

Lista de lucrări în domeniul de știință definit de disciplinele din postul scos la concurs

NUMELE ȘI PRENUMELE: Brassai Sándor Tihamér

I. LISTA PUBLICAȚIILOR RELEVANTE

1. **Brassai Sándor Tihamér**, Neurális hálózatok és fuzzy logika, Scientia Kiadó, Kolozsvár, 2019, ISBN 978-606-975-021-6
2. **Brassai Sándor Tihamér**, Újrakonfigurálható digitális áramkörök tervezési és tesztelési módszerei, Scientia Kiadó, Kolozsvár, 2018, ISBN 978 606 975 020-9,
3. **Brassai Sándor Tihamér**, Sisteme neuroadaptive realizate cu circuite FPGA cu Aplicații în Sistemele de Control Automat, teza de doctorat, Prog. dr. ing. DAN Ștefan, Universitatea "Transilvania" din Brașov, 2008
4. **Sandor Tihamer Brassai**, Barna Iantovics, Calin Enachescu, Optimization of Robotic Mobile Agent Navigation, Studies in Informatics and Control, ISSN 1220-1766, vol. 21 (4), pp. 403-412, 2012.
5. **Brassai Sándor Tihamér**, Bakó László, Hardware Implementation of CMAC Type Neural Network on FPGA for Command Surface Approximation, Acta Polytechnica Hungarica - Journal of Applied Sciences at Budapest Tech Hungary, Vol. 4, No. 3, 2007, ISSN 1785-8860
6. **Brassai, S.T.**, FPGA based hardware implementation of a self-organizing map, Intelligent Engineering Systems (INES), 2014 18th International Conference on, Tihany, Hungary, Publisher: IEEE, 3-5 July 2014, DOI:10.1109/INES.2014.6909349
7. **S.T. Brassai**, L. Bako, L. Losonczi, Assistive Technologies for Visually Impaired People, Acta Universitatis Sapientiae, Electrical and Mechanical Engineering, pp. 39-50, 2011.
8. **Brassai S.T.**, Iantovics B., Enăchescu C., Artificial Intelligence in the Path Planning Optimization of Mobile Agent Navigation, Procedia Economics and Finance, Elsevier, Volume 3, Pages 1-1268 (2012), ISSN 2212-5671
9. **Brassai, S.T.**, Bakó, L., Székely, I., Dan, Șt., Neural Control Based on RBF Network implemented on FPGA Proceedings of the 11th International Conference on Optimisation of Electrical and Electronic Equipment (OPTIM '08) , ISBN 978-973-131-032-9, pp. 41-46, Trasilvania University of Brasov, Brașov, 2008.
10. **Brassai Sándor Tihamér**, Hajdu Szabolcs, Tămas Tibor, Bakó László, Hardware implemented adaptive neuro fuzzy system, pp.58 - 63, Carpathian Control Conference (ICCC), 2015 16th International , Szilvásvárad, IEEE, 2015, ISBN 978-1-4799-7369-9

II. LISTA COMPLETĂ DE PUBLICAȚII, CREAȚII, INVENȚII

A. Teza de doctorat.

Sisteme neuroadaptive realizate cu circuite FPGA cu Aplicații în Sistemele de Control Automat, Prog. dr. ing. DAN Ștefan, Universitatea "Transilvania" din Brașov, 2008

B. Cărți publicate

B1. Cărți (manuale, monografii, tratate, îndrumare etc.) publicate la edituri recunoscute în străinătate.

B2. Cărți (manuale, monografii, tratate, îndrumare etc.) publicate în țară, la edituri recunoscute CNCSIS/CNCS.

1. **Brassai Sándor Tihamér**, Neurális hálózatok és fuzzy logika, Editura Scientia, Cluj-Napoca, 2019, 290 pagini, ISBN 978-606-975-021-6,
2. **Brassai Sándor Tihamér**, Újrakonfigurálható digitális áramkörök tervezési és tesztelési módszerei, Editura Scientia, Cluj-Napoca, 2018, 206 pagini, ISBN 978-606 975-020-9.

B3. Cărți (manuale, monografii, tratate, îndrumare etc.) publicate la alte edituri sau pe plan local.

1. **Brassai Sándor Tihamér**, Șerb Dorin Adrian, Calculatoare Personale, Editura, "Dimitrie Cantemir" Tîrgu Mureș, 2000
2. Horațiu Zărnescu, Mircea Dulău, Petru Moraru, Adrian Gligor, **Sándor Tihamér Brassai**, Ingineria reglării automate: Îndrumător de laborator, vol. 1: Structuri de sisteme de reglare cu regulatoare analogice , Universitatea "Petru Maior" Târgu Mureș, Târgu Mureș, 1998

B4. Cărți (manuale, monografii, tratate, îndrumare etc.) publicate pe web.

B5. Capitole de cărți publicate în străinătate

B6. Capitole de cărți publicate în țară

C. Lucrări științifice publicate

C1. Lucrări științifice publicate în reviste cotate ISI

1. Sandor Tihamer Brassai, Barna Iantovics, Calin Enachescu, Optimization of Robotic Mobile Agent Navigation, Studies in Informatics and Control, ISSN 1220-1766, vol. 21 (4), pp. 403-412, 2012., WOS IF: 1.02

C2. Lucrări științifice publicate în reviste indexate în baze de date internaționale (indicați și baza de date).

1. Tamas, Tibor, Szabolcs Hajdu, and **Sándor Tihamér Brassai**, Adaptive Neuro-Fuzzy Structure Based Control Architecture. *Procedia Technology* 22 (2016): 600-605, WOS
2. Bakó László , Hajdu Szabolcs, **Brassai Sándor-Tihamér**, Morgan Fearghal, Enachescu Calin, Embedded Implementation of a Real-Time Motion Estimation Method in Video Sequences, Elsevier, *Procedia Technology*, Vol. 2016, No 22, 2016, ISSN 2212-0173, pp. 897, Elsevier, WOS
3. L. Losonczi, L.F. Márton, **S.T. Brassai**, L. Farkas, Embedded EEG Signal Acquisition Systems, *Procedia Technology*, Elsevier, Volume 12, 2014, Pages 141–147, WOS,
4. L. Losonczi, L.F. Márton, **S.T. Brassai**, L. Farkas, Circuit Techniques for Reducing the Effect of Analog Signal Conditioning Imperfections in EEG Measuring - *Procedia Technology*, Elsevier, 2014, Volume 12, Pages 148–153, WOS
5. L.F. Márton, **S.T. Brassai**, L Bakó , L. Losonczi, Detrended Fluctuation Analysis of EEG Signals *Procedia Technology*, Elsevier, 2014, Volume 12, Pages 125–132, WOS
6. L.F. Márton, L. Bakó, **S.T. Brassai** , L. Losonczi, Multichannel EEG Signal Recording Analysis based on Cross Frequency Coupling Method - *Procedia Technology*, Elsevier 2014, Volume 12, Pages 133–140, WOS
7. **Brassai S.T.**, Iantovics B., Enăchescu C., Artificial Intelligence in the Path Planning Optimization of Mobile Agent Navigation, *Procedia Economics and Finance*, Elsevier, Volume 3, Pages 1-1268 (2012), ISSN 2212-5671, WOS
8. Bakó L., **Brassai, S.T.**, “ Embedded neural controllers based on spiking neuron models,, *Pollack Periodica* , An International Journal for Engineering and Information Sciences, DOI: 10.1556/Pollack.4.2009.3.13, Vol. 4, No. 3, pp. 143–154 (December 2009), Akadémiai Kiadó, Budapest, Hungary, ISSN 1788-3911,
9. **Brassai, S.T.**, Bakó L., “Visual Trajectory Control of a Mobile Robot Using FPGA Implemented Neural Network, *Pollack Periodica*, An International Journal for Engineering and Information Sciences, *Pollack.4.2009.3.12*, Vol. 4, No. 3, pp. 129–142 (December 2009), Akadémiai Kiadó, Budapest, Hungary, ISSN 1788-3911
10. **Brassai Sándor Tihamér**, Bakó László, Hardware Implementation of CMAC Type Neural Network on FPGA for Command Surface Approximation, *Acta Polytechnica Hungarica - Journal of Applied Sciences at Budapest Tech Hungary*, Vol. 4, No. 3, 2007, ISSN 1785-8860, MATARKA, IEEE
11. Bakó László, **Brassai Sándor Tihamér**, *Spiking neural networks built into FPGAs: Fully parallel implementations*, *WSEAS Transactions on Circuits and Systems*, Issue 3, Volume 5, March 2006, pp346-353, ISSN 1109-2734, British Library Direct

C3. Lucrări științifice publicate în reviste din străinătate (altele decât cele menționate anterior).

C4. Lucrări științifice publicate în reviste din țară, recunoscute CNCSIS/CNCS (altele decât cele din baze de date internaționale).

