectura microprocesoarelor*, Suport de curs, format electronic, Universitatea din Pitesti, 2021
5. Gheorghe Serban, *Microprocesoare si limbaje de asamblare*, Suport de curs, format electronic, Universitatea din Pitesti, 2021
6. Gheorghe Serban, *Structura si organizarea calculatoarelor*, Suport de curs, format electronic, Universitatea din Pitesti, 2021
7. Gheorghe Serban, *Proiectarea cu microprocesoare*, Suport de curs, format electronic, Universitatea din Pitesti, 2021
8. Gheorghe Serban, *Microprocesoare si microcontrolere*, Suport de curs, format electronic, Universitatea din Pitesti, 2021
9. Gheorghe Serban, *Calculatoare numerice*, Suport de curs, format electronic, Universitatea din Pitesti, 2021

### C. Lucrări (articole) ISI / BDI publicate în perioada 1985 - 2022

#### C1. Articole în reviste cotate ISI Thomson Reuters

1. Gheorghe Serban, Laurentiu Ionescu, Alin Mazare, *The possibility of optimisation for power supply consumption using evolvable power regulator*, Revue Roumaine des Sciences Techniques-Serie Electrotechnique et Energetique, Vol. 57, Issue 2, pp. 222-231, EDITURA ACAD ROMANE, 2012, ISSN: 0035-4066, WOSUID: WOS:000305202600012, FI 1,114 (2017), 2012, (TC\_6\_2012\_DECIE)
2. Bizon Nicu, Mazare Alin Gheorghita, Ionescu Laurentiu Mihai, Thounthong Phatiphat, Kurt Erol, Oproescu Mihai, Serban Gheorghe, Lita Ioan, *Better Fuel Economy by Optimizing Airflow of the Fuel Cell Hybrid Power Systems Using Fuel Flow-Based Load-Following Control*, ENERGIES, Volume: 12, Issue: 14, Article Number: 2792, Published: JUL 2 2019 DOI: 10.3390/en12142792, ISSN: 1996-1073, FI. 2018: 2,707, 2019, (TC\_9\_2019\_DECIE)
3. Enescu, FM (Enescu, Florentina Magda)[ 1 ] ; Bizon, N (Bizon, Nicu)[ 1,2,3 ] ; Onu, A (Onu, Adrian)[ 4 ] ; Raboaca, MS (Raboaca, Maria Simona)[ 2 ] ; Thounthong, P (Thounthong, Phatiphat)[ 5 ] ; Mazare, AG (Mazare, Alin Gheorghita)[ 1 ] ; Serban, G (Serba, *Implementing Blockchain Technology in Irrigation Systems That Integrate Photovoltaic Energy Generation Systems*, SUSTAINABILITY Volume: 12 Issue: 4 Pages: 1540-1540, Article Number: 1540 Published: FEB 2 2020 FI\_2020 =2,592CCC:0005224602002581SI WOS – zona galbenă, 2020, (TC\_11\_2020\_DECIE)

#### C2. Articole în volume indexate ISI Proceedings

1. Ioan Lita, Emil Sofron, Gheorghe Serban, *A method of noise reduction in data acquisition systems from sensors*, 24th International Spring Seminar on Electronics Technology: Concurrent Engineering in Electronic Packaging, Conference Proceedings Pages: 253-257 Published: 2001 WOSUID: WOS:000170861900057, 2001
2. E. Sofron, Gh. Șerban, I. Bostan, L. Ionescu, V. Ionescu, A. Mazare, *Neuron implementation using reconfigurable hardware*, Proceedings of the International Conference on Optimisation of Electrical and Electronic Equipment, OPTIM 2004, vol.III: Industrial Automation and Control, pp. 182-192, ISBN 978-973-635-288-1 WOSUID: WOS:000255192200033, 2004
3. Sofron, E., Șerban, G., Sandu, F., Iana, G., Serbanescu, A., *Hardware implementation of a sigma-delta modulator*, Proceedings of the International Conference on Optimisation of Electrical and Electronic Equipment, OPTIM 2004, Vol. 4: Applied Electronics, Electrical Engineering Education, pp. 33-38, ISBN 978-973-635-289-8 WOSUID: WOS:000255387700010, 2004
4. Daniel Vișan, Ioan Liță, Gheorghe Șerban, Bogdan Cioc, *Method for Analysis of Lossy Transmission Lines*, Proceedings IEEE International Spring Seminar on Electronics Technology 27th ISSE 2004, Sofia, Bulgaria, May 13-16, 2004, ISBN 0-7803-8422-9, pp.439-443, [http://ieeexplore.ieee.org/xpl/freeabs\\_all.jsp?arnumber=1490851](http://ieeexplore.ieee.org/xpl/freeabs_all.jsp?arnumber=1490851) WOSUID: WOS:000230638000091, 2004
5. Anton C., Ionescu L., Tutanescu I., Mazare A., Serban G., *FPGA-Implemented CRC Algorithm*, 2009 IEEE International Conference on Applied Electronics, AE2009, ISSN 1803-7232, ISBN 978-80-7043-781-0, pp. 25-29, Pilsen, Czech Republic, [http://ieeexplore.ieee.org/xpl/freeabs\\_all.jsp?arnumber=5289268](http://ieeexplore.ieee.org/xpl/freeabs_all.jsp?arnumber=5289268) WOSUID: WOS:000273977300004, 2009
6. M. Chita, G. Serban, L. Ionescu, C. Ghita, A. Mazare, *Optoelectronic system with optical fibres sensor for ionic concentration measurement of ions from tampon solutions*, Annals of DAAAM for 2009 &

