

## Lista de lucrări publicate

elaborate de Prof. Univ. dr. ing. *Mihai IORDACHE*,

Departamentul de Electrotehnică,  
Facultatea de Inginerie Electrică  
Universitatea "Politehnică" din București

### A. Teza de doctorat

A1. **M., Iordache**, "Contribuții la modelarea sistemelor electrice neliniare în regim tranzitoriu", teza de dizertație, U.P.P. București, 1977.

### B. Cărți și capitole

#### Ba. Cărți tipărite în edituri centrale

**Ba1. M. Iordache**, M. Perpelea, "Analiza asistată de calculator a circuitelor electrice și electronice neliniare complexe de mari dimensiuni", Editura Didactica si Pedagogica, București, 1995, ISBN 973 – 30 – 3175 - 5.

**Ba2. Lucia Dumitriu, M., Iordache**, "Teoria modernă a circuitelor electrice - Vol. I - Fundamentare teoretică, Aplicații, Algoritmi și Programe de calcul", Editura All Educational S.A., București 1998, ISBN 973 – 9337 – 99- 6 (508 pag.).

**Ba3. M.Iordache**, Lucia Dumitriu, "Teoria modernă a circuitelor electrice - Vol. II - Fundamentare teoretică, Aplicații, Algoritmi și Programe de calcul", Editura All Educational S.A., București 2000, ISBN 973 – 684 – 337- 8 (805 pag.).

**Ba4. M. Iordache**, Lucia Dumitriu, "Simularea asistată de calculator a circuitelor analogice", Editura POLITEHNICA Press, București 2002, ISBN 973 – 85238 – 9 - 3 (450).

**Ba5. M. Iordache**, Lucian Mandache, "Analiza asistată de calculator a circuitelor analogice neliniare", Editura POLITEHNICA Press, București 2004, ISBN 973 – 8449 – 36 - 7 (405 pag.).

**Ba6. Lucia Dumitriu, M. Iordache**, "Simularea numerică a circuitelor analogice cu programul SPICE", MATRIX ROM, București, 2006, ISBN (10) 973 – 755 – 054 – 4, ISBN (13) 978 – 773 – 755 - 054 – 5 (133 pag.), [www.dragos.elth.pub.ro](http://www.dragos.elth.pub.ro).

**Ba7. M. Iordache**, Lucian Mandache, Mircea Perpelea, "Analyse numérique des circuits analogiques non linéaires, Groupe Genoyer, 13420 Gémenos – France, Marseille 2006, ISBN 973 – 85238 – 9 - 3 (368 pag.).

**Ba8. M. Iordache**, Lucia Dumitriu, *Teoria Circuitelor Electrice*, Editura Matrix ROM, București, 2007, ISBN: 979 – 973 – 755 – 174 - 0 (289 pag.), [www.dragos.elth.pub.ro](http://www.dragos.elth.pub.ro).

**Ba9. M. Iordache**, *Bazele Electrotehnicii*, Editura Matrix ROM, București, 2008, ISBN: 978 – 973 – 755 – 296 - 9 (281 pag.), [www.dragos.elth.pub.ro](http://www.dragos.elth.pub.ro).

**Ba10. M. Iordache**, L. Mandache, D. Niculae, *Analiza asistată de calculator a sensibilităților și toleranțelor circuitelor analogice*, Editura Matrix ROM, București, 2008, ISBN: 978 – 973 – 755 – 583 - 0 (376 pag.)

**Ba11. Mihai Iordache**, Lucia Dumitriu, *Generation of the Transfer Functions for MIMO Systems*, Chapter 4, *DESIGN OF ANALOG CIRCUITS THROUGH SYMBOLIC ANALYSIS, ENERATION OF THE TRANSFER FUNCTIONS FOR MIMO SYSTEMS*, Mourad

Fakhfakh, Esteban Tlelo-Cuautle and Francisco V Fernandez (Eds), Bentham Science Publishers, 2011, pp. 83-114.

**Ba12.** Lucia Dumitriu, **Mihai Iordache**, *Sensitivity Computation Based on Auxiliary Circuits*, Chapter 9, *DESIGN OF ANALOG CIRCUITS THROUGH SYMBOLIC ANALYSIS, GENERATION OF THE TRANSFER FUNCTIONS FOR MIMO SYSTEMS*, Mourad Fakhfakh, Esteban Tlelo-Cuautle and Francisco V Fernandez (Eds), Bentham Science Publishers, 2011, pp. 228-262.

**Ba13.** **Mihai Iordache**, Lucia Dumitriu, Dragoș Niculae, Georgiana Zainea, Capitolul - *Power Transfer by Magnetic Induction*, în cartea , **Wireless Power Transfer**, River Publishers , Denmark, 2012, pp. 1 – 40.