1. Dénes L. Pap Zsuzsanna, Fodor L. Kakucs Timea., **Brassai S.T.**, Metode morfometrice pentru evaluarea dezvoltării prenatale a organului vomeronazal uman, Revista de Medicină și Farmacie, Universitatea de Medicină și Farmacie din Tg. Mureș, Editura Universitz Press, 2009, vol 55, supl4, ISSN 1221-2229
2. Bakó László, Székely Gyula (Iuliu), **Brassai Sándor Tihamér**, Development of Advanced Neural Models. Software And Hardware Implementation, Timișoara, Transaction on Electronics and communication, Scientific buletin of the Politehnica University of Timișoara, 2004, p214-219, ISSN 1583-3380
3. **Brassai Sándor Tihamér**, Dávid László, Bakó László, Hardware Implementation of CMAC based artificial network with process control application, Timișoara, Transaction on Electronics and communication, Scientific buletin of the „Politehnica” University of Timisoara, 2004, p209-213, ISSN 1583-3380

C5. Lucrări științifice publicate în reviste, altele decât cele menționate anterior

1. **S.T. Brassai**, L. Bako, L. Losonczi, Assistive Technologies for Visually Impaired People, Acta Universitatis Sapientiae, Electrical and Mechanical Engineering, 2011
2. Aszalos A., Domokos J. ,Vajda T., **Brassai S.T.**, Dávid L., Exambrev - Integrated System for Patent Application, Acta Universitatis Sapientiae, Electrical and Mechanical Engineering, An International Scientific Journal of Sapientia University, Cluj-Napoca, Vol. 2, 2010, ISSN 2066-8910 (online version), ISSN 2065-5916 (printed version), ISSN-L 2065-5916
3. **Brassai, S.T.**, (2009) FPGA Implementation of Fuzzy Controllers and Simulation Based on a Fuzzy Controlled Mobile Robot, Acta Universitatis Sapientiae, Electrical and Mechanical Engineering, An International Scientific Journal of Sapientia University, Cluj-Napoca, Vol. 1, 2009, ISSN 2066-8910 (online version) ISSN 2065-5916 (printed version)

C6. Lucrări științifice publicate în volumele manifestărilor științifice

1. Péter Pap and **Sándor Tihamér. Brassai**, Design and Implementation of Automated Phototherapy System, 2018 19th International Carpathian Control Conference (ICCC), Szilvasvarad, 2018, pp. 271-276, doi: 10.1109/CarpathianCC.2018.8399640, WOS, Proceedings Paper
2. Szabolcs Hajdu, **Tihamer S. Brassai**, Iuliu Szekely, Complementary Filter Based Sensor Fusion on FPGA Platforms, International Conference on Optimization of Electrical and Electronic Equipment (OPTIM 2017) & 2017 International Aegean Conference on Electrical Machines and Power Electronics (ACEMP 2017), 2017, ISBN: 978-1-5090-4490-0 pp. 851-856, WOS, Proceedings Paper

3. Róbert Moni, László Bakó, Szabolcs Hajdú, Fearghal Morgan and **Sándor Tihamér Brassai**, *Embedded Real-time Implementation of a Computational Efficient Optical Flow Extraction Method for Intelligent Robot Control Applications*, 24th Irish Conference on Artificial Intelligence and Cognitive Science, University College Dublin, September 20-21, 2016, CEUR Workshop Proceedings, Vol. 1751, pp. 116-127.
4. Bakó László, Enăchescu Călin, **Brassai Sándor Tihamér**, Design and Validation of a Low Resource-Cost Video Data Processing Method for Embedded Implementation of Optical Flow Extraction, pp.13 - 18, Carpathian Control Conference (ICCC), 2015 16th International , Szilvásvárad, IEEE, 2015, ISBN 978-1-4799-7369-9,
5. **Brassai Sándor Tihamér**, Hajdu Szabolcs, Tamas Tibor, Bakó László, Hardware implemented adaptive neuro fuzzy system, pp.58 - 63, szerk. Brassai Sándor Tihamér, Carpathian Control Conference (ICCC), 2015 16th International , Szilvásvárad, IEEE, 2015, ISBN 978-1-4799-7369-9, WOS, Proceedings Paper
6. Tibor Tamas, **Sándor Tihamér Brassai**, Hardware Implementation of a Neuro-Fuzzy Controller Using High Level Synthesis Tool, MACRo 2015. Volume 1, Issue 1, Pages 183–191, ISSN (Online) 2247-0948, DOI: 10.1515/macro-2015-0018, May 2015, WOS, Proceedings Paper
7. **Sándor Tihamér Brassai**, Szabolcs Hajdu, Tibor Tamas, Embedded Adaptive Neuro Fuzzy Inference System with Hardware Implemented Real Time Parameter Update, MACRo 2015. Volume 1, Issue 1, Pages 211–222, ISSN (Online) 2247-0948, DOI: 10.1515/macro-2015-0021, May 2015, WOS, Proceedings Paper
8. Szabolcs Hajdu, **Sándor-Tihamér Brassai**, Implementation of Embedded Linux Systems on FPGA Based Circuits for Real Time Process Control, MACRo 2015. Volume 1, Issue 1, Pages 145–154, ISSN (Online) 2247-0948, DOI: 10.1515/macro-2015-0014, May 2015, WOS, Proceedings Paper
9. **Brassai, S.T.**, FPGA based hardware implementation of a self-organizing map. Intelligent Engineering Systems (INES), 2014 18th International Conference on , Tihany, Hungary, Publisher: IEEE, pp. 101-104, 3-5 July 2014, DOI:10.1109/INES.2014.6909349, WOS, Proceedings Paper
10. Losonczi, L, Marton, L.F. **Brassai, T.S.**, Bako, L., A novel bio-signal acquisition system for brain computer interfaces , Electrical and Electronics Engineering (ISEEE), 2013 4th International Symposium on, pp. 1-4, 11-13 Oct. 2013 (IEEEExplore Digital Library), WOS, Proceedings Paper
11. Lajos Losonczi, László-Ferenc Márton, **Sándor-Tihamér Brassai**, Lóránd Farkas A novel EEG Signal Acquisition System, 4th International Conference on Recent Achievements in Mechatronics, Automation, Computer Science and Robotics, 2013
12. Lajos Losonczi, László-Ferenc Márton, **Sándor-Tihamér Brassai**, Lóránd Farkas Real time distributed micro-system designed for bio-signal recording, 4th International Conference on Recent Achievements in Mechatronics, Automation, Computer Science and Robotics, 2013
13. Lajos Losonczi, László-Ferenc Márton, **Sándor-Tihamér Brassai**, Lóránd Farkas Portable EEG Signal Measuring System, 4th International Conference on Recent Achievements in Mechatronics, Automation, Computer Science and Robotics. 2013

14. László- Ferenc Márton, László Bakó, **Sándor-Tihamér Brassai**, Péter Szigeti, Norbert Katona, Lóránd Farkas, Petra Pável, Hajnal Kelemen, Lajos Losonczi Signals for a spherical robot control based on EEG recordings, 4th International Conference on Recent Achievements in Mechatronics, Automation, Computer Science and Robotics, 2013
15. László-Ferenc Márton, László Bakó, **Sándor-Tihamér Brassai**, Péter Szigeti, Norbert Katona, Lóránd Farkas, Petra Pável, Lajos Losonczi New ways in nonstationary, nonlinear EEG signal processing, 4th International Conference on Recent Achievements in Mechatronics, Automation, Computer Science and Robotics, 2013
16. Bakó L., Kolcsár Á.-Z., **Brassai S.T.**, Márton L.F., Losonczi L., Neuromorphic Neural Network Parallelization on CUDA Compatible GPU for EEG, Signal Classification, Computer Modeling and Simulation (EMS), 2012 Sixth UKSim/AMSS European Symposium on, pp 359-364, 2012, ISBN: 978-1-4673-4977-2, DOI: Digital Object Identifier : 10.1109/EMS.2012.87, WOS, Proceedings Paper
17. Bakó, L., **Brassai, S.T.**, Losonczi L. and Márton, L.F., "Position Paper: Evolving Advanced Neural Networks on Run-Time Reconfigurable Digital Hardware Platform, 8th International Conference on High-Performance and Embedded Architectures and Compilers (HiPEAC),The 3rd International Workshop on Adaptive Self-tuning Computing Systems (ADAPT'13), January 21-23, 2013, Berlin, Germany
18. Brassai, S.T., Bakó, L., Losonczi L. and Márton, L.F., "Parallel pipeline solution for hardware implementation of artificial neural networks within circuit real time weight update, 8th International Conference on High-Performance and Embedded Architectures and Compilers (HiPEAC), 2nd Workshop on Design Tools and Architectures for Multi-Core Embedded Computing Platforms (DITAM'13), January 21-23, 2013, Berlin, Germany
19. Bakó, L., **Brassai, S.T.**, Losonczi L. and Márton, L.F., "Multiple processor core systems on FPGA circuits implementing bio-inspired neural networks for classification tasks, 8thInternational Conference on High-Performance and Embedded Architectures and Compilers, (HiPEAC), 2nd Workshop on Design Tools and Architectures for Multi-Core Embedded Computing Platforms (DITAM'13), January 21-23, 2013, Berlin, Germany
20. L. Losonczi, L., Katona, T.J., Viney, L., Bakó, S.T., **Brassai, L.F.**, Márton, "Neurobiological, smart signal acquisition and improved information extraction methods, 2012, 8th Forum of Neuroscience (FENS), July 14-18, 2012, Barcelona, Spain.
21. Laszlo Bako, Ervin Gyorgy-Mozes, **Sandor-Tihamer Brassai**, Lajos Losonczi, Laszlo Ferenc Marton, Neural Network Parallelization On FPGA Platform For EEG Signal Classification, Proceedings of The 6th edition on the Interdisciplinarity in Engineering International Conference, "Petru Maior" University Publishing House, Tirgu Mures, pp. 370-376, 2012, ISSN 2285 – 0945, ISSN–L 2285 – 0945
22. Lajos Losonczi, Laszlo Bako, **Sandor-Tihamer Brassai**, Laszlo-Ferenc Marton, Hilbert-Huang Transform Used For EEG Signal Analysis, Proceedings ofThe 6th edition on the Interdisciplinarity in Engineering International Conference, "Petru Maior" University Publishing House, Tirgu Mures, pp. 361-369, 2012, ISSN 2285 – 0945, ISSN–L 2285 – 0945