Proceedings of the 20th International DAAAM Symposium, Volume 20, No. 1, ISSN 1726-9679, ISBN 978-3-901509-70-4, Viena, Austria, 2009 WOSUID: WOS:000282335600443, 2009

7. Serban, G., Anton, I., Ionescu, L., Mazăre, A., *An implementation of BCH codes in a FPGA*, Proceedings of 2010 International Conference on Applied Electronics (AE), Pilsen, Czech Republic, ISSN 1803-7232, Print ISBN 978-80-7043-865-7, INSPEC Accession Number 11580675, [http://ieeexplore.ieee.org/xpl/freeabs\\_all.jsp?arnumber=5599616](http://ieeexplore.ieee.org/xpl/freeabs_all.jsp?arnumber=5599616), WOSUID: WOS:000305765800063, 2010

8. Florin-Marian Birleanu, Cornel Ioana, Alexandru Serbanescu, Gheorghe Șerban, Emil Sofron, *Estimation of thermo-hydrodynamic parameters in energy production systems using non-stationary signal processing*, Forty-Fourth Asilomar Conference on Signals, Systems and Computers, nov. 2010, USA/Monterey, CA, ISBN 978-1-4244-9720-1, ISSN 1058-6393, pp. 1353 – 1356, [http://ieeexplore.ieee.org/xpl/freeabs\\_all.jsp?arnumber=5757753](http://ieeexplore.ieee.org/xpl/freeabs_all.jsp?arnumber=5757753) WOSUID: WOS:000305886000252, 2010

9. V. Iana, G. Șerban, P. Angheliescu, L. Ionescu, *Optimization of Sigma-Delta Modulator Based on Artificial Immune Algorithms*, 12th International Conference on Optimization of Electrical and Electronic Equipment, OPTIM 2010, Brasov, 20-22 Mai 2010, pp. 1010 – 1015, ISSN 1842-0133, ISBN 978-1-4244-7019-8, [http://ieeexplore.ieee.org/xpl/freeabs\\_all.jsp?arnumber=5510362](http://ieeexplore.ieee.org/xpl/freeabs_all.jsp?arnumber=5510362) WOSUID: WOS:000291967300150, 2010

10. Laurentiu Mihai Ionescu; Alin Gheorghita Mazare; Gheorghe Serban, *VLSI implementation of an associative content addressable memory based on Hopfield network model*, CAS 2010 Proceedings (International Semiconductor Conference) Year: 2010, Volume: 02 Pages: 499 - 502, ISBN: 978-1-4244-5781-6; ISSN: 1545-827X, Vol. 1, Section IC&D, DOI: 10.1109/SMICND.2010.5650469, EID: 2-s2.0-78651095773, <http://www.scopus.com/inward/record.url?eid=2-s2.0-78651095773&partnerID=MN8TO...>, IEEEExplore, WOSUID: WOS:000371396100105, 2010

11. Serban G., Anton C., Ionescu L., Tutanescu I., Mazare A., *Implementation of a 64-bit hybrid SR-ARQ algorithm on FPGA*, Proceedings of 2011 International Conference on Applied Electronics, ISBN 978-80-7043-987-6, ISSN 1803-7232, IEEE Catalog Number CFP1169A-PRT, p. 337-340, Pilsen, 7-8 September 2011, [http://ieeexplore.ieee.org/xpl/freeabs\\_all.jsp?arnumber=6049046](http://ieeexplore.ieee.org/xpl/freeabs_all.jsp?arnumber=6049046) WOSUID: WOS:000305136600074, 2011

