

## LISTA DE LUCRĂRI – **Sl.dr.ing. Ruxandra Liana Costea**

A – teza de doctorat

Thesis: *Artificial neural networks: switching times for WTA circuits of Hopfield type*

Award: Cum laudae

Adviser: Prof.dr.ing. Corneliu A. Marinov

Year: 2007

B – Carti si capitole in carti

1. M. Ghitiu, A. Tomescu, V. Bucata, **R. L. Costea**, F.M.G. Tomescu - "*Introducere in Transmisiunea Informatiei prin programe Scilab*", Ed. Printech, Bucuresti, 2004, ISBN 973-652-908-8.
2. E. Cazacu, O. Drosu, G. Epureanu, L. Petrescu, V. Manescu, G. Paltanea, **R.L. Costea**, V. Bucata – "*Chestiuni speciale de teoria circuitelor electrice – Elemente de teorie si aplicatii*", Vol. 1, Editura MATRIX-ROM, Bucuresti, 2005, ISBN 973-685-925-8.

C – Lucrari indexate ISI/BDI

### **PUBLICATIONS:**

1. R. L. Costea and C.A. Marinov, "*New accurate and flexible design procedure for a stable KWTA continuous time network*", IEEE Transactions on Neural Networks, Vol. 22, No.9, pp.1357-1367, 2011.
2. C. A. Marinov and R. L. Costea, "*Time-Oriented Synthesis for a WTA Continuous Time Neural Networks Affected by Capacitive Cross-Coupling*", IEEE Transactions on Circuits and Systems I: Regular Papers, Vol. 57, No. 6, pp. 1358-1370, June 2010

### **Conference Papers:**

1. C.A. Marinov, **R.L. Costea** and V.E. Bucata, "*On the invariance of Lazzaro circuit model*", 2012 The 55th International Midwest Symposium on Circuits and Systems (MWSCAS), pp.1188-1191, Boise, USA, August 2012.
2. **R. L. Costea** and C. A. Marinov, "*Continuous time recurrent neural network designed for KWTA operation*", 2011 International Joint Conference on Neural Networks – IJCNN 2011, pp. 86-89, San Jose, USA.
3. **R. L. Costea** and C. A. Marinov, "*Recurrent neural networks as a KWTA selector: a synthesis procedure*", IEEE International Symposium on Circuits and Systems - ISCAS 2011, pp.1093-1096, Rio de Janeiro, Brazilia, 2011.
4. **R. L. Costea** and C. A. Marinov, "*K-WTA Selection Using a Recurrent Neural Network*", Proceedings of Fourteenth International Conference on Cognitive and neural Systems, May 19-22, 2010, Boston, USA.

5. **R. L. Costea** and C.A. Marinov, "*Time evaluation for WTA Hopfield type circuits affected by cross-coupling capacitances*", in M. Koppen et al. (EDS), ICONIP 2008, Part II, LNCS 5507, p. 885-892, Springer-Verlag Berlin Heidelberg, 2009.
6. **R. L. Costea** and C. A. Marinov, "*Speed and correctness in computational neural circuits*", Proceedings of Thirteenth International Conference on Cognitive and neural Systems, pp.128, May 27-30, 2009, Boston, USA.
7. **R. L. Costea** and C. A. Marinov, "*Time evaluation for Hopfield type circuits affected by cross-coupling capacitances*", 15<sup>th</sup> International Conference, ICONIP 2008, pp. 82-83, Nov. 2008, Auckland, New Zealand.
8. **R. L. Costea** and C. A. Marinov, "*Time-problem in Hopfield neural networks with parasitic capacitances*", International Symposium on Electronics and Telecommunication ETC'08, Eight Edition, 25-26 September, 2008, Timisoara, Romania. Published in "Buletinul Stiintific al Universitatii Politehnica din Timisoara", Transactions on Electronics and Communications, Tom 53(67), Fascicola 1, 2008.
9. **R. L. Costea** and C. A. Marinov, "*A neural maximum selector: explicit parameters set-up for time performance*", The 5<sup>th</sup> International Mediterranean and Latin American Modeling Multi-Conference I3M 2008, The European Modeling & Simulation symposium EMSS 2008, pp. 348-352, September 17-19, 2008, Campora S. Giovanni, Italy, ISSN 978-88-903724-0-7.
10. **R. L. Costea** and C. A. Marinov, "*Correct behavior and processing time for a WTA neural network under the influence of coupling capacitances*", Proceedings of Twelfth International Conference on Cognitive and neural Systems, pp.117, May 14-17, 2008, Boston, USA.
11. **R. L. Costea** and C. A. Marinov, "*Clocking and WTA design of a continuous time Hopfield net with parasitic capacitances*", European Conference on Circuit Theory and Design, ECCTD2007, pp. 396-399, Seville, 26-30 August 2007, IEEE Catalog number 07EX1835C, ISBN 1-4244-1342-7.
12. **R. L. Costea** and C. Marinov, "*Clocking a WTA network under capacitive coupling*", International Symposium on Signals Circuits and Systems, ISSCS, pp. 273-274, Vol. 1, ISSCS, Iasi, 2007, IEEE Catalog number 07EX1678, ISBN 1-4244-0968-3.
13. **R. L. Costea** and C.A. Marinov, "*The impact of capacitive faults on WTA performances*", The 6-th International Conference on Scientific Computing in Electrical Engineering - SCEE2006, pp.148-149, Sinaia, Romania, September 2006.
14. **R. L. Costea** and C. A. Marinov, "*Processing time and cross capacitive coupling for a Winner Take All circuit*", International Conference Mixed Design of Integrated Circuits and Systems, Gdynia, Poland, pp.518-521, June 2006.