23. Laszlo-Ferenc Marton, **Sandor-Tihamer Brassai**, Zoltan German-Sallo, Laszlo Bako, Lajos Losonczi, Technical Signal Processing With Application In EEG Channels Correlation, Proceedings of The 6th edition on the Interdisciplinarity in Engineering International Conference, "Petru Maior" University Publishing House, Tirgu Mures, pp. 339-349, 2012, ISSN 2285 – 0945, ISSN–L 2285 – 0945
24. **Sandor Tihamer Brassai**, Laszlo Bako, Laszlo Ferenc Marton, Zoltan German-Sallo, Lajos Losonczi, Fpga Based Implementation Of Wavelet Convolution, Proceedings of The 6th edition on the Interdisciplinarity in Engineering International Conference, "Petru Maior" University Publishing House, Tirgu Mures, pp. 332-338, 2012, ISSN 2285 – 0945, ISSN–L 2285 – 0945
25. **Sándor Tihamér Brassai**, Lajos Losonczi, László Ferenc Márton, László Bakó, Barna Iantovics, Călin Enăchescu, Intelligence In Mobile Robot Navigation, Proceedings of The 6th edition on the Interdisciplinarity in Engineering International Conference, "Petru Maior" University Publishing House, Tirgu Mures, pp. 326-331, 2012, ISSN 2285 – 0945, ISSN–L 2285 – 0945
26. **Brassai, S.T.**; Enachescu, C.; Losonczi, L. , Marton L.F., FPGA based embedded support for mobile robot sonar based navigation, System Theory, Control and Computing (ICSTCC), 2012 16th International Conference on, pp. 1-6, 2012, ISBN: 978-1-4673-4534-7
27. **S.T Brassai**, C. Enăchescu, L. Losonczi, RBF Network for Mobile Robot Sonar Based Localization and Environment Modeling, Book of Abstract of the 13th International Conference on Optimization of Electrical and Electronic Equipment, Edited by The Transilvania University of Brasov, Faculty of Electrical Engineering and Computer Science, Brasov, May 24-26, pp. 275. 2012, ISSN 1842-2012, WOS. Proceedings Paper
28. L. Losonczi, L. Bakó, **S.T. Brassai**, L. Katona, L.F. Márton, Portable EEG Signal Measuring and Processing Network, Proceedings of the 3rd TOBI Workshop, Wurzburg, Germany on March 20-22, 2012
29. Bakó L, **Brassai S.T**, Hardware Neural Network Implementation Using Embedded Multiple Core Processors- International Conference on Recent Achievements in Mechatronics, Automation, Computer Science and Robotics, MACRo 2011, Targu Mureş, ISBN 978-973-1970-54-7
30. **Brassai S.T**, Bakó L, Márton L.F., Parallelization techniques for BCI signal computation, - International Conference on Recent Achievements in Mechatronics, Automation, Computer Science and Robotics, MACRo 2011, Targu Mureş, ISBN 978-973-1970-54-7
31. László BAKÓ, **Sándor Tihamér BRASSAI**, Lajos LOSONCZI, László Ferenc MÁRTON, Embedded System Based EEG Signal Processing, Proceedings of the 2nd International Conference on Recent Achievements in Mechatronics, Automation, Computer Science and Robotics, MACRo 2010, Sapientia University, Department Of Electrical Engineering, Department Of Mechanical Engineering, May 14-15, 2010, Tîrgu Mureş, Romania, ISBN 978-973-1970-39-4, pp. 63-72.
32. **Brassai S.T.**, Dézsi H., Bakó L., Navigation system implementation for a quad rotor helicopter, Sixth International PhD, DLA Symposium, University of Pécs, Hungary, Pollack Mihály Faculty of Engineering, 25-26 October, 2010, Edited by Prof. Miklós Iványi, Rotari Press, Komló, Hungary.

33. Vajda, T., Bako L., **Brassai S. T.**, Using Dynamic Programming and Neural Networks to Match Human Action, Proceedings of the 11th International Carpathian Control Conference, ICCC 2010, May 26-28, 2010, Eger, Hungary, ISBN 978-963-06-9289-2, pp. 231-234., WOS, Proceedings Paper
34. ASZALOS Attila, DOMOKOS József, VAJDA Tamás, **BRASSAI Sándor Tihamér**, DÁVID László, *EXAMBREV Integrated System for Patent Application Overview*, MACRo2010. Proceedings of the 2nd International Conference on Recent Achievements in Mechatronics, Automation, Computer Science and Robotics (MACRo2010), Editura Scientia, 2010,
35. **Brassai Sándor Tihamér**, FPGA Implementation of Fuzzy Controllers and Simulation Based on a Fuzzy Controlled Mobile Robot, 1st International Conference on Recent Achievements in Mechatronics, Automation, Computer Science and Robotics MACRo2009, Tîrgu Mureş, Romania, March 20-21, 2009.
36. VAJDA Tamás, DOMOKOS József, **BRASSAI Sándor Tihamér**, Dávid László, Aszalos Attila Development of EXAMBREV Integrated System for Patent Application , Proceedings of the 4th edition of The INTER-ENG International Conference, Tîrgu Mures, România, 12-13 November, 2009, Vol. 5 (XXII), 2009, ISSN 1841-9267
37. DOMOKOS József, VAJDA Tamás, **BRASSAI Sándor Tihamér**, Dávid László, *Integrated system for patent application examination (EXAMBREV)* , Proceedings of the 17th International Conference on Control Systems and Computer Science CSCS 17, ISSN: 2066-4451, pp.135-140, Bucureşti, România, 26-29 May, 2009.
38. **Brassai, S.T.**, Bakó, L., Visual trajectory control of a mobile robot using FPGA implemented neural network, Fourth International PhD, DLA Symposium, University of Pécs, Hungary, Pollack Mihály Faculty of Engineering, 20-21 October, 2008, Edited by Prof. Miklós Iványi, ISBN 978-963-7298-27-1, Rotari Press, Komló, Hungary
39. Bakó, L., **Brassai, S.T.**, Embedded neural controllers based on spiking neuron models, Fourth International PhD, DLA Symposium, University of Pécs, Hungary, Pollack Mihály Faculty of Engineering, 20-21 October, 2008, Edited by Prof. Miklós Iványi, ISBN 978-963-7298-27-1, Rotari Press, Komló, Hungary
40. **S. T. Brassai**, L. Bakó, Comanda unui robot mobil cu reţele neuronale artificiale pentru urmărirea unei traiectorii prescrise, ENELKO – SZÁMOKT Conferinţa internaţională de energetică –Electrotehnică şi informatică, Societatea Maghiară Tehnico-Ştiinţifică din Transilvania, Cluj, 2008, ISSN 1842-4546
41. G. Csernáth, B. Csenter, A. Aszalos, **S.T. Brassai**, I. Székely, Driving QVGA and WQVGA LCD Panels with 30fps Live Video Stream Using HS USB, Conference proceedings International Symposium for Design and Tehnology of Electronic Packaging 14th Edition, Transilvania University of Braşov, Brasov, Romania, 2008. ISSN1843-5122
42. **S.T. Brassai**, L.F. Márton, L. Dávid, L. Bakó, Hardware Implemented Neural Network Based Mobile RobotControl , Conference proceedings International Symposium for Design and Tehnology of Electronic Packaging 14th Edition, Transilvania University of Braşov, Brasov, Romania, 2008, ISSN1843-5122
43. **S.T. Brassai**, L. Gidró, L. Bakó, G. Csernáth, Practical Implementation of an Embedded Intelligent Control System, Conference proceedings International Symposium for Design and Tehnology of Electronic Packaging 14th Edition. Transilvania University of Braşov, Brasov, Romania, 2008, ISSN1843-5122

