

LISTA DE LUCRĂRI
Prof.univ.dr.ing. SERBAN GHEORGHE

B. Cărți și capitole în cărți publicate în perioada 1985 - 2018

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)

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 în 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 în 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, Universitatea din Pitesti, 2016, 2016
5. Gheorghe Serban, *Microprocesoare si limbaje de asamblare*, Suport de curs, Universitatea din Pitesti, 2016, 2016
6. Gheorghe Serban, *Structura si organizarea calculatoarelor*, Suport de curs, Universitatea din Pitesti, 2016, 2016
7. Gheorghe Serban, *Proiectarea cu microprocesoare*, Suport de curs, Universitatea din Pitesti, 2016, 2016

8. Gheorghe Serban, *Microprocesoare si microcontrolere*, Suport de curs, Universitatea din Pitesti, 2016, 2016
9. Gheorghe Serban, *Calculatoare numerice*, Suport de curs, Universitatea din Pitesti, 2016, 2016

C. Lucrări (articole) ISI / BDI publicate în perioada 1985 - 2018

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 1,036 (2016), 2012, (TC_9_2012_DECIE, TC_9_2012_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. Şerban, 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., Şerban, 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 Vişan, Ioan Liţă, Gheorghe Şerban, 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 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 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., Mazare, 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, WOSUID: WOS:000305765800063, 2010
8. Florin-Marian Birleanu, Cornel Ioana, Alexandru Serbanescu, Gheorghe Şerban, 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 WOSUID: WOS:000305886000252, 2010
9. V. Iana, G. Şerban, 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 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-

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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=6049046WOSUID: WOS:000305136600074, 2011

12. Florin-Marian Birleanu, Cornel Ioana, Cedric Gervaise, Jocelyn Chanussot, Alexandru Serbanescu, Gheorghe Şerban, *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=21WOSUID: WOS:000298377500196, 2011

13. Gabriel Iana, Petre Angheliescu, Gheorghe Şerban, *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=6049062WOSUID: WOS:000305136600041, 2011

14. Ionescu L., Mazare A., Şerban 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=6049113WOSUID: 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=6049101WOSUID: 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 Conferece 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%2Fxpls%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%2Fxpls%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, IEEExplore, 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, 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, IEEExplore, 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, IEEExplore, 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, IEEExplore, 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, 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 - 291Date 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 onDate of Conference: 29 June-1 July 2017Date 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. A. Mazare, L. M. Ionescu, D. Visan, A. Lita, G. Serban *Embedded system for real time analysis of thermal images for prevention of water stress on plants*, Published in: Electronics Book Series: International Spring Seminar on Electronics Technology ISSE Published: 2018, ISBN: 978-1-5386-5731-7; 978-3-319-73847-5 ISSN: 2161-2536, WOS:000449866600001, 41st International Spring Seminar on Electronics Technology (ISSE), MAY 16-20, 2018, Zlatibor, Serbia (TC_25_2018_DECIE)

32. L. M. Ionescu, A. Mazare, G. Serban, D. Visan, A. Lita, *Intelligent command of an underground irrigation and fertilization system*, Published in: International Symposium for Design and Technology in Electronic Packaging Pages: 306-309 Published: 2018 ISBN: 978-1-5386-5577-1 ISSN: 2641-287X WOS:000466960400065, 24th IEEE International Symposium on Design and Technology in Electronic Packaging (SIITME), OCT 25-28, 2018, Iasi, Romania (TC_25_2018_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

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5. L. Ionescu; C. Anton; I. Tutănescu; A. Mazăre; G. Șerban, *On a FPGA implementation of BCH Codes*, The 5-th International Conference for Internet Technology and Secured Transactions (ICITST-2010), ISBN 978-1-4244-8862-9, INSPEC Accession Number: 11706545, November 8-11, 2010, London, pp.1 - 5, EID: 2-s2.0-79951491679, <http://www.scopus.com/inward/record.url?eid=2-s2.0-79951491679&partnerID=MN8TO...>, IEEExplore, 2010

6. Gheorghe Gavriiloaia; Gheorghe Serban; Emil Sofron; M. -R. Gavriiloaia; A. -M. Ghemiogean, *Evaluation of microwave electromagnetic field absorbed by human thyroid gland*, 2010 IEEE 16th International Symposium for Design and Technology in Electronic Packaging (SIITME) Pages: 43 - 46, DOI: 10.1109/SIITME.2010.5651818, EID: 2-s2.0-78751492583, <http://www.scopus.com/inward/record.url?eid=2-s2.0-78751492583&partnerID=MN8TO...>, IEEExplore, 2010

7. Gabriel V. IANA, Petre ANGHELESCU, Neacsă TRAIAN, Gheorghe SERBAN, *Optimal Implementation of Cryptographic Algorithms on FPGA*, Scientific Bulletin, Series "Electronics and Computers Science", vol. 10, nr.2, 2010, pp.17-22, ISSN 1453-1119, Copernicus, B+, 2010