## **Bb. Carti tipărite de tipografii locale**

**Bb1.** M. Preda și alții (**coautor**), "Analiza circuitelor electrice cu metoda variabilelor de stare", Lit. I.P.B., București, 1973.

**Bb2.** M. Preda și alții (**coautor**), "Electrotehnică și mașini electrice - note de curs", Lit. I.P.B., București, 1980.

**Bb3.** **M. Iordache**, "Electrotehnică, electronică și mașini electrice, curs partea a II-a Electronică", Lit. I.P.B., București, 1987.

**Bb4.** **M. Iordache**, Lucia Dumitriu, N. Voicu, "Electrotehnică, electronică și mașini electrice, curs partea a III-a Mașini, micromașini și acționări electrice", Lit. I.P.B., București, 1988.

**Bb5.** **M. Iordache**, Lucia Dumitriu, N. Voicu, "Electrotehnică, electronică și mașini electrice, curs partea a I-a Electrotehnică", Lit. I.P.B., București, 1990.

## **Bc. Culegeri și îndrumare de laborator publicate în ediduri centrale**

**Bc1.** M. Preda și alții (**coautor**), "Bazele electrotehnicii - culegere de probleme", Ed. did. și pedagogică, București, 1980.

**Bc2.** M. Preda și alții (**coautor**), "Bazele electrotehnicii - culegere de probleme" (reeditată și completată), Ed. did. și pedagogică, București, 1983.

## **Bd. Culegeri și îndrumare de laborator publicate de tipografii locale**

**Bd1.** S. Pușcașu și alții (**coautor**), "Îndrumar pentru lucrări de laborator la Bazele electrotehnicii", Lit. Universității din Craiova, 1968.

**Bd2.** M. Preda și alții (**coautor**) "Analiza circuitelor electrice - Metoda variabilelor de stare", Lit. I.P.B., București, 1973.

**Bd3.** M. Preda și alții (**coautor**), "Regimul tranzitoriu în circuitele electrice", Culegere de probleme, Lit. I.P.B., București, 1977.

**Bd4.** "Îndrumar de laborator la Bazele electrotehnicii", Lit. I.P.P.B., București, 1978. (Coautor).

**Bd5.** **M. Iordache**, " Culegere de probleme de electrotehnică, electronică și mașini electrice", Lit. I.P.B., București, 1984.

**Bd6.** **M. Iordache**, Lucia Dumitriu, " Culegere de probleme de electrotehnică - Curent alternativ - Probleme, algoritmi și programe de calcul", Litografia U.P.B, București, 1995.

**Bd8.** Lucia Dumitriu, **M. Iordache**, "Culegere de probleme de electrotehnică - Curent continuu - Probleme, algoritmi și programe de calcul", Litografia U.P.B, București, 1996.

**Bd9.** **M. Iordache**, Lucia Dumitriu, " Culegere de probleme de electrotehnică - Circuite neliniare - Probleme, algoritmi și programe de calcul", Litografia U.P.B, București, 1996.

**Bd10.** Lucia Dumitriu, **M. Iordache**, "Culegere de probleme de electrotehnică - Circuite electrice în regim tranzitoriu - Probleme, algoritmi și programe de calcul", Litografia U.P.P.B, București, 1996.

### **C. Lucrări indexate ISI/BDI**

#### **Ca. Lucrari publicate în reviste ISI**

**Ca1.** D, Ioan, M, Rebican, **M. Iordache**, "Approximate SPICE Models of Nonlinear Magnetic Circuits Based on Field Solution", Electromagnetic Nondestructive Evaluation (II), R. Albanese et al. (Eds), IOS Press, Amsterdam-Berlin-Oxford-Tokyo-Washington, DC, 1998, Volume 4, pp.,120-128. (ISI).

**Ca2.** **M. Iordache**, Lucia Dumitriu, "Efficient Decomposition Techniques for Symbolic Analysis of Large – Scale Analog Circuits by State Variable Method", Analog Integrated Circuits and Signal Processing, Kluwer, Vol. 40, No. 3, September 2004, Kluwer Academic Publishers, pp. 235-253, Springer Netherlands ISSN: 0925-1030 (Paper) 1573-1979 (Online). (ISI).

**Ca3.** **M. Iordache**, Lucia Dumitriu, "The Generalized Topological Formula for transfer Functions' Generation by Two-Graph tree enumeration", Analog Integrated Circuits and Signal Processing, Vol. 47, No. 1, April 2006, Kluwer Academic Publishers, pp. 85-100, Springer Netherlands ISSN: 0925-1030. (ISI).

**Ca4.** Lucia Dumitriu, **M. Iordache**, "Numerical Steady-State Analysis of Nonlinear Analog Circuits Driven by Multi-Tone Signals", International Journal of Bifurcation and Chaos (IJBC), Volume: 17, Issue: 10 (October 2007), ISSN: 0218-1274, pp 3595-3601. (ISI).