44. Bakó, L., **Brassai, S.T.**, Székely, I., Baczó, M., Hardware Implementation of Delay-coded Spiking-RBF Neural Network for Unsupervised Clustering, Proceedings of the 11th International Conference on Optimisation of Electrical and Electronic Equipment (OPTIM '08) , ISBN 978-973-131-032-9, pp. 51-56, Trasilvania University of Brasov, Braşov, 2008, WOS, Proceedings Paper
45. **Brassai, S.T.**, Bakó, L., Székely, I., Dan, Şt., Neural Control Based on RBF Network implemented on FPGA Proceedings of the 11th International Conference on Optimisation of Electrical and Electronic Equipment (OPTIM '08) , ISBN 978-973-131-032-9, pp41-46, Trasilvania University of Brasov, Braşov, 2008, WOS, Proceedings Paper.
46. **Brassai Sándor Tihamér**, Bakó László, Dan Ştefan, FPGA Parallel Implementation of CMAC Type Neural Network with on Chip Learning, SACI 2007, Budapest Tech, Hungary, 2007, 111-115, ISBN: 142441234X, WOS, Proceedings Paper.
47. Bakó László, **Brassai Sándor Tihamér**, *Hardware spiking neural networks: parallel implementations using FPGAs*, Proceedings of the 8th WSEAS Int. Conference on Automatic Control, Modeling and Simulation, Prague, Czech Republic, March 12-14, 2006 (pp. 261-266), ISBN 960-8457-42-4, ISSN 1790-5117
48. Bakó László, **Brassai Sándor Tihamér**, Iuliu Székely, *Fully Parallel Implementation of Spiking Neural Networks on FPGA*, Proceedings of the 10th International Conference on Optimisation of Electrical and Electronic Equipment (OPTIM '06), Braşov (Moeciu), Volume III, pp135-142, ISBN 973-635-705-8, Trasilvania University Press, 2006, WOS, Proceedings Paper
49. Germán-Salló Zoltán, **Brassai Sándor-Tihamér**, *Adapted wavelet analysis in ECG signal processing*, Târgu Mureş, Universitatea Petru Maior, Târgu Mureş. 2005, vol I, p243-248, ISBN: 973-656-490-8
50. Bakó László, **Brassai Sándor Tihamér**, Természetazonos felépítésű mesterséges neurális hálózatok hardvare megvalósítása (Hardware Implementation of Neuromorphic Artificial Neural Networks), Cluj-Napoca, Számokt 2005 Cluj Napoca, EMT, P219-230, ISBN: 973-7840-01-1
51. Bakó László, **Brassai Sándor Tihamér**, *Fejlett neuronmodellek szimulációja és megvalósítása (Simulation and Implementation of Advanced Neural Models)*, Számokt 2004 – Cluj-Napoca, EMT, 2004, ISBN:973-86097-8-X, p98-107
52. Bakó László, Iuliu Székely, Dávid László, **Brassai Sándor Tihamér**, *Simulation of Spiking Neural Networks*, Proceedings of the 9th International Conference on Optimisation of Electrical and Electronic Equipment (OPTIM '04), ISBN 973-635-285-4, pp179-184, Trasilvania University Press, Braşov, 2004, WOS, Proceedings Paper
53. Márton F. L., Grif. H. Ş., **Brassai S.T.**, *CMAC Type Artificial Neural Network Used in Trajectory Following*, 7th International Workshop on Robotics In Alpe-Adria-Danube Region RAAD 1998, Smolenice, Slovakia, pp. 133-139, 1998

D. Traduceri de cărţi, capitole de cărţi, alte lucrări ştiinţifice

E. Editare, coordonare de volume

Editare tehnică: Brassai Sándor Tihamér

1. **Brassai Sándor Tihamér**, Neurális hálózatok és fuzzy logika, Editura Scientia, Cluj-Napoca, 2019, ISBN 978-606-975-021-6
2. **Brassai Sándor Tihamér**, Újrakonfigurálható digitális áramkörök tervezési és tesztelési módszerei, Editura Scientia, Cluj-Napoca, 2018, ISBN 978-606-975-020-9

F. Brevete de invenții și alte titluri de proprietate

G. Contracte de cercetare (menționați calitatea de director sau membru)

a) Activitate de cercetare în calitate de director

1. Determinarea în timp real a orientării sistemelor aeriene fără pilot cu implementare în circuite digitale reconfigurabile cu utilizare în aplicații de urmărire traiectorie, Institutul Programelor de Cercetare, conducător, membri în echipa de cercetare: dr. ing. Bakó László, ing. Hajdú Szabolcs, ing. Tămas Tibor, masterand. Hegedűs Zsolt, 2015-2016 (durata proiectului 18. luni), Nr. de înreg. IPC: 12/6/28.04.2015, valoare contract: 15.000RON
2. Implementarea hardware a rețelelor neuronale artificiale prin utilizarea instrumentelor de sinteza de nivel înalt, Institutul Programelor de Cercetare, Conducator, 2014, nr. înreg. IPC: 6/2/2014, nr. înreg. Univ. Sap. :128/2/2014, valoare contact 7.000 RON
3. Conducător în cadrul subproiectului III.4. Feladatfűggő felépítésű pipeline többprocesszoros rendszerek tervezési módszerének kidolgozása és alkalmazása nagy sebességigényű beágyazott célrendszerekben, TÁMOP-4.2.2.C-11/1/KONV-2012-0004 Universitatea Pannon, membru în echipa de cercetare Tămas Tibor, durata proiectului 08.08.2014- 15.03.2015, 3.200.000HUF, conform contractului din 8 august 2014.
4. Studiul rețelelor neuronale artificiale cu implementare hardware pentru detectarea și evitarea obstacolelor cu aplicații la navigarea persoanelor cu deficiențe de vedere, Rețea transnațională de management integrat al cercetării postdoctorale în domeniul Comunicarea științei. Construcție instituțională (școală postdoctorală) și program de burse (CommScie), Numărul de identificare al contractului: POSDRU/89/1.5/S/63663, bursă post doctorat aprox. 12.000 EUR.
5. Sisteme neuroadaptive implementate pe circuite digitale reconfigurabile. Institutul Programelor de Cercetare, Conducator, 2008-2009, nr. înreg. 209/67/02.04.2009 și nr. 212/67 din 13.04.2009, valoare contract. 10.000 RON

b) Activitate de cercetare în calitate de membru

1. Echipament pentru înregistrarea și prelucrarea semnalelor EEG aplicabilă în studiul și realizarea interfețelor creier-calculator, Director de proiect: Lajos Losonezi, nr. 347/23.08.2011, LAMBDA COMMUNICATIONS SRL cofinanțat prin Fondul European de Dezvoltare Regională, cercetător științific de gradul III

2. Cercetarea, dezvoltarea și utilizarea procedurilor și a instrumentației de control în timp real al unor sisteme, pe baza semnalelor neurobiologice, Conducător Conf. dr.ing Márton László, Membru, 2011-2013 (proiect în derulare) IPC (Institutul Programelor de Cercetare al Univ. Sapientia, Nr.de înreg.34/9/22.03.2011 22.500RON , Nr. de înreg. IPC: 1/5/05.01.2012 22.500RON, în total 45.000RON
3. Sistem Informatic Integrat, bazat pe Inteligență Artificială, pentru Examinarea Cererilor de Brevet de Invenție (EXAMBREV), ANCS, Nr. proiect: 11-076/2007, Director program Marin Radu, membru, 2007-2010, , nr. înreg Fundația Sapientia Universitatea Sapientia 925/14.09.2007, Bugetul care revine Universității Sapientia: 300.000 RON
4. Comanda în timp real a sistemelor tip neuroproteză bazate pe semnale EEG, Institutul Programelor de Cercetare, Conducător Conf. dr.ing Márton László, membru, 2007-2008, nr. înreg. 661/ Decembrie 2007 +act adițional 88/03.04.2008, contract finanțare din 08.09.2008 valoare contract: 14.729RON. valoare contract
5. Comanda în timp real a sistemelor tip neuroproteză bazate pe semnale EEG, Institutul Programelor de Cercetare, Conducător Conf. dr.ing Márton László, membru, 2008-2009. Contractul bursa cercetare 212/36 din 13 aprilie 2009 și Contractul de finanțare nr. 209/36 din 2 aprilie 2009, Valoare contract: 7.504 RON
6. Metode inteligente pentru prelucrarea digitală și interpretarea semnalelor EKG bazate pe analiza Wavelet, Institutul Programelor de Cercetare, Conducător Prof. dr. ing. Székely Iuliu, membru, 2005-2006, nr. înreg. 1305/25.10.2005+act adițional nr. 1305/2005. valoare contract: 1.5670RON
7. Optimizarea și aplicarea rețelelor neuronale artificiale neuromorfe în probleme de control, Institutul Programelor de Cercetare, Conducător: Prof. dr. ing. Székely Iuliu, Membru, 2004-2005, nr. înreg. 1361/05.10.2004, 1.850 EUR
8. Simularea și utilizarea rețelelor neuronale artificiale neuromorfe, Institutul Programelor de Cercetare, Prof. dr. ing. Székely Iuliu , membru, 2003-2004, nr. înreg.1938/19.12.2003, valoare contract 1.190EUR
9. Modelarea și simularea rețelelor neuronale artificiale neuromorfe, Institutul Programelor de Cercetare, Prof. dr. ing. Székely Iuliu, membru, 2002-2003, nr. înreg. E/CS/442/25.03.2003, 1.190EUR