12. Florin-Marian Birleanu, Cornel Ioana, Cedric Gervaise, Jocelyn Chanussot, Alexandru Serbanescu, Gheorghe Șerban, *On the Recurrence Plot Analysis method behaviour under scaling transform*, 2011 IEEE Statistical Signal Processing Workshop (SSP), june 2011, Nice, France, ISBN 978-1-4577-0568-7, pp. 789 – 792, [http://ieeexplore.ieee.org/xpl/mostRecentIssue.jsp?asf\\_arn=null&asf\\_iid=null&asf\\_pun=5959910&asf\\_in=null&asf\\_rpp=null&asf\\_iv=null&asf\\_sp=null&asf\\_pn=21](http://ieeexplore.ieee.org/xpl/mostRecentIssue.jsp?asf_arn=null&asf_iid=null&asf_pun=5959910&asf_in=null&asf_rpp=null&asf_iv=null&asf_sp=null&asf_pn=21) WOSUID: WOS:000298377500196, 2011

13. Gabriel Iana, Petre Angheliescu, Gheorghe Șerban, *RSA Encryption Algorithm Implemented on FPGA*, 2011 IEEE International Conference on Applied Electronics, ISBN 978-80-7043-987-6, Print ISBN 978-1-4577-0315-7, ISSN 1803 – 7232, IEEE Catalog Number: CFP1169A-PRT, pag. 177 – 180, Pilsen, Czech Republic, 07 – 08 September 2011, [http://ieeexplore.ieee.org/xpl/freeabs\\_all.jsp?arnumber=6049062](http://ieeexplore.ieee.org/xpl/freeabs_all.jsp?arnumber=6049062) WOSUID: WOS:000305136600041, 2011

14. Ionescu L., Mazare A., Șerban G., Barbu V., Anton C., *FPGA implementation of an associative content addressable memory*, 2011 IEEE International Conference on Applied Electronics, ISBN 978-80-7043-987-6, Print ISBN 978-1-4577-0315-7, ISSN 1803 – 7232, IEEE Catalog Number: CFP1169A-PRT, p. 181-184, Pilsen, Czech Republic, 7-8 september 2011, [http://ieeexplore.ieee.org/xpl/freeabs\\_all.jsp?arnumber=6049113](http://ieeexplore.ieee.org/xpl/freeabs_all.jsp?arnumber=6049113) WOSUID: WOS:000305136600042, 2011

15. Mazare, A., Ionescu, L., Serban, G., Barbu, V., *Evolvable hardware with Boolean functions network implementation*, IEEE International Conference on Applied Electronics, ISBN 978-80-7043-987-6, Print ISBN 978-1-4577-0315-7, ISSN 1803 – 7232, IEEE Catalog Number: CFP1169A-PRT, p. 255-260, Pilsen, Czech Republic, 7-8 september 2011, [http://ieeexplore.ieee.org/xpl/freeabs\\_all.jsp?arnumber=6049101](http://ieeexplore.ieee.org/xpl/freeabs_all.jsp?arnumber=6049101) WOSUID: WOS:000305136600058, 2011

16. Gheorghe Serban, Constantin Anton, Laurentiu Mihai Ionescu, Alin Mazare, *H-ARQ System for real time Error Detection and Correction based on Hardware Associative Memories*, International Conference “Applied Electronics”, Pilsen 5-7 September 2012, pp. 249-252, ISSN 1803-7232, ISBN 978-80-7043-781-0, IEEE Catalog Number CFP0969A-PRT, University of West Bohemia, Pilsen, Czech Republic, 2012, Web of Knowledge, IEEE Xplore, WOSUID: WOS:000329181800046, 2012, (TC\_6\_2012\_DECIE, TC\_6\_2012\_DECIE)