**Ca5.** **M. Iordache**, Lucia Dumitriu, „Time Domain Diakoptic Analysis Based on Reduced-Order State Equations”, International Journal of Bifurcation and Chaos (IJBC), Volume: 17, Issue: 10 (October 2007), pp. 3625 – 3631, ISSN: 0218-1274. (ISI).

**Ca6.** L. Mandache, **M. Iordache**, Lucia Dumitriu, "Efficience élevée de l'analyse des régimes périodiques à l'aide des échelles de temps multiples", Revue Roum. Sci. Techn.-Électrotechn. et Énerg., Bucarest, Tome **52**, No. 2, Bucarest, 2007, pp. 143 – 155, RM-ISSN 0035-4066. (ISI).

**Ca7.** **M. Iordache**, N. Voicu, Lucia Dumitriu, Camelia Petrescu, "Steady-State Thermal Field Analysis of the Turbo-Generator Rotor with Direct Cooling", Advanced Electrical and Computer Engineering, Academy of Technical Sciences of Romania „Stefan cel Mare”, Vol 7 (14), No. 2(28) 2007, pp. 28-32. (ISI).

**Ca8.** **M. Iordache**, Lucia Dumitriu, D. Niculae, "A new generalised hybrid method for nonlinear analog circuit analysis", Rev. Roum. Sci. Techn.- Électrotechn. et Énerg., Tome 53, No. 4, Bucarest , Oct-Dec 2008, pp. 393-401, ISSN 0035-4066. (ISI).

**Ca9.** Oana Sîrbu, **M. Iordache**, L. Mandache, Lucia Dumitriu, „Novel Approach for Electromagnetic Actuators Analysis in Transient Behavior”, Journal: Advances in Electrical and Computer Engineering Year: 2012, Vol: 12, 12 Issue: 1, pp. 103-108. (ISI).

**Ca10.** David Cordeau, Mihaela Izabela Ionita, Jean – Marie Paillot, **Mihai Iordache**, "New Formulation of the Equations Describing the Locked States of Two Van der Pol

Oscillators Coupled Through a Broadband Network – Application to the Design of Two Differential Coupled VCOS”, *Journal of Circuits, Systems, and Computers (JCSC)*, ISSN; 0218 – 1266, Volume 30, Issue: 8(2012), pp. 1587 – 1605 (in press, accepted to be published). (ISI).

**Ca11.** Iulia Dumitrescu, Smail Bachir, David Cordeau, Jean – Marie Paillot, **Mihai Iordache**, ”Modeling an Characterization of Oscillator Circuits by Van der Pol Model Using Parameter Estimation”, *Journal of Circuits, Systems, and Computers (JCSC)*, ISSN; 0218 – 1266, Volume 21, No. 5 (August 2012), pp. 1587 – 1605 (in press, accepted to be published). (ISI).

**Ca12.** Ionita, David Cordeau, Jean-Marie Paillot, Smail Bachir, **Mihai Iordache**, “A CAD Tool for an Array of Differential Oscillators Coupled Through a Broadband Network”, *International Journal of RF and Microwave Computer-Aided Engineering*. (in press, accepted to be published). (ISI).

### **Cb. Proceeding-uri cotate ISI**

**Cb1.** P. Cristea, **M. Iordache**, "A diakoptic analysis method", 1983 IEEE International Symposium on Circuit and Systems Proceedings, Newport Inn, Newport Beach, California, May2 - May 4, 1983, Volume 2 of 3 Volumes, pp. 633-636. (ISI)

**Cb2.** P. Cristea, **M. Iordache**, Rodica Tuduce, "Nonlinear circuit analysis using projection operators", IEEE 1984 International Conference on Computers, Systems & Signal Processings, Bangalore India, Dec. 9-12 1984, Volume 2 of 3, pp. 1025 - 1029. (ISI).

**Cb3.** P. Cristea, **M. Iordache**, "A new diakoptic method for nonlinear network analysis", ECCTD'85 Seventh European Conference on Circuit Theory and Design, Prague, sept. 2-5, 1985, pp. 239-242.