H. Creația artistică

H1 Participări la manifestații artistice internaționale

H2. Participări la manifestații artistice naționale

H3. Expoziții, filme, spectacole, concerte, discuri de autor, opere internaționale

H4. Expoziții, filme, spectacole, concerte, discuri de autor, opere naționale

H5. Produse cu drept de proprietate intelectuală în domeniul artistic

III. RECUNOAȘTEREA

I. Premii, distincții.

- Medalie de aur, P.HANTZ, L. KOVÁCS, P. HUBERT & S. T. BRASSAI, Salonul internațional de invenție, Geneva, 23 aprilie 2010
- Excellent paper award for young scientist: 2008 IEEE 14th International Symposium for Design and Technology in Electronic Packaging, September 18-21, Predeal, Romania (<http://siitme.ro/siitme-award-winners-over-the-years/>)
- Best Paper Award in Computer Science and Telecommunication Session at the 3rd International Conference in Recent Achievements in Mechatronics, Automation, Computer Science and Robotics, Tîrgu Mureș, 8-9 April, 2011

J. Citări

1. Tamas, Tibor, Szabolcs Hajdu, and **Sándor Tihamér Brassai**. Adaptive neuro-fuzzy structure based control architecture. *Procedia Technology* 22 (2016): 600-605

Cit 1. Nasrollahzadeh, Ali, Ghader Karimian, and Amir Mehrafsa. Implementation of neuro-fuzzy system with modified high performance genetic algorithm on embedded systems. *Applied Soft Computing* 60 (2017): 602-612. WOS, IF: 3,907/2017, Q1

Cit 2. Abdelkrim, H., Othman, S. B., & Saoud, S. B. (2018, March). FPGA implementation of self-reconfigurable fuzzy logic controller. In 2018 International Conference on Advanced Systems and Electric Technologies (IC_ASET) (pp. 151-156). IEEE., WOS

2. Brassai, Sándor Tihamér, Szabolcs Hajdu, and Tibor Tămas. Embedded Adaptive Neuro Fuzzy Inference System with Hardware Implemented Real Time Parameter Update. *MACRo 2015 1.1* (2015): 211-222.

Cit 3. Nasrollahzadeh, Ali, Ghader Karimian, and Amir Mehrafsa. Implementation of neuro-fuzzy system with modified high performance genetic algorithm on embedded systems. *Applied Soft Computing* 60 (2017): 602-612., WOS, 3,907/2017, Q1

3. Tămas, Tibor, and **Sándor Tihamér Brassai**. Hardware implementation of a neuro-fuzzy controller using high level synthesis tool. *MACRo 2015 1.1* (2015): 183-191.

Cit 4. Karakuzu, Cihan, Fuat Karakaya, and Mehmet Ali Çavuşlu. FPGA implementation of neuro-fuzzy system with improved PSO learning. *Neural Networks, Elsevier* 79 (2016): 128-140, WOS, IF: 7.197/2017, Q1

Cit 5. Giannoccaro, Nicola Ivan, Issei Uchitomi, and Tetsuzo Sakamoto. Decentralized neuro-fuzzy control of an experimental web transport platform. *Industrial Electronics Society, IECON 2016-42nd Annual Conference of the IEEE. IEEE, 2016, WOS, IEEEExplore*

4. **Brassai, S.T.**, FPGA based hardware implementation of a self-organizing map, Intelligent Engineering Systems (INES), 2014 18th International Conference on , Tihany, Hungary, Publisher: IEEE, 3-5 July 2014, DOI:10.1109/INES.2014.6909349

Cit 6. Ann, Lee Yee, Phaklen Ehkan, and M. Y. Mashor. Possibility of Hybrid Multilayered Perceptron Neural Network Realisation on FPGA and Its Challenges. , Advanced Computer and Communication Engineering Technology, Volume 362 of the series Lecture Notes in Electrical Engineering, Springer International Publishing, Lecture Notes in Electrical Engineering, 362, pp. 1051-1061, Springer, Google Scholar, Scopus

Cit 7. de Sousa, Miguel Angelo de Abreu, and Emilio Del-Moral-Hernandez. An FPGA distributed implementation model for embedded SOM with on-line learning. Neural Networks (IJCNN), 2017 International Joint Conference on. IEEE, 2017.. WOS, IEEEExplore Scholar google

Cit 8. de Sousa, Miguel Angelo de Abreu, Ricardo Pires, and Emilio Del-Moral-Hernandez. OFDM symbol identification by an unsupervised learning system under dynamically changing channel effects. Neural Computing and Applications (2017): 1-13, Springer, Scopus

5. 1. L.F. Márton, **S.T. Brassai**, L Bakó , L. Losonczai, Detrended Fluctuation Analysis of EEG Signals, Procedia Technology, Elsevier, 2014, Volume 12, Pages 125–132

Cit 9. Janjarasjitta, .A. Loparob, Examination of scale-invariant characteristics of epileptic electroencephalograms using wavelet-based analysis, Computers & Electrical Engineering, Elsevier, Volume 40, Issue 5, July 2014, Pages 1766–1773, WOS, IF:2/2017

Cit 10. Paul, S.; Mazumder, A.; Ghosh, P.; Tibarewala, D.N.; Vimalarani, G., EEG based emotion recognition system using MFDFA as feature extractor, in Robotics, Automation, Control and Embedded Systems (RACE), 2015 International Conference on , vol., no., pp.1-5, 18-20 Feb. 2015, doi: 10.1109/RACE.2015.7097247(IEEE Conference Publications), IEEEExplore

Cit 11. Marri, Kiran, and Ramakrishnan Swaminathan. Multifractal analysis of sEMG signals for fatigue assessment in dynamic contractions using Hurst exponents. Biomedical Engineering Conference (NEBEC), 2015 41st Annual Northeast. IEEE. 2015, IEEEExplore

Cit 12. Namazi, Hamidreza, et al. Analysis of the influence of memory content of auditory stimuli on the memory content of EEG signal. Oncotarget 7.35 (2016): 56120-56128, WOS:000386911600014, IF: 2015/2016 5.008, IEEE, IF: 5.168/2017, Q1

Cit 13. J. P. Kelwade and S. S. Salankar, Radial basis function neural network for prediction of cardiac arrhythmias based on heart rate time series, 2016 IEEE First International Conference on Control, Measurement and Instrumentation (CMI). Kolkata, 2016, pp. 454-458, IEEEExplore, Scholar Goole

Cit 14. J. P. Kelwade and S. S. Salankar, An optimal structure of multilayer perceptron using particle swarm optimization for the prediction of cardiac arrhythmias, 2016 5th International Conference on Reliability, Infocom Technologies and Optimization (Trends and Future Directions) (ICRITO), Noida, 2016, pp. 426-430, IEEEExplore, Scholar Goole

Cit 15. Kelwade, Jairam P., and Suresh S. Salankar. Prediction of heart abnormalities using Particle Swarm Optimization in Radial Basis Function Neural network. Automatic Control and Dynamic Optimization Techniques (ICACDOT), International Conference on. IEEE, 2016, IEEEExplore, Scholar Goole