17. Laurentiu Ionescu, Constantin Anton, Ion Tutanescu, Alin Mazare, Gheorghe Serban, *Error correction and detection system based on Hopfield networks*, 2012 International Conference For Internet Technology And Secured Transactions, pp. 541-544, 10-12 Dec. 2012, London, ISBN 978-1-4673-5325-0 IEEE Xplore  
([http://ieeexplore.ieee.org/xpl/login.jsp?tp=&arnumber=6470868&url=http%3A%2F%2Fieeexplore.ieee.org%2Fxppls%2Fabs\\_all.jsp%3Farnumber%3D6470868](http://ieeexplore.ieee.org/xpl/login.jsp?tp=&arnumber=6470868&url=http%3A%2F%2Fieeexplore.ieee.org%2Fxppls%2Fabs_all.jsp%3Farnumber%3D6470868))WOSUID: WOS:000317120000087 , 2012, (TC\_6\_2012\_DECIE, TC\_6\_2012\_DECIE)
18. Constantin Anton, Laurentiu Ionescu, Ion Tutanescu, Alin Mazare, Gheorghe Serban, Adriana Oprea, *An Error Detection and Correction System based on Associative Memories*, 2012 20th Telecommunications Forum (TELFOR), pp.568 -571, 20-22 Nov. 2012, Belgrade, ISBN 978-1-4673-2983-5, IEEE Xplore  
[http://ieeexplore.ieee.org/xpl/login.jsp?tp=&arnumber=6419274&url=http%3A%2F%2Fieeexplore.ieee.org%2Fxppls%2Fabs\\_all.jsp%3Farnumber%3D6419274](http://ieeexplore.ieee.org/xpl/login.jsp?tp=&arnumber=6419274&url=http%3A%2F%2Fieeexplore.ieee.org%2Fxppls%2Fabs_all.jsp%3Farnumber%3D6419274))WOSUID: WOS:000316626800139, 2012, (TC\_9\_2012\_DECIE, TC\_9\_2012\_DECIE)
19. Vlad Barbu, Laurentiu Mihai Ionescu, Alin Gheorghita Mazare, Gheorghe Serban, *Evolvable hardware used in heliostat field tracker system control*, International Conference “Applied Electronics”, Pilsen 10-12 September 2013, pp. 29-33, ISSN 1803-7232, ISBN 978-80-261-0166-6, IEEE Catalog Number CFP0969A-PRT, University of West Bohemia, Pilsen, Czech Republic, 2013, Web of Knowledge, IEEE Xplore(<http://ieeexplore.ieee.org/xpl/articleDetails.jsp?arnumber=6636472>)WOSUID: WOS:000343819700007, 2013, (TC\_6\_2013\_DECIE, TC\_6\_2013\_DECIE)
20. Anton C., Ionescu L. Mazăre A., Tutănescu I., Serban G., *Errors correction with optimised Hopfield neural networks*, Telecommunications Forum (TELFOR), 2013 21st, 25-28 nov. 2013, ISBN 978-1-4799-1419-7 , pp. 393 - 396, DOI: 10.1109/TELFOR.2013.6716252, IEEEExplore, WOSUID: WOS:000349857500093 , 2013, (TC\_6\_2013\_DECIE, TC\_6\_2013\_DECIE)
21. Anton, C., Ionescu, L. , Tutanescu, I. , Mazare, A. , Serban, G., *Error detection and correction using LDPC in parallel Hopfield networks*, 4th International Symposium on Electrical and Electronics Engineering (ISEEE), 2013, 11-13 Oct. 2013, INSPEC Accession Number:13936656 , 10.1109/ISEEE.2013.6674380WOSUID: WOS:000335153400074, 2013, (TC\_9\_2013\_DECIE, TC\_9\_2013\_DECIE)
22. Mazare, A.; Ionescu, L.; Serban, G, *FPGA-based system for data acquisition and remote communication*, 2014 Ieee 20th International Symposium for Design and Technology in Electronic Packaging (Siitme), Pages: 169-174, Published: 2014WOSUID: WOS:000358258300030, 2014, (TC\_2\_2014\_DECIE)
23. A. Mazare, L.M. Ionescu, A.I. Lita, G. Serban, *Mobile system with real time route learning using Hardware Artificial Neural Network*, Proceedings of the 2015 7th International Conference on Electronics, Computers and Artificial Intelligence Pages: P45-P48 Published: 2015WOSUID: WOS:000370971100115, 2015, (TC\_9\_2015\_DECIE, TC\_9\_2015\_DECIE)
24. Alin Mazare; Laurentiu-Mihai Ionescu; Adrian-Ioan Lita; Gheorghe Serban, *Real Time System for Image Acquisition and Pattern Recognition Using Boolean Neural Network*, 2015 38th International Spring Seminar on Electronics Technology (ISSE) Pages: 292 - 295, DOI: 10.1109/ISSE.2015.7248008, IEEEExplore, 2015, (TC\_9\_2015\_DECIE, TC\_9\_2015\_DECIE)
25. Laurentiu-Mihai Ionescu; Alin Mazare; Adrian-Ioan Lita; Gheorghe Serban, *Fully Integrated Artificial Intelligence Solution for Real Time Route Tracking*, 2015 38th International Spring Seminar on Electronics Technology (ISSE)Pages: 536 - 540, DOI: 10.1109/ISSE.2015.724805, IEEEExplore, 2015, (TC\_7\_2015\_DECIE, TC\_7\_2015\_DECIE)
26. Adrian Ioan Lita; Laurentiu Mihai Ionescu; Alin Gheorghita Mazare; Gheorghe Serban; Ioan Lita, *Real time system for instrumental sound extraction and recognition*, 2016 39th International Spring Seminar on Electronics Technology (ISSE)Pages: 456 - 461, DOI: 10.1109/ISSE.2016.7563240, IEEEExplore, 2016, (TC\_6\_2016\_DECIE, TC\_6\_2016\_DECIE)
27. Gheorghe Serban, Gabriel Vasile Iana, Petre Anghelescu, *Fault detection of direct radiator loudspeaker systems by phase characterisation*, The 8th International Conference on Electronics, Computers and artificial Intelligence, Published: 2016, Ploiesti ROMANIA, ISSN-1843-2115 IEEE Xplore, Google Scholar, 2016, (TC\_9\_2016\_DECIE)
28. Ionescu, L. M.; Mazare, A.; Serban, G.; Ionita, S., *Real time monitoring system used in route planning for the electric vehicle*, INTERNATIONAL CONGRESS OF AUTOMOTIVE AND TRANSPORT