**Cb4.** P. Cristea, **M. Iordache**, Rodica Tuduce, N. Nicoara, "Nonlinear circuit analysis using system projectors", ECCTD'85 Seventh European Conference on Circuit Theory and Design, Prague, sept. 2-5, 1985, pp. 243-246. (ISI)

**Cb5.** **M. Iordache**, "Generalization Topological Formulae for Symbolic or Numeric-Symbolic Generation of Network Functions", European Conference on Circuit Theory and Design, ECCTD'93, Davos Switzerland 30. Aug. - 3. Sept.'93, pp. 279-283. (ISI)

**Cb6.** **M. Iordache**, Lucia Dumitriu, M. Perpelea, "Diakoptic Analysis for Large-Scale Electrical Circuits", International Symposium on Signals, Circuits & Systems November 4-5, 1993, Iași - Romania, pp. 28 - 33. (ISI)

**Cb7.** **M. Iordache**, R. Iordache, "Generalized Diakoptic Analysis for Large-Scale Piecewise-Linear Nonlinear Electrical Circuits", ISCAS'94, The New Connaught Rooms London, England, May 30 - June 2, 1994, Proceedings Volume 6 of 6, Nonlinear Circuits and Systems (NCS) Neural Systems (NEU), pp. 41- 44. (ISI).

**Cb8.** P. Cristea, **M. Iordache**, Lucia Dumitriu, F. Spinei, "On Tree Generation Diakoptic Method Used in Circuit Symbolic Analysis", ECCTD'95, European Conference on Circuit Theory and Design, Istanbul, Turkey, 27-31 August 1995, Proceedings Vol. II, pp. 625-635. (ISI)

**Cb9.** **M. Iordache**, Lucia Dumitriu, "Diakoptic Generalized Topological Formulae with Homogeneous Parameters", Proceedings of The International Symposium on Signals Circuits and Systems Iași, SCS'95, Romania, October 19-21, 1995, pp. 343-348. (ISI).

**Cb10.** **M. Iordache**, Lucia, Dumitriu, “Symbolic Analysis of Large Integrated Circuits Using a New Two-Graph Tree Enumeration Method”, ECCTD'97, Proceedings of The 1997 European Conference on Circuit Theory and Design, Technical University of Budapest, Hungary, 30th August - 3rd September 1997, Volume 2 of 3, pp. 468-474. (ISI).

**Cb11.** Lucia Dumitriu, **M. Iordache**, “Transfer Function Discretization”, Proceedings SCS’97, International Symposium on Signal Circuits and Systems, Iași, România, October 2-3, 1997, Volume 2 of 2, pp. 300-303. (ISI).

**Cb12.** **M. Iordache**, Lucia Dumitriu, “Generalized Hybrid Analysis for Nonlinear and Nonreciprocal Circuits”, Proceedings of 1998 International Symposium Nonlinear Theory and its Applications, NOLTA’98, Le Régent, Crans-Montana, Switzerland September 14-17, 1998, pp.121-124. (ISI).

**Cb13.** **M. Iordache**, Lucia Dumitriu, Fl. Constantinescu, Miruna Nițescu “Tearing Techniques for Symbolic Simulation of Large-Scale Analog Circuits”, Proceedings of 9<sup>th</sup> IEEE International Conference on Electronics, Circuits and Systems – ICECS 2002, September 15-18, 2002, Dubrovnik, Croatia, Vol. 1, pp. 879-882, ISBN: 0-7803-7596-3.INSPEC: 7554253. (ISI).

**Cb14.** Fl. Constantinescu, Miruna Nițescu, C.V. Marin, **M. Iordache**, Lucia Dumitriu, “Implementation of 2D SPICE models for finding periodic steady state of strongly nonlinear RF-IC ”, Proceedings of 9<sup>th</sup> IEEE International Conference on Electronics, Circuits and Systems – ICECS 2002, September 15-18, 2002, Dubrovnik, Croatia, Vol. 1, pp. 273-276, ISBN: 0-7803-7596-3.INSPEC: 7554253. (ISI).

**Cb15.** **M. Iordache**, Lucia Dumitriu, L. Mandache, “Efficient Symbolic Analysis Method for Large-Scale Analog Circuits”, Proc. of the International Symposium on Signals, Circuits and Systems, SCS’03, Iasi, Romania, July, 10-11, 2003, Vols 1 and 2 pp. 353-356, ISBN: 0-7803-7979-9, INSPEC Accession Number: 7938063. (ISI).

**Cb16.** **Mihai Iordache**, Lucia Dumitriu, “A new Tearing Approach for Symbolic Computation of the Circuit Functions and of Large-Change Multiparameter Sensitivities”, Proceedings of the 9<sup>th</sup> International Conference on Optimization of Electrical and Electronic Equipment, OPTIM’04, Brasov, May 20-21, 2004, Vol. 1, pp. 57-62, ISBN: 973-635-286-2. (ISI).

**Cb17.** **M. Iordache**, Lucia Dumitriu, “Circuit Diakoptic Analysis Based on Order Reduction of State Equations”, Proc. of the International Symposium on Signals, Circuits and Systems, ISSCS’05, Volume 1 of 2, Iasi, Romania, July, 14-15, 2005, pp. 187-190, ISBN: 0-7803-9029-6. (ISI).