- Cit 16. Kelwade, J. P., and S. S. Salankar. Comparative study of neural networks for prediction of cardiac arrhythmias. Automatic Control and Dynamic Optimization Techniques (ICACDOT), International Conference on. IEEE, 2016, IEEEExplore, Scholar Goole
- Cit 17. Xiao, Ran, et al. Characterization of infant mu rhythm immediately before crawling: A high-resolution EEG study, *NeuroImage* 146 (2017): 47-57, WOS, IF: 5.426, Q1
- Cit 18. Jac Fredo, Agastinose Ronickom, et al. Classification of Normal and Knee Joint Disorder Vibroarthrographic Signals Using Multifractals and Support Vector Machines, *Biomedical Engineering: Applications, Basis and Communications* 29.03 (2017): 1750016., WOS IF: 0,233/2017
- Cit 19. Li, Xin, Erjuan Cai, and Jiannan Kang. EEG Multi-fractal De-trended Fluctuation Mental Stress Analysis. Chinese Intelligent Systems Conference. Springer, Singapore, 2017, Scopus, Springer
- Cit 20. Rakshit, Arnab, et al. Fractal analysis of EEG signals for studying the effect of cognitive stress on brain. *International Journal of Biomedical Engineering and Technology* 25.2-4 (2017): 336-369, WOS
- Cit 21. Zebende, Gilney Figueira, Florêncio Mendes Oliveira Filho, and Juan Alberto Leyva Cruz. Auto-correlation in the motor/imaginary human EEG signals: A vision about the FDFA fluctuations. *PloS one* 12.9 (2017): e0183121, WOS, IF: 2.766/2017 Q1
- Cit 22. Anitta, F., Sunitha, R., Pradhan, N., & Sreedevi, A. (2019). Non-linear Analysis of Time Series Generated from the Freeman K-Set Model. In *Cognitive Informatics and Soft Computing* (pp. 217-225). Springer, Singapore, Scopus, Springer
6. L.F. Márton, L. Bakó, **S.T. Brassai** , L. Losonczi, Multichannel EEG Signal Recording Analysis based on Cross Frequency Coupling Method - *Procedia Technology*, Elsevier 2014, Volume 12, Pages 133–140
- Cit 23. C. Garripoli; J. L. J. P. van der Steen; F. Torricelli; M. Ghittorelli; G. H. Gelinck; A. H. M. Van Roermund; E. Cantatore, Analogue Frontend Amplifiers for Bio-Potential Measurements Manufactured With a-IGZO TFTs on Flexible Substrate, in *IEEE Journal on Emerging and Selected Topics in Circuits and Systems* , vol.PP, no.99, pp.1-11, 2016, doi: 10.1109/JETCAS.2016.2616723, WOS, IEEEExplore IF:3.218/2017 Q1
- Cit 24. Liu, Yang, et al. Epileptic seizure detection from EEG signals with phase–amplitude cross-frequency coupling and support vector machine. *International Journal of Modern Physics B* (2017): 1850086, WOS, IF: 0.769/2017
- Cit 25. Azevedo, Stephen G., et al. System-independent characterization of materials using dual-energy computed tomography. *IEEE Transactions on Nuclear Science* 63.1 (2016): 341-350.
- Cit 26. By: Qiao, Xiao-Yan; Zhang, Qi, Phase-coupling of EEG Rhythms Evoked by Emotional Audio-Visual Stimuli Based on Bicoherence, Conference: International Conference on Biomedical Engineering and Life Science (BELS) Location: Wuhan, PEOPLES R CHINA Date: NOV 14-15, 2015, 2015 International Conference on Biomedical Engineering and Life Science (BELS 2015) Pages: 129-135 Published: 2015

7. L. Losonczi, L.F. Márton, **T.S. Brassai**, L Farkas, Embedded EEG signal acquisition systems, *Procedia Technology* 12, 141-147, 2014

Cit 27. Toresano, La Ode Husein Z., et al. Data acquisition instrument for EEG based on embedded system. *AIP Conference Proceedings*. Vol. 1817. No. 1. AIP Publishing, 2017, WOS

Cit 28. Polo, A., Narvaez, P., & Robles Algarín, C. (2018). Implementation of a Cost-Effective Didactic Prototype for the Acquisition of Biomedical Signals. *Electronics*, 7(5), 77., WOS, IF: 2,110/2017, Q2

Cit 29. Manic, K. S., Saadha, A., Pirapaharan, K., & Aravind, C. (2014). Characterisation And Separation Of Brainwave Signals. *Journal of Engineering Science and Technology EURECA*, 32-44, WOS

Cit 30. Toresano, L. O. H. Z., et al. Data acquisition system of 16-channel EEG based on ATSAM3X8E ARM Cortex-M3 32-bit microcontroller and ADS1299. *AIP Conference Proceedings*. Vol. 1862. No. 1. AIP Publishing, 2017, WOS, Google Scholar

Cit 31. Chatterjee, Bipra, L. M. Saini, and Tapan Kumar Gandhi. Non-invasive wireless EEG monitor. 2017 International Conference on Energy, Communication, Data Analytics and Soft Computing (ICECDS). IEEE, 2017, Scopus, IEEEExplore

8. **Sandor Tihamer Brassai**, Barna Iantovics, Calin Enachescu, Optimization of Robotic Mobile Agent Navigation, *Studies in Informatics and Control*, ISSN 1220-1766, vol. 21 (4), pp. 403-412, 2012.

Cit 32. Camelia-Mihaela Pinte, *Advances in Bio-inspired Computing for Combinatorial Optimization Problems*, Intelligent Systems Reference Library, Volume 57 2014, ISBN: 978-3-642-40178-7 (Print) 978-3-642-40179-4 (Online)

Cit 33. Ziting KANG, Zali FENG, Wenming ZHANG, Pengying LI, Automatic Obstacle Avoidance System Used in Deep-sea Mining Vehicle, *Electrotehnică, Electronică, Automatică*, vol. 61 (2013), Nr. 3 (Elsevier, Engineering Village, Scopus, Compendex, ProQuest, ProQuest-Ulrich's Periodical Directory, EBSCO, Index Copernicus), CiteScore 2013:0.2, Index Copernicus Impact Factor, in 2011: 4.66

Cit 34. Moon Sun SHIN, Myeong Cheol KO, Yong Wan JU, Young Jin JUNG, Bum Ju LEE, Implementation of Context-Aware Based Robot Control System for Automatic Postal Logistics, *Studies in Informatics and Control*, ISSN 1220-1766, vol. 22 (1), pp. 71-80, 2013., WOS

Cit 35. Muhammad ZOHAIB, Syed Mustafa PASHA, Nadeem JAVAID, Abdus SALAAM, Jamshed IQBAL, An Improved Algorithm for Collision Avoidance in Environments Having U and H Shaped Obstacles, *Studies in Informatics and Control*, ISSN 1220-1766, vol. 23 (1), pp. 97-106, 2014. WOS

Cit 36. Crişan, Gloria Cerasela, et al., An analysis of the hardness of novel TSP Iberian instances, *International Conference on Hybrid Artificial Intelligence Systems*. Springer International Publishing, 2016. Volume 9648 of the book series *Lecture Notes in Computer Science (LNCS)*, WOS

Cit 37. Zhou, Honglu, Mingli Song, and Witold Pedrycz. A Comparative Study of Improved GA and PSO in Solving Multiple Traveling Salesmen Problem. *Applied Soft Computing* (2017)., WSO, IF: 3,907/2017, Q1

Cit 38. Dolicanin, E., Fetahovic, I., Tuba, E., Capor-Hrosik, R., & Tuba, M. (2018). Unmanned combat aerial vehicle path planning by brain storm optimization algorithm. *Studies in Informatics and Control*, 27(1), 15-24., WOS.

9. **Brassai S.T.**, Iantovics B., Enăchescu C., Artificial Intelligence in the Path Planning Optimization of Mobile Agent Navigation, *Procedia Economics and Finance*, Elsevier, Volume 3, Pages 1-1268 (2012), ISSN 2212-5671

Cit 39. Camelia-Mihaela Pinte, Advances in Bio-inspired Computing for Combinatorial Optimization Problems, Intelligent Systems Reference Library, Volume 57 2014, ISBN: 978-3-642-40178-7 (Print) 978-3-642-40179-4 (Online)

Cit 40. Hiba Yahyaoui, Takwa Tlil, Saoussen Krichen, A Randomized Multi-start Genetic Algorithm for the One-Commodity Pickup-and-Delivery Traveling Salesman Problem ,Advances in Swarm and Computational Intelligence, Volume 9142 of the series Lecture Notes in Computer Science pp 45-49, Date: 02 June 2015,

Cit 41. DL Cruz, W Yu, Multi-agent path planning in unknown environment with reinforcement learning and neural network, Systems, Man and Cybernetics (SMC), 2014 IEEE International Conference on, pp.3458,3463, oct. 2014, DOI: 10.1109/SMC.2014.6974464, WOS, IEEEExplore

Cit 42. Pinte, C.-M.; Ludwig, S.A.; Crisan, G.C., Adaptability of a discrete PSO algorithm applied to the Traveling Salesman Problem with fuzzy data, in Fuzzy Systems (FUZZ-IEEE), 2015 IEEE International Conference on , vol., no., pp.1-6, 2-5 Aug. 2015, doi: 10.1109/FUZZ-IEEE.2015.7337839, WOS, IEEEExplore

Cit 43. Elsheikh, E.A., El-Bardini, M.A. & Fkirin, Practical Design of a Path Following for a Non-holonomic Mobile Robot Based on a Decentralized Fuzzy Logic Controller and Multiple Cameras, M.A. Arab J Sci Eng (2016) 41: 3215. doi:10.1007/s13369-016-2147-x <http://link.springer.com/article/10.1007/s13369-016-2147-x>, 2015 / 2016 , WOS, Scopus, IF: 1.092/2017