ENGINEERING - MOBILITY ENGINEERING AND ENVIRONMENT (CAR2017) Book Series: IOP Conference Series-Materials Science and Engineering Volume: 252 Article Number: UNSP 012095 DOI: 10.1088/1757-899X/252/1/012095 Published: 2017 Conference: 11th International Congress of Automotive and Transport Engineering - Mobility Engineering and Environment (CAR) Location: Pitesti, ROMANIA Date: NOV 08-10, 2017 Publisher IOP PUBLISHING LTD, DIRAC HOUSE, TEMPLE BACK, BRISTOL BS1 6BE, ENGLAND Accession Number: WOS:000419817200095 ISSN: 1757-8981, 2017, (TC\_11\_2017\_DECIE, TC\_11\_2017\_DECIE)

29. L.M. Ionescu, A. Mazăre, A.I. Liță, D. Visan, G. Serban, N. Belu, A. Sanmarghitan, T. Goeller, S. Balauta, *Current consumption monitoring and analysis system for energy management improvement in an industrial complex*, Published in: Design and Technology in Electronic Packaging (SIITME), 2017 IEEE 23rd International Symposium for Date of Conference: 26-29 Oct. 2017 Pages: 286 - 291 Date Added to IEEE Xplore: 18 January 2018 ISBN Information: Electronic ISBN: 978-1-5386-1626-0 USB ISBN: 978-1-5386-1625-3 Print on Demand(PoD) ISBN: 978-1-5386-1627-7 DOI: 10.1109/SIITME.2017.8259909 Publisher: IEEE Conference Location: Constanta, Romania, Romania, 2017, (TC\_10\_2017\_DECIE)

30. L. M. Ionescu, A. Mazare, M. Oproescu, I. Lita, G. Serban, B. Nadia, *Electricity consumption measurement system for detecting losses occurring in power transmission networks*, Published in: Electronics, Computers and Artificial Intelligence (ECAI), 2017 9th International Conference on Date of Conference: 29 June-1 July 2017 Date Added to IEEE Xplore: 07 December 2017 ISBN Information: Electronic ISBN: 978-1-5090-6458-8 Print ISBN: 978-1-5090-6457-1 USB ISBN: 978-1-5090-6456-4 Print on Demand(PoD) ISBN: 978-1-5090-6459-5 INSPEC Accession Number: 17415558 DOI: 10.1109/ECAI.2017.8166469 Publisher: IEEE Conference Location: Targoviste, Romania, 2017, (TC\_13\_2017\_DECIE)