15. **R. L. Costea** and C. A. Marinov, "*Capacitive cross-coupling faults and WTA correct behaviour*", 10th IEEE Workshop on Signal Propagation on Interconnects, Berlin, Germany, pp. 189-192, May 2006.
16. V. Bucata, **R. L. Costea**, and C. A. Marinov, "*Circuit WTA cu tranzistoare MOS functionand in regim sub-prag*", Simpozionul National de Electrotehnica Teoretica, Bucharest, 12-14 May, 2005.
17. C. A. Marinov, **R. L. Costea**, and V. Bucata, "*KWTA Networks with Equally-Leveled Competitors*", Simpozionul National de Electrotehnica Teoretica, Bucharest, circ\_P13.pdf, ISBN 973-718-096-8, 22-23 October, 2004.
18. C. A. Marinov, B. Calvert, **R. L. Costea**, and V. Bucata, "*Time Evaluations for Analog KWTA Processors*", ECCOMAS 2004, Jyvaskyla, Finland, vol. II, 664.pdf, ISBN 951-39-1869-6, 24-28 July, 2004.
19. C. A. Marinov, **R. L. Costea**, and V. Bucata, "*Extreme Working Conditions for Neural Selector*", ECCOMAS 2004, Jyvaskyla, Finland, Vol. II, 663.pdf, ISBN 951-39-1869-6, 24-28 July, 2004.
20. **R. L. Costea** and C. A. Marinov, "*Time analysis of neural selection*", Advanced Topics in Electrical Engineering (ATEE 2002), Electrical Engineering and Mathematics, pp.41, Bucharest, UPB, ISBN 973-652-674-7, 29 Noiembrie 2002, ISBN 973-652-674-7.
21. C.A. Marinov, B. Calvert and **R. L. Costea**, "*Processing a sequence of lists with a KWTA analog neural network*", 13-th Int. Conf. Systems Research, Informatics and Cybernetics, July 30 - Aug. 4 2001, Baden-Baden, Germany in Proceedings of the Focus Symposium on Learning and Adaptation in Stochastic and Statistical Systems, eds. A. Murgu and G.E. Lasker, IAS, Univ. of Windsor, pp. 6-12, ISBN 1-894613-17-1, 2002
22. C. A. Marinov and **R. L. Costea**, "*Crossbar switching by neural network*", Proceedings of the 3-rd Japan-Romania Joint Seminar on Applied Electromagnetics and Mechanical Systems (editors T.Maghyar and K.Nagayo), Oradea, Sept 2001, pp. 55-62, ISBN 973-613-060-6.

Contracte de cercetare:

- Grant CEEX I 03/06.10.2005

Title: "*Methods and tools for automatic nanoelectronics design*" – ( *n-EDA – Metodologii si instrumente pentru proiectare nanoelectronica automata* )

- Grant PD\_38, 2010-2012

Title: "*Designing recurrent neural network circuits for kwta data processing*"