**Cb18.** **M. Iordache**, Lucia Dumitriu, F. Constantinescu, Miruna Nitescu, “A New Steady-State Analysis Method for RF-IC Circuits Driven by Multi-Tone Signals”, Proceedings of 2006 IEEE International Symposium on Circuits and Systems, ISCAS’06, May 21-24, 2006, Island Kos, Greece, pp. 2357-2360, , ISBN: 0-7803-9390-2, IEEE Xplore Print ISBN: 0-7803-9389-9, INSPEC Accession Number: 9086243, Digital Object Identifier: 10.1109/ISCAS.2006.1693095. (ISI).

**Cb19.** Fl. Constantinescu, Al. Gheorghe, D. Constantiu Ioan, Miruna Nitescu, **M. Iordache**, Lucia Dumitriu, “A New Approach to the Computation of Reduced Order Models for One-Port and Two-Port RC Circuits”, Proceedings of 2006 IEEE International Symposium on Circuits and Systems, ISCAS’06, May 21-24, 2006, Island Kos, Greece, pp. 4002-4005, ISBN: 0-7803-9390-2, IEEE Xplore Print ISBN: 0-7803-9389-9, INSPEC Accession Number: 9086228, Digital Object Identifier: 10.1109/ISCAS.2007.1693506. (ISI).

**Cb20.** Lucia Dumitriu, **M. Iordache**, G. Stamatescu, “Boundary Conditions for Multi-Tone Steady-State Analysis of Nonlinear Integrated Analog Circuits”, Proceedings of 3<sup>th</sup> IEEE International Conference on Circuits and Systems for Communications, ICCSC’06, July 6-7, 2008, Politehnica University, Bucharest, România, pp. 166-171, ISBN: 978 – 1 – 4244 – 2419 - 1. (ISI).

**Cb21.** **M. Iordache**, Lucia Dumitriu, “Multi-Time Method Based on State Equations for RF Circuit Analysis”, Proceedings of 2006 IEEE International Symposium on Circuits and

Systems, ISCAS'07, May 27-30, 2007, New Orleans, U.S.A., Vol. 1-11, pp. 517-520, Catalog Number: 07CH37868c, ISBN: 1-4244-0921-7, Library of Congress: 80-646530, IEEE Xplore Print ISBN: 1-4244-0920-9, INSPEC Accession Number: 9539075, Digital Object Identifier: 10.1109/ISCAS.2007.378684. (ISI).

**Cb22.** Lucia Dumitriu, **M. Iordache**, „Order Reduction by Explicit Moment Matching Based on State Variable Approach”, Proc. of the International Symposium on Signals, Circuits and Systems, ISSCS'07, Volume 2 of 2, Iasi, Romania, July, 12-13, 2007, Vols 1 and 2, pp. 509-512, ISBN: 1-4244-0968-3, IEEE Catalog Number: 07EX1678, Library of Congress: 2007920356. (ISI).

**Cb23.** **Mihai Iordache**, Lucia Dumitriu, Catalin Dumitriu, Nicolae Voicu, Dragos Niculae, “Hybrid symbolic method for steady-state thermal field analysis”, Conference, Excellence Research – A Way to E.R.A, October 24-26, Brasov, Romania, 2007, ISSN: 1843 – 5904, pp. 258\_1 – 258\_6. (BDI).

**Cb24.** Lucia Dumitriu, **M. Iordache**, N. Voicu, „Symbolic Hybrid Analysis of Nonlinear Analog Circuits ”, Proc. of the European Conference on Circuit Theory and Design, ECCTD'07, Sevilla, Spain, 26-30 August 2007, pp. 970-973, on CD, IEEE: Catalog Number: 07EX1835C, ISBN: 1-4244-1342-7, Library of Congress: 2007928156. (ISI).

**Cb25.** **M. Iordache**, Lucia Dumitriu, “Behavioral Model Generation of Analog Circuits”, Proc. of the 5<sup>th</sup> WSEAS International Conference on Applied Electromagnetics, Wireless and Optical Communications (Electroscience'07), Tenerife, Spain, Dec. 14-16 2007, ISSN: 1790-5117, pp. 22 – 26. (ISI).

**Cb26.** Lucia Dumitriu, **M. Iordache**, “Reduced-Order Modelling of Large Linear Passive Circuits Using Krylov Projection Method”, Proceedings of 4<sup>th</sup> IEEE European Conference on Circuits and Systems for Communications, ECCSC'08, July 10-11, 2008, Politehnica University, Bucharest, România, pp. 95-100, ISBN: 978 – 606 - 521 – 043 – 1. (ISI).

**Cb27.** A. Marascu, Lucia Dumitriu, **M. Iordache**, D. Niculae, “Tolerance Analysis for Chebyshev Filters”, Proceedings of 4<sup>th</sup> IEEE European Conference on Circuits and Systems for Communications, ECCSC'08, July 10-11, 2008, Politehnica University, Bucharest, România, pp. 78-62, ISBN: 978 – 606 - 521 – 043 – 1. (ISI).