31. Alin Gh Mazare, Laurentiu M Ionescu, Daniel Visan, Adrian I Lita, Gheorghe Serban, *Embedded system for real time analysis of thermal images for prevention of water stress on plants*, 2018 41st International Spring Seminar on Electronics Technology (ISSE) , Conference Location: Zlatibor, Serbia, Publisher: IEEE, Electronic ISBN: 978-1-5386-5731-7 , Date of Conference: 16-20 May 2018, 2018, (TC\_25\_2018\_DECIE)

32. Laurentiu Mihai Ionescu, Alin Gheorghita Mazare, Gheorghe Serban, Daniel Visan, Adrian Ioan Lita, *Intelligent command of an underground irrigation and fertilization system*, 2018 IEEE 24th International Symposium for Design and Technology in Electronic Packaging (SIITME), Date of Conference: 25-28 Oct. 2018, Electronic ISBN: 978-1-5386-5577-1, Print on Demand(PoD) ISBN: 978-1-5386-5578-8, 2018, (TC\_25\_2018\_DECIE)

33. LM Ionescu, AG Mazare, D Visan, AI Lita, I Lita, G Serban, *Embedded Image Analysis System Based on B-ANN*, 2020 43rd International Spring Seminar on Electronics Technology (ISSE), 1-6, 2020, (TC\_11\_2020\_DECIE)

### **C3. Articole în reviste și volumele unor manifestări științifice indexate în alte baze de date internaționale**

1. Cristian-Iulian RÎNCU Vasile-Gabriel IANA Gheorghe ȘERBAN Ion TUTĂNESCU, *HARDWARE IMPLEMENTATION OF A TENT MAP-BASED CHAOTIC GENERATOR*, Proceedings of ELECO`2007 5TH International conference on Electrical and Electronics Engineering, Bursa, Turkey, 2007, Google Scholar, 2007

2. Laurentiu Mihai Ionescu; Alin Gheorghita Mazare; Gheorghe Serban; Ionel Bostan, *Step down evolvable power regulator*, Scientific Bulletin, Series "Electronics and Computers Science", vol. 8, nr.2, 2008, pp.93-98, ISSN 1453-1119, Copernicus, B+, 2008

3. Constantin Anton; Laurentiu Ionescu; Ion Tutanescu; Alin Mazare; Gheorghe Serban, *Detecting errors in digital communications with CRC codes implemented with FPGA*, The 4th International Conference for Internet Technology and Secured Transactions, ICITST-2009, ISBN 0-9546628-2-2, November 9-12, 2009, London, UK.p.1-6 Pages: 1 - 6, DOI: 10.1109/ICITST.2009.5402630, EID: 2-s2.0-77950337110, <http://www.scopus.com/inward/record.url?eid=2-s2.0-77950337110&partnerID=MN8TO...>, IEEEExplore, 2009

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20. Gheorghe Serban, Florentina Magda Enescu, *Dynamic Web for Efficient Educational Management*, The 11th International Conference on Electronics, Computers and Artificial Intelligence, ECAI 2019, ISBN: 978-1-7281-1624-2, ISSN: 2378-7147, Pitesti, 27 June – 29 June 2019, 2019, (TC\_12\_2019\_DECIE)

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#### **E. Brevete de invenție obținute în întreaga activitate**

1. Gavrioloia, G.; Serban, G.; Iana, V. G., *APPARATUS AND METHOD OF HIGH RESOLUTION EVALUATION OF TEMPERATURE DISTRIBUTION OVER THE SURFACE OF HUMAN BODY*, , 2011

2. Gheorghe Serban, *Interfață serie paralel microprogramată*, Ministerul Energiei Electrice, Certificat de inovator, nr.3462/1986

#### **F. Granturi / proiecte de cercetare în perioada 1985 - 2022**

##### **F1. Granturi / proiecte câștigate prin competiție internațională**

1. *Cost-Efficient Data Collection for Smart Grid and Revenue Assurance*, , Cost-Efficient Data Collection for Smart Grid and Revenue Assurance (Optimizarea costurilor la colectarea datelor de la contoarele inteligente si metode de imbunatatire a profitului la transportul energiei electrice) CERA-SG, Project Outline Application ID: 77594, Project plan – ERA-Net Smart Grids Plus, Total 2016 = 39.627,00 Euro (178.321,50 Lei), Total 2017 = 83.686,5 lei, Total 2018 = 83686 lei, 2016, 0.00, (TC\_6\_2016\_DECIE)