Cit 44. Cruz, David Luviano, and Wen Yu, Path planning of multi-agent systems in unknown environment with neural kernel smoothing and reinforcement learning, Neurocomputing (2016), WOS, Scopus, Elsevier, IF: 3.241/2017, Q1

Cit 45. E. A. Elsheikh, M. A. El-Bardini and M. A. Fkirin, Practical path planning and path following for a nonholonomic mobile robot based on visual servoing, 2016 IEEE Information Technology, Networking, Electronic and Automation Control Conference, Chongqing, 2016, pp. 401-406., doi: 10.1109/ITNEC.2016.7560390, WOS, IEEEExplore

Cit 46. E. A. Elsheikh, M. A. El-Bardini and M. A. Fkirin, Dynamic path planning and decentralized FLC path following implementation for WMR based on visual servoing, 2016 3rd MEC International Conference on Big Data and Smart City (ICBDSC), Muscat, 2016, pp. 1-7. doi: 10.1109/ICBDSC.2016.7460359, WOS, IEEEExplore

Cit 47. Martínez-García, Edgar A., et al., Neural control and coordination of decentralized transportation robots, Proceedings of the Institution of Mechanical Engineers, Part I: Journal of Systems and Control Engineering (2018): 0959651818756777, Source: 2016 Journal Citation Reports® (Clarivate Analytics, 2017), Imapct Factor 1.420, WOS, IF: 0.988/2017

10. Laszlo-Ferenc Marton, **Sandor-Tihamer Brassai**, Zoltan German-Sallo, Laszlo Bako, Lajos Losonczi, Technical Signal Processing With Application In EEG Channels Correlation, Proceedings ofThe 6th edition on the Interdisciplinarity in Engineering International Conference, “Petru Maior” University Publishing House, Tirgu Mures, pp. 339-349, 2012, ISSN 2285 – 0945, ISSN–L 2285 – 0945

Cit 48. Giroladini W, Pederzoli L, Bilucaglia M, Melloni S, Tressoldi P. A new method to detect event-related potentials based on Pearson’s correlation. EURASIP Journal on Bioinformatics and Systems Biology. 2016;2016:11. doi:10.1186/s13637-016-0043-z, Scopus, Springer

11. Lajos Losonczi, Laszlo Bako, **Sandor-Tihamer Brassai**, Laszlo-Ferenc Marton, Hilbert-Huang Transform Used For EEG Signal Analysis, Proceedings of The 6th edition on the Interdisciplinarity in Engineering International Conference, "Petru Maior" University Publishing House, Targu Mures, pp. 361-369, 2012, ISSN 2285 – 0945, ISSN-L 2285 – 0945

Cit 49. Szalai, János, and Ferenc Emil MÓZES, An improved AM-FM decomposition method for computing the instantaneous frequency of non-stationary signals, IFAC Proceedings Volumes 46.6 (2013): 69-73., (DOI)10.3182/20130522-3-RO-4035.00023, Scopus

Cit 50. Ghasemi, Nasim, and Mohammad Reza Mosavi, Seizure prediction using EEG segmentation change points, Intelligent Systems and Signal Processing (ICSPIS), 2017 3rd Iranian Conference on. IEEE, 2017, IEEEExplore

Cit 51. Kimmattkar, Nisha Vishnupant, and B. Vijaya Babu, Initial analysis of brain EEG signal for mental state detection of human being, Trends in Electronics and Informatics (ICEI), 2017 International Conference on. IEEE, 2017, IEEEExplore

12. Bako, L.; Kolesar, A.; **Brassai, S.T.**; Marton, L.; Losonczi, L., Neuromorphic Neural Network Parallelization on CUDA Compatible GPU for EEG Signal Classification, in Computer Modeling and Simulation (EMS), 2012 Sixth UKSim/AMSS European Symposium on , vol., no., pp.359-364, 14-16 Nov. 2012, doi: 10.1109/EMS.2012.87

Cit 52. Sheng, Y., Wang, J., Liao, Y., Zhao, Z., A machine learning model for wide area network intelligence with application to multimedia service, IEICE Transactions on Communications E99B (11), pp. 2263-2270, WOS, IF: 1,09/2017

Cit 53. Sheng, Yiqiang, et al., Max-min-degree neural network for centralized-decentralized collaborative computing, IEICE Transactions on Communications 99.4 (2016): 841-848. IEICE TRANSACTIONS on Communications Vol.E99-B No.4 pp.841-84, WOS, IF: 1,09/2017

Cit 54. B. Guo, R. Zhang, G. Xu, C. Shi and L. Yang, Predicting Students Performance in Educational Data Mining, 2015 International Symposium on Educational Technology (ISET), Wuhan, 2015, pp. 125-128. doi: 10.1109/ISET.2015.33, Scopus

13. **S.T. Brassai**, L. Bako, L. Losonczi, "Assistive Technologies for Visually Impaired People, Acta Universitatis Sapientiae, Electrical and Mechanical Engineering, 2011.

Cit 55. Marko Periša, Dragan Peraković, Slavko Šarić, Conceptual Model of Providing Traffic Navigation Services to Visually Impaired Persons, Promet – Traffic&Transportation, Vol. 26, 2014, No. 3, 209-218 (2013 IF 0.292.). Scopus Cite Score 2017: 0,456

Cit 56. K Duarte, J Cecilio, JS Silva, Information and Assisted Navigation System for Blind, People Proceedings of the 8th International Conference on Sensing Technology, Sep. 2-4, 2014, Liverpool, UK, pp. 470-473, SCOPUS, GoogleScholar

Cit 57. Gupta, S.; Sharma, I.; Tiwari, A.; Chitranshi, G., Advanced guide cane for the visually impaired people, in Next Generation Computing Technologies (NGCT). 2015 1st International Conference on , vol., no., pp.452-455, 4-5 Sept. 2015. doi: 10.1109/NGCT.2015.7375159, WOS, IEEEExplore

Cit 58. Kamaludin Muhammad Haziq, Mahmood Nasrul Humaimi, Ahmad Abd Hamid, Omar Camallil, Yusof Masdinah Alauyah Md, Sonar Assistive Device for Visually Impaired People JURNAL TEKNOLOGI (ISSN: 0127-9696) 73: (6) (2015) 2015, TEKNOLOGI Journal indexed by SCOPUS, WOS

Cit 59. Jesie, R.S., Advanced talking navigation cane for visually impaired using capacitive touch keypad, in Circuit, Power and Computing Technologies (ICCPCT),

- 2015 International Conference on , vol., no., pp.1-5, 19-20 March 2015, doi: 10.1109/ICCPCT.2015.7159373, IEEEExplore, GoogleScholar
- Cit 60. Journal on Multimodal User Interfaces, June 2017, Volume 11, Issue 2, pp 149–172, An insight into assistive technology for the visually impaired and blind people: state-of-the-art and future trends, WOS IF: 1,142017
- Cit 61. Emerging Trends and Applications of the Internet of Things, Dmytro Zubov, Chapter V, Building IoT With Arduino,, 2017
- Cit 62. Portable Monitoring and Navigation Control System for Helping Visually Impaired People, Thesis submitted In partial fulfillment of the requirements For the Master
- Cit 63. of Applied Science degree in Mechanical Engineering, SCOPUS, https://ruor.uottawa.ca/bitstream/10393/36869/1/Sain_Mohit_2017_thesis.pdf
- Cit 64. Nurul Fathiah Ghazali1, Muhammad Amir As'ari1,2, Mohd Najeb Jamaludin1,2, Lukman Hakim Ismail1, Hadafi Fitri Mohd Latip1,2 and Abdul Hafidz Omar1, Wearable Device for Malaysian Ringgit Banknotes Recognition Based on Embedded Decision Tree Classifier, SCOPUS, GoogleScholar
14. BakÓ, László, and **Sándor Tihamér Brassai**, Embedded neural controllers based on spiking neuron models. Pollack Periodica 4.3 (2009): 143-154.
- Cit 65. Bolkeny, Ildiko, and Viktor Fuvesi. AI based predictive detection system, Pollack Periodica 13.2 (2018): 137-146, Scopus
15. **Brassai, S.T.**, Bakó, L., Székely, I., Dan, Șt., Neural Control Based on RBF Network implemented on FPGA, Proceedings of the 11th International Conference on Optimisation of Electrical and Electronic Equipment (OPTIM '08) , ISBN 978-973-131-032-9, pp41-46, Trasilvania University of Brasov, Braşov, 2008, ISI proceedings.
- Cit 66. Hsin-Hung Chou, Ying-Shieh Kung, Nguyen Vu Quynh, Stone Cheng, Optimized FPGA design, verification and implementation of a neuro-fuzzy controller for PMSM drives, Mathematics and Computers in Simulation, Available online 2 August 2012, ISSN 0378, WOS, IF: 1.476/2017, Q2
- Cit 67. Zhe-Cheng Fan and Wen-Jyi Hwang. Efficient VLSI Architecture for Training Radial Basis Function Networks, Sensors (Basel). 2013 March; 13(3): 3877–3848. Published online 2013 March 19. doi: 10.3390/s130303848, WOS, IF: 2,475/2017, Q2
- Cit 68. Alisson C. D. de Souza and Marcelo A. C. Fernandes , Parallel Fixed Point Implementation of a Radial Basis Function Network in an FPGA, Sensors. 2014,14, 14, pp. 18223-18243, doi:10.3390/s141018223, CiteScore 2014: 2.40. WOS, IF: 2,475/2017, Q2
- Cit 69. Xiaoping Zhu; Longtao Yuan; Dong Wang; Yaowu Chen; , .FPGA Implementation of a Probabilistic Neural Network for Spike Sorting, Information Engineering and Computer Science (ICIECS), 2010 2nd International Conference on, vol., no., pp.1-4, 25-26 Dec2010, doi: 10.1109/ICIECS.2010.5677694, Scopus, IEEEExplore
- Cit 70. Elitas, M., Yavuz, O.; Erkmen, B., Field Programmable Gate Array implementation of Conic Section Function Neural Network: An alternative to analog CSFNN circuitry,, Intelligent Engineering Systems (INES), 2012 IEEE 16th International Conference on, vol., no., pp.135-138, 13-15 June 2012, doi: 10.1109/INES.2012.6249818., Scopus, IEEEExplore