**Cb28.** **M. Iordache**, Lucia Dumitriu, N. Voicu, C. Dumitriu, “Simulation of induction motor ventilation system by electric modeling”, Proc. of the 12<sup>th</sup> WSEAS International Conference on Circuits – New Aspects of Circuits, Heraklion, Greece, July 22-24, 2008, ISBN: 978-960-6766-82-4, ISSN: 1790-5117, pp. 45-48, Published by WSEAS Press [www.wseas.org](http://www.wseas.org). (ISI).

**Cb29.** **M. Iordache**, Lucia Dumitriu, A. Ilie, “Projection Method for Order Reduction of Analog Circuits”, Invited Paper, Proc. of the 12<sup>th</sup> WSEAS International Conference on Circuits – New Aspects of Circuits, Heraklion, Greece, July 22-24, 2008, ISBN: 978-960-6766-82-4, ISSN: 1790-5117, pp. 49-54, Published by WSEAS Press [www.wseas.org](http://www.wseas.org). (ISI).

**Cb30.** **M. Iordache**, Lucia Dumitriu, “Network Function Generation for MIMO Systems”, Proceedings of the 11<sup>th</sup> International Conference on Optimization of Electrical and Electronic Equipment, OPTIM'08, Brasov, May 22-23, 2008, Vol. I, pp. 27-32, ISBN: 978-973-131-029-9, ISSN 1842-0133, INSPEC Accession Number:10146013. (ISI).

**Cb31.** Lucia Dumitriu, **M. Iordache**, L. Mandache, „Model Order Reduction by a Projection Technique Implemented on State Variable Approach”, Proc. of the International Symposium on Signals, Circuits and Systems, ISSCS'09, Volume 1 of 2, Iasi, Romania, July, 9-10, 2009, pp. 57-60, IEEE Catalog Number: CFP09816-PRT, ISBN: 978-1-4244-3784-9, Library of Congress: 2008912245. (ISI).

**Cb31. M. Iordache**, Lucia Dumitriu, Lucian Mandache, „Two Time-Scale Approach Implemented by Hybrid Equations”, Proc. of the European Conference on Circuit Theory and Design, ECCTD’09, August 23-27, 2009, Antalya, Turkey, Vols 1 and 2, pp. 579-583, on CD, IEEE: Catalog Number: CFP09ECC-CDR, ISBN: 978-1-4244-3896-9, Library of Congress: 2009900553. (ISI).

**Cb33. Mihai Iordache**, Lucia Dumitriu, Lucian Mandache, „EFFICIENT MODELING OF LUMPED CIRCUITS IN QUASIPERIODIC BEHAVIOR”, Proceedings of the 16<sup>th</sup> International Conference on Digital Signal Processing, Vols 1 and 2, July 05-07, 2009, pp. 1177-1182, ISBN: 978-1-4244-3297-4. (ISI).

**Cb34. D. Cazacu, I. Popa, M. Iordache, I. Popa**, „Finite Element Numerical Experimental on the Absorption of the EMF Radiation in 3D Human Head Models”, Proceedings of the 32<sup>th</sup> International Spring Seminar on Electronics Technology, May 13-17, Brno, 2009, pp. 467-470, ISBN: 978-1-4244-4260-7, INSPEC Accession Number: 10837803. (ISI).

**Cb35. Lucia Dumitriu, Mihai Iordache**, Lucian Mandache, „CAD of MIMO Systems by Reduced Order Modeling”, Proceedings of the 12<sup>th</sup> International Conference on Optimization of Electrical and Electronic Equipment, OPTIM 2010, Brasov, România, May 20-22, 2010, Vol. I, pp. 957-962, ISBN: 978-973-131-029-9, ISSN 1842-0133. (ISI).

**Cb36. Ioana – Gabriela Sirbu, L. Mandache, M. Iordache**, „A Novel Model of DC Series Motor Based on Electrical Equivalent Circuit”, Proc. of the International Symposium on Signals, Circuits and Systems, ISSCS’11, Volume 1 of 2, Iasi, Romania, July, 9-10, 2011, pp. 57-60, IEEE Catalog Number: CFP09816-PRT, ISBN: 978-1-4244-3784-9, Library of Congress: 2008912245. (ISI).

**Cb37. Mihaela Izabela Ioniță, D. Cordeau, J. M. Paillot, M. Iordache**, „Analysis and Design of an Array of Two Differential Oscillators Coupled Through a Resistive Network”, Proc. of the 20<sup>th</sup> European Conference on Circuit Theory and Design, ECCTD 2011, August 29-31, 2011, Linköping, Sweden, pp. 73-76, on USD, IEEE Catalog Number: CFP11ECC-USB, E-ISBN: 978-1-4577-0616-5, IEEE Xplore Print ISBN: 978-1-4577-0759-9, Digital Object Identifier: 10.1109/ECCTD.2011.6043612. (ISI).