##### **F2. Granturi / proiecte câștigate prin competiție națională**

1. , *MODELAREA, SIMULAREA ȘI IMPLEMENTAREA DETERMINISTĂ ȘI NEURO - FUZZY A SEMNALELOR; APLICAȚII ÎN COMUNICAȚII ȘI CONTROLERE DE PROCES*, Grant CNCISIS19961996 - 1997, 1996

2. Gheorghe Serban, *SISTEM DE ACHIZIȚIE ÎN TIMP REAL AL PARAMETRIILOR DIN INSTALAȚIILE NUCLEARE*, Program INFOSOC Contract nr. 29/7 nov. 2001, 2001

3. , *ANALIZA, ORGANIZAREA ȘI ÎMBUNĂTĂȚIREA FUNCȚIONĂRII REȚELEI EDUCATIONALE DE CALCULATOARE CONECTATE LA INTERNET*, Program INFOSOC – proiect nr. 26/20012001 - 2003, 2001

4. , *DEZVOLTAREA SISTEMULUI DE MANAGEMENT AL CALITATII IN INVATAMANTUL SUPERIOR*, Program CALIST 2002, Contract. Nr 3415/20022002 - 2004, 2002
5. , *Microtraductoare de accelerație pentru aplicații auto (MITRAC)*, PNCDI programul MATNANTECH, 2001, Contract. Nr 34/2002, 2002
6. , *Organism national de certificare a sistemelor calitatii si de personal în învățământul superior*, PNCDI, Program INFRAS, Contract Nr.135/11.10.2002, 2002
7. Gheorghe Serban, *CRONOTAHOGRAF ELECTRONIC DIGITAL PENTRU AUTOVEHICULE TRANSPORT MARFA SI CALATORI*, Program AMTRANS Contract 8C1/2004 (Proiect prioritar), 2004
8. , *SISTEM DE MASURA ACCELEROMETRIC AVANSAT PENTRU INVESTIGARI ATMOSFERICE CU SONDE PLANETARE*, Program AEROSPATIAL – proiect nr. 117/20042004 - 2006 , 2004
9. Gheorghe Serban, *Principii de extindere si optimizare a performantelor laserilor cu mediu activ solid*, Program CEEEX 2005 Contract 05-D11-27 - LASTEX, 2005
10. , *PLATFORMA MULTIMEDIA PENTUR IMPLEMENTAREA TELESERVICIILOR MEDICALE COMPLEXE & TELMES*, Program CEEEX 2005 – proiect nr.1032/2005Perioada 2005 - 2007, 2005
11. , *SISTEM INTEGRAT PENTRU UTILIZATORUL MOBIL – SIUM*, Program CEEEX 2005 – proiect nr. 1234/20052005 - 2008, 2005
12. , *Identificarea amprentei vocale ca suport in combaterea terorismului (AVCT)*, PNCDI Program Securitate S 18/20052005 - 2007, 2005
13. Gheorghe Serban, *SOLUȚII AVANSATE DE INFORMARE ȘI GHIDARE PENTRU CONDUCĂTORII AUTO ȘI CĂLĂTORI UTILIZÂND HĂRȚI DIGITALE*, Program CEEEX 2006 Contract X2C25 – SAIGHID, 2006
14. , *Dispozitive cu metastructuri pentru procesarea complexa a semnalelor radio in rețelele de comunicatii mobile si prin sateliti*, METAPRO, Perioada de derulare: 27.07.2006 – 2008, Program CEEEX, Proiect P-CD, Director/Responsabil de proiect: Gheorghe Gavriloaia, Universitatea din Pitesti, Contract nr. 58/2006, 2006
15. , *Sistem integrat de conversie a energiei din surse regenerabile*, AMTRANS, contractant: Institutul National de Cercetare-Dezvoltare pentru Tehnologii Criogenice si Izotopice - ICSI Rm. Valcea, nr. 2354/2006, finantator: MEdC, CEEEX nr. 226, Valoare: 65000 RON, 2006-2008, 2006
16. , *Algoritmi inteligenti pentru controlul eficient al unui sistem inverter alimentat de la o pila de combustie*, Grant CNCISIS nr. 570/2006; 2006-2008Valoare: 69000 RON, 2006
17. , *Ansamblu sistem radiant & impuls purtator pentru comunicatii de banda ultra-larga la bordul navelor maritime*, PNCDI II Programul 4 Parteneriate in domeniile prioritare 2008 – proiect nr. 12085/20082008 - 2011, 2008
18. , *Sistem de acces wireless hibrid cu adresare unica (SAWHAU)*, PNCDI II Parteneriate proiect nr. 12126 / 01.10.20082008 - 2011, 2008
19. , *Algoritmi pentru prelucrarea fuzzy – haotica a imaginilor de la un analizor multispectral utilizat in depistarea precoce a cancerului*, PNCDI II Parteneriate proiect nr. 12096 / 01.10.20082008 - 2011 , 2008
20. , *Rețea virtuala IT&C pentru unitati de invatamant si cercetare dispersate geografic - CERVIT*, Program CEEEX 2007, Contract Nr. 2-097/20072008 - 2011 , 2008
21. , *Creșterea securității rețelelor de comunicații prin utilizarea tehnologiilor de identificare biometrică*, Planul sectorial de cercetare-dezvoltare al MCTI Contract nr. 604/289-16.06.20082008 - 2010 , 2008
22. , *Metode si algoritmi noi de prelucrare a imaginilor de la senzori ortogonali pentru diagnosticarea precoce a cancerului tiroidian*, PNCDI II Program Idei Proiect nr. 1178/20092009 - 2012, 2009
23. , *Studiu privind folosirea rețelelor de sateliți pentru comunicații mobile - SATCOM*, Planul sectorial de cercetare-dezvoltare al MCTI Contract nr. 20-1 MCTI 2009 - 2010 , 2009
24. , *Impactul noilor tehnici si tehnologii din domeniul wireless asupra structurii și evoluției Tabelului Național de Atribuire a Benzilor de Frecvență – TNABF*, Planul sectorial de cercetare-dezvoltare al MCTI Contract nr. 21-1 MCTI2009 - 2010 , 2009
25. F. Birleanu, G. Serban, A. Iordachescu, *Recognition and classification of surfaces and structures. Evaluation and creation of specific algorithms in order to be integrated into industrial image processing systems*, Beneficiar: S.C. DPR Draexlmaier Procese de Productie Romania S.R.L.(Romania),