16. Bako, L., **S.T. Brassai** ; I. Szekely, M.A. Baczo, Hardware implementation of delay-coded spiking-RBF neural network for unsupervised clustering, Optimization of Electrical and Electronic Equipment, 2008. OPTIM 2008. 11th International Conference on. IEEE, 2008.

Cit 71. Yusob, Bariah, Zuriani Mustaffa, and Junaida Sulaiman, Anomaly Detection in Time Series Data Using Spiking Neural Network, Advanced Science Letters 24.10 (2018): 7572-7576. WOS, IF: 1.253/2010, Q2

17. **Brassai Sándor Tihamér**, Bakó László, Hardware Implementation of CMAC Type Neural Network on FPGA for Command Surface Approximation, Acta Polytechnica Hungarica - Journal of Applied Sciences at Budapest Tech Hungary, Vol. 4, No. 3, 2007, ISSN 1785-8860, MATARKA, IEEE, Scopus

Cit 72. Mehran S. Razzaghi, Alireza Mohebbi, Predicting the Seismic Performance of Cylindrical Steel Tanks Using Artificial Neural Networks (ANN), Acta Polytechnica Hungarica Vol. 8, No. 2, 2011, WOS, SCOPUS, IF: 0.909/2017

Cit 73. Taghavipoura, M.S. Foumanib, M. Boroushakic, Implementation of an optimal control strategy for a hydraulic hybrid vehicle using CMAC and RBF networks, Scientia Iranica, Volume 19, Issue 2, April 2012, Pages 327–334, WOS, Scopus, IF: 0,48/2017

Cit 74. H.A Khan, A.C.M. Tan, Y. Xiao, V. Sreeram, H.H.C.lu, An Implementation of novel CMAC algorithm for very short term load forecasting, Journal of Ambient Intelligence and Humanized Computing, 2013, DOI:10.1007/s12652-012-0157-4, WOS, IF: 1,423/2017

Cit 75. Bo Yang; Ran Bao; Huatao Han, Robust Hybrid Control Based on PD and Novel CMAC With Improved Architecture and Learning Scheme for Electric Load Simulator, Industrial Electronics, IEEE Transactions on , vol.61, no.10, pp.5271,5279, Oct. 2014, WOS, IF:7.05/2017, Q1

Cit 76. Belfiore, N.P.; Rudas, I.J., Applications of computational intelligence to mechanical engineering, in Computational Intelligence and Informatics (CINTI), 2014 IEEE 15th International Symposium on , vol., no., pp.351-368, 19-21 Nov. 2014, doi: 10.1109/CINTI.2014.7028702, WOS, IEEEExplore

Cit 77. Min-Kuang Wu; Widodo, S., Single input cerebellar model articulation controller (CMAC) based maximum power point tracking for photovoltaic system, Computer Communication Control and Automation (3CA), 2010 International Symposium on, ISBN: 978-1-4244-5565-2, pp. 439 – 442, Scopus, IEEEExplore

Cit 78. S.P. Joy Vasantha Rani, K. Aruna Prabha, (2010) Stochastic logic computation based RBFNN with adaptive hidden layer structure, Journal of Engineering, Design and Technology, Vol. 8 Iss: 2, pp.206 – 220., Scopus

18. Bakó, László, and **Sándor-Tihamér Brassai**. Hardware spiking neural networks: parallel implementations using FPGAs, Proceedings of the 8th WSEAS international conference on Automatic control, modeling & simulation. World Scientific and Engineering Academy and Society (WSEAS), 2006.

Cit 79. Han, Woo Joon, and Il Song Han, Bio-inspired visual information processing—the neuromorphic approach, International Conference on Bio-Inspired Models of Network, Information, and Computing Systems. Springer Berlin Heidelberg, 2010.

19. Bakó László, **Brassai Sándor Tihamér**, Spiking neural networks built into FPGAs: Fully parallel implementations, WSEAS Transactions on Circuits and Systems, Issue 3. Volume 5, March 2006, pp346-353, ISSN 1109-2734

- Cit 80. Cit. 1 Yutaka Maeda, Yoshinori Fukuda, and Takashi Matsuoka. 2008. Pulse density recurrent neural network systems with learning capability using FPGA. WSEAS Trans. Cir. and Sys. 7, 5 (May 2008), 321-330.
- Cit 81. Cit. 2 Fernando Perez-Peña, Arturo Morgado-Estevez, Alejandro Linares-Barranco, Angel Jimenez-Fernandez, Francisco Gomez-Rodriguez, Gabriel Jimenez-Moreno and Juan Lopez-Coronado, Neuro-Inspired Spike-Based Motion: From Dynamic Vision Sensor to Robot Motor Open-Loop Control through Spike-VITE, Sensors 2013, 13(11), 15805-15832; doi:10.3390/s131115805, WOS IF:2.475, Q2
20. **Brassai Sándor Tihamér**, Dávid László, Bakó László, Hardware Implementation of CMAC based artificial network with process control application, Timișoara, Transaction on Electronics and communication, Scientific buletin of the „Politehnica” University of Timisoara, 2004, p209-213, ISSN 1583-3380 (Cat. B+)
- Cit 82. R Wood, A McGlashan, J Yatulis Digital implementation of a neural network for imaging - Photonics, 2012 - proceedings.spiedigitallibrary.org, WOS
21. Bako, Laszlo, and **Sandor-Tihamer Brassai**, Spiking neural networks built in FPGAs: fully parallel implementations, WSEAS Transactions on Circuits and Systems 5.3 (2006): 346-353.
- Cit 83. Perez-Peña, Fernando, et al., Neuro-inspired spike-based motion: from dynamic vision sensor to robot motor open-loop control through spike-VITE, Sensors 13.11 (2013): 15805-15832., WOS, IF: 2.475/2017
22. **Brassai, Sándor Tihamér**, and László Bakó, Visual trajectory control of a mobile robot using FPGA implemented neural network, Pollack Periodica 4.3 (2009): 129-142.
- Cit 84. Ghorbel, A., et al., A HW/SW Implementation on FPGA of Absolute Robot Localization Using Webcam Data, Sensors, Circuits & Instrumentation Systems 2 (2017): 75., WOS, capitol carte
23. Bako L, Hajdu S, **Brassai ST**, Morgan F, Enachescu C (2016) Embedded implementation of a real-time motion estimation method in video sequences. Proc Technol 22:897-904.
- Cit 85. Bermúdez, Aurelio, et al. Optimization of lateral interaction in accumulative computation on GPU-based platform, The Journal of Supercomputing (2019): 1-16.
- Cit 86. Petreto, Andrea, et al., Energy and Execution Time Comparison of Optical Flow Algorithms on SIMD and GPU Architectures, Conference on Design and Architectures for Signal and Image Processing (Dasip 2018). 2018.

K. Alte realizări semnificative.

Alte elemente de recunoaștere a contribuției științifice.

- Contract pentru elaborare curs on line cu titlul: Circuite digitale reconfigurabile, K-MOOC, Óbuda University, Budapest, nr. contract. OE-EKIK-490/2017
- Bursă cercetare – tutore, student Gálfi Andor, anul IV calculatoare , Tutorat în cadrul programului Márton Áron, 2016-2017, nr. inregistrare TI-S247/2017
- Bursă, tutore, masterand Gábor László Szabolcs, Collegium Talentum, 2017-2018
- Bursă, tutore, masterand, Pap Péter, Collegium Talentum, 2017-2018
- Bursă de doctorat, Institutul Programelor de Cercetare al Fundației Sapientia, contract nr. 1128/15. noiembrie 2006

Data, 14.01.2019.

Semnătura,