**Cb38. L. Mandache, D. Topan, M. Iordache**, Lucia Dumitriu, Ioana Gabriela Sîrbu „On the Time-Domain Analysis of Analog Circuit Containing Nonlinear Inductors”, Proc. of the 20<sup>th</sup> European Conference on Circuit Theory and Design, ECCTD 2011, August 29-31, 2011, Linköping, Sweden, pp. 98-101, on USD, IEEE Catalog Number: CFP11ECC-USB, E-ISBN: 978-1-4577-0616-5. IEEE Xplore Print ISBN: 978-1-4577-0617-2, Digital Object Identifier: 10.1109/ECCTD.2011.6043853. (ISI).

**Cb39. Iulia Dumitrescu, Mihai Iordache**, Lucia Dumitriu, Lucian Mandache, David Cordeau, Jean-Marie Paillot, „Sensitivity and Tolerance Analysis for Oscillator Circuits Simulated by Van der Pol Models”, Proceedings of the 13<sup>th</sup> International Conference on Optimization of Electrical and Electronic Equipment, OPTIM 2012, May 24-26, Brasov, România, 2012, Vol. I, pp. 957-962, ISBN: 978-4673-1654-8, ISSN 1842-0133. (ISI).

**Cb40. M. Iordache**, Lucia Dumitriu, J. M. Paillot, Iulia Dumitrescu, D. Cordeau, „Analysis of Coupled Oscillators by State Variable Method”, Proceeding of the 7<sup>th</sup> International Symposium Advanced Topics in Electrical Engineering – ATEE’11, 12-14 May 2011 – Bucharest, ROMANIA, Editura Politehnica Press, pp. 17 - 10, ISSN: 2068-7966, Print ISBN: 978-1-4577-0507-6, INSPEC Accession Number: 12118910. (BDI).

**Cb41. Ioana-Gabriela Sîrbu, M. Iordache**, L. Mandache, „Considerations on the Simulation Models of AC Plunger-Type Magnets”, Proceeding of the 7<sup>th</sup> International Symposium Advanced Topics in Electrical Engineering – ATEE’11, 12-14 May 2011 –

Bucharest, ROMANIA, Editura Politehnica Press, pp. 25 - 30, ISSN: 2068-7966, Print ISBN: 978-1-4577-0507-6, INSPEC Accession Number: 12118914. (BDI).

**Cb42. M. Iordache**, Ileana Calomfirescu, D. Niculae, M. Dogaru, „Simulation of Induction Motor Using State Equations”, Proceeding of the 7<sup>th</sup> International Symposium Advanced Topics in Electrical Engineering – ATEE’11, 12-14 May 2011 – Bucharest, ROMANIA, Editura Politehnica Press, pp. 59 - 64, ISSN: 2068-7966, Print ISBN: 978-1-4577-0507-6, INSPEC Accession Number: 12118939. (BDI).

**Cb43. D. Niculae, M. Iordache**, Lucia Dumitriu, „Magnetic Coupling Analysis in Wireless Transfer Energy”, Proceeding of the 7<sup>th</sup> International Symposium Advanced Topics in Electrical Engineering – ATEE’11, 12-14 May 2011 – Bucharest, ROMANIA, Editura Politehnica Press, ISSN: 2068-7966, pp. 405 - 408. Print ISBN: 978-1-4577-0507-6, INSPEC Accession Number: 12118908. (BDI).

#### **D. Lucrări publicate în reviste și volume cu referenți (neindexate)**

##### **Da. Lucrări publicate în reviste (neindexate)**

**Da1. M. Iordache**, "Aplicarea teoriei grafurilor de fluentă la determinarea criteriilor de similitudine", E.E.A.- Electrotehnica 3, nr.4, 1975. pp. 188-192.

**Da2. M. Iordache**, "Calculul criteriilor de similitudine ale fenomenelor studiate pe modele, asistat de calculatorul numeric", E.E.A. - Automatică și Electronică, vol.20, nr.2, 1976, pp. 68-74.

**Da3. M. Iordache**, Vl. Socaciu, "A demonstration of the second theorem of similitude", Rev. Roum. Sci. Techn. - Électrotechn. et Énerg., nr.1, Bucarest, 1976, pp. 409-417.

**Da4. M. Iordache**, "Formularea și scrierea ecuațiilor de stare pentru circuitele electrice neliniare cu surse comandate neliniare și elemente în exces utilizând elemente dipolare", E.E.A. - Electrotehnica, nr.1, 1977, pp. 33-41.