Contract: 5/21.01.2014 (DPR); 4/24.01.2014 (UPIT) / Durata:februarie 2014 - decembrie 2014 (valoarea UPIT=20744 euro sau 92315 lei), 2014, (TC\_13\_2014\_DECIE, TC\_13\_2014\_DECIE)

26. G. Iana, P. Anghelescu, G. Serban, *Test of speaker system regarding feasibility, quality and cost. Theoretical evaluation & documentation of concept*, Finanțare: S.C. DPR Draexlmaier Procese de Productie Romania SRLBeneficiar S.C. DPR Draexlmaier Procese de Productie Romania SRLContract nr. : 6/21.01.2014, Nr. Inreg. 5/24.01.2014Valoare: 97492.00 lei, 2014, (TC\_15\_2014\_DECIE, TC\_15\_2014\_DECIE)

27. SOARE LILIANA CRISTINA, MAZARE ALIN GHEORGHITA, IONESCU LAURENTIU MIHAI, BIZON NICU, LITA IOAN, SERBAN GHEORGHE, OPROESCU MIHAI, ANGHELESCU PETRE, VISAN DANIEL ALEXANDRU, BELU NADIA, ANGHEL DANIEL CONSTANTIN, TOPALA CARMEN MIHAELA, SUTAN, *PN-III-P1-1.2-PCCDI-2017-0332 "Creșterea capacității instituționale de cercetare bioeconomică pentru exploatarea inovatoare a resurselor vegetale autohtone, în vederea obținerii de produse horticole cu valoare adăugată ridicată" – BIOHORTINOV* /, Cod: PN-III-P1-1.2-PCCDI-2017, beneficiar: UPIT, anul: 2018, domeniul stiintific: Bioeconomie, valoare: 1533000.00, 2018, (TC\_25\_2018\_DECIE)

### **F3. Contracte de cercetare cu mediul socio-economic**

1. G. Serban, *Sistem cu microcontroler pentru achiziția și prelucrarea semnalelor de la traductoarele de radiații (partea 1 și partea 2)*, Beneficiar RAAN – Sucursala de Cercetări Nucleare PiteștiPerioada 1999 - 2001Val. Contract 160.000.000 lei vechi, respectiv cca 40.000 lei noi (1 USD = 15.000 lei lechi in 1999), 1999

**Data: 20.09.2022**

**Cadrul didactic SERBAN GHEORGHE**  
**Semnătura**