8. Laurentiu Ionescu; Constantin Anton; Ion Tutanescu; Alin Mazare; Gheorghe Serban, *Reed-Muller decoder with associative memories*, 2011 International Conference for Internet Technology and Secured Transactions Pages: 274 - 277, ISBN 978-1-908320-00-1 IEEE, 11-24 december 2011, Abu Dhabi, United Arab Emirates, 2011 EID: 2-s2.0-84857479837, <http://www.scopus.com/inward/record.url?eid=2-s2.0-84857479837&partnerID=MN8TO...>, IEEExplore, 2011

9. Iana Vasile Gabriel, Anghelescu Petre, Serban Gheorghe, *Nonlinear Function Optimizations Based on Clonal Selective Principle for Hardware Implementation*, ICIT 2011 The 5th International

Conference on Information Technology, Published May 2011, Amman, ISBN: 9957-8583-0-0, Google Scholar, 2011

10. Laurențiu Mihai Ionescu, Constantin Anton, Ion Tutănescu, Alin Mazăre, Gheorghe Șerban, *Hardware Implementation of BCH Error Correcting Codes on a FPGA*, International Journal of Intelligent Computing Research (IJICR), Volume 2, Issue 2, p. 134-139, June 2011, Infonomics Society, ISSN 2042 4655, Google Scholar, 2011

11. Florin-Marian Birleanu; Ion Candel; Cornel Ioana; Cedric Gervaise; Alexandru Serbanescu; Gheorghe Serban, *A vector approach to transient signal processing*, 2012 11th International Conference on Information Science, Signal Processing and their Applications (ISSPA)Pages: 1141 - 1146, DOI: 10.1109/ISSPA.2012.6310462, IEEEExplore, 2012, (TC_9_2012_DECIE, TC_9_2012_DECIE)

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14. Vasile-Gabriel IANA, Petre ANGHELESCU, Gheorghe SERBAN, Cristian-Iulian RINCUI, *SHA-1 cryptographic algorithm implemented on FPGA*, Scientific Bulletin, Series "Electronics and Computers Science", vol. 12, nr. 1, 2012, pp.7-12, ISSN 1453-1119, Copernicus, B+, 2012, (TC_9_2012_DECIE, TC_9_2012_DECIE)

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17. Laurentiu Mihai Ionescu, Alin Mazare, Belu Nadia, Adrian Ioan Lita, Daniel Visan, Gheorghe Serban, *Intelligent Monitoring System To Combat Water Stress In Plant Crops*, ECAI 2018 INTERNATIONAL CONFERENCE 10th Edition, "Electronics, Computers and Artificial Intelligence28 - 30 June 2018, Iasi, ROMANIA, 2018, (TC_25_2018_DECIE)

E. Brevete de invenție obținute în întreaga activitate

1. Gh. Serban, *Interfata Serie-Paralel Programabila*, Certificat de inovator nr. 3462, Ministerul Energiei Electrice, beneficiar I.R.E. RENEL Pitești, 1987

F. Granturi / proiecte de cercetare în perioada 1985 - 2018

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, 2016, 0.00, (TC_6_2016_DECIE, 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 – director, *SISTEM DE ACHIZIȚIE IN TIMP REAL AL PARAMETRILOR DIN INSTALAȚIILE NUCLEARE*, Program INFOSOC Contract nr. 29/7 nov. 2001, 2001
3. *ANALIZA, ORGANIZAREA SI ÎMBUNĂȚIREA FUNCȚIONĂRII REȚELEI EDUCAȚIONALE 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. *Microtrductoare 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 – director coordonator, *CRNOTAHOGRAF 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 - director, *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 - director, *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 retelele de comunicatii mobile si prin sateliti, METAPRO*, Perioada de derulare: 27.07.2006 – 2008, Program CEEEX, Proiect P-CD, Director/Responsabil de proiect: Gheorghe Gavrioloaia, 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: MEEdC, 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. *Retea 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

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 Pitești Perioada 1999 - 2001 Val. Contract 160.000.000 lei vechi, respectiv cca 40.000 lei noi (1 USD = 15.000 lei lechi in 1999), 1999

2. 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 (valoare UPIT=20744 euro sau 92315 lei), 2014, (TC_13_2014_DECIE, TC_13_2014_DECIE)

3. G. Iana, P. Angheliescu, 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 SRL Beneficiar S.C. DPR Draexlmaier Procese de Productie Romania SRL Contract nr. : 6/21.01.2014, Nr. Inreg. 5/24.01.2014 Valoare: 97492.00 lei, 2014, (TC_15_2014_DECIE, TC_15_2014_DECIE)

G. Premii obținute

1. Lucrare premiata de revista Circuit Cellar din USA cu “*Distinctive Excellence*” Laurentiu Ionescu, Gheorghe Șerban, Alin Mazare, “*RTOS Kernel for AVR Family and Multitasking Applications*” – AVR 2006 Design Contest (vezi <http://www.circuitcellar.com/avr2006/winners/DE/DE.htm> , respectiv <http://www.circuitcellar.com/avr2006/winners/DE/AT2742.htm>)

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