**Da5. M. Iordache**, Vl. Socaciu, "A generalization of method of equation with variations on transient analysis of linear and nonlinear networks", Rev. Roum. Sci. Techn. - Électrotechn. et Énerg., nr.1, Bucarest, 1977, pp. 33-42.

**Da6. M. Iordache**, Gh. Tecuci, "A method to determine the common normal tree (CNT) and the essential incidence matrices for an electric network with controlled sources", Rev. Roum. Sci. Techn. - Électrotechn. et Énerg., nr. 3, Bucarest, 1977, pp. 343-352.

**Da7. M. Iordache**, Vl. Socaciu, "A method of computing the derivate of some functions descibing nonlinear electric phenomena", Bulet. Inst. Politeh. București, nr. 1, 1977, pp. 51-58.

**Da8. M. Iordache**, M. Georgescu, A. Ciubotaru, "Simularea și calculul circuitelor electrice neliniare în regim tranzitoriu pe calculatorul numeric", E.E.A. - Electrotehnica, nr.4, 1977, pp. 161-168.

**Da9. M. Iordache**, N. Ludu, "Calculul regimurilor tranzitorii din convertizorul static de frecvență de 500 Hz, asistat de calculatorul numeric", E.E.A. - Electrotehnica 5, nr. 4, 1977, pp. 161-168.

**Da10. M. Iordache**, "State equations of nonlinear networks with controlled sources and excess elements", Rev. Roum. Sci. Techn. - Électrotechn. et Énerg., nr. 3, Bucarest, 1978, pp. 341-352.



**Da11. M. Iordache**, "A method of analysis dc nonlinear networks with controlled sources", Rev. Roum. Sci. Techn. - Électrotechn. et Énerg., nr. 4, Bucarest, 1978, pp. 545-554.

**Da12. M., Iordache**, "Ecuatiile de stare ale circuitelor electrice cu surse comandate, elemente în exces și cuplaje magnetice", E.E.A. - Electrotehnica, nr.10, 1978, pp. 104-110.

**Da13. Mariana Neamțu, M. Iordache**, "Utilizarea tehnicilor de calcul cu matrice rare în analiza circuitelor electrice neliniare", E.E.A. - Electrotehnica, nr.1, 1978, pp. 11-16.

**Da14. M. Iordache, Mariana, Neamțu**, "Asupra condițiilor inițiale în analiza în regim tranzitoriu a circuitelor electrice", E.E.A. - Electrotehnica 26, nr. 7, Oct., 1978, pp. 244-250.

**Da15. M. Iordache, Diana Iordache, N. Voicu**, "Algoritm și program de analiză a circuitelor electrice liniare rezistive cu surse comandate", E.E.A. - Electrotehnica, nr. 3, 1979, pp. 120-125.

**Da16. M. Iordache, Diana Iordache, G. Ionescu**, "A new algorithm and program of the analysis of linear networks with controlled sources magnetic, couplings and excess elements in transient behaviour", Rev. Roum. Sci. Techn. - Électrotechn. et Énerg., nr. 2, Bucarest, 1980, pp. 189-203.

**Da17. M. Iordache, Doina Istrătescu**, "Algoritm și program de simulare și analiză a circuitelor electrice și electronice de c.a. liniare cu surse comandate și cuplaje magnetice", Bulet. Inst. Politehnic București, nr.1, 1980, pp. 67-77.

**Da18. N. Voicu, M. Iordache**, "Modelarea matematică a sistemului de ventilație a rotoarelor turbogeneratoarelor de medie putere", E.E.A. - Electrotehnica, nr.1, 1980, pp. 1-7.

**Da19. M. Iordache**, "Metode de determinare a punctului static de funcționare și a condițiilor inițiale independente în analiza circuitelor electrice neliniare active", E.E.A. - Electrotehnica, nr.3, 1980, pp. 133-137, ISSN: 1582 - 5175.

**Da20. M. Dogaru, M. Iordache, N. Voicu**, " Modelarea matematică a regimurilor de funcționare la scurtcircuit trifazat brusc și la mersul în asincron a turbogeneratoarelor de mare putere, asistată de calculatorul numeric", E. E. A. - Electrotehnica, nr. 5, 1980, pp. 228-236.

**Da21. M. Iordache**, "PGDFR: Program General de Determinare a Funcțiilor de Rețea", E.E.A. - Electrotehnica, nr.8, 1980; pp. 263-268.

**Da22. M. Iordache**, "Generalization of the topological formulas with homogeneous parameters", Rev. Roum. Sci. Techn. - Électrotechn. et Énerg. nr.4, Bucarest, 1980, pp. 501-513.

**Da23. M. Iordache, Vl. Socaciu**, "A method for tree generation without duplication", Rev. Roum. Sci. Techn. - Électrotechn. et Énerg., nr. 1, Bucarest, 1981, pp. 55-62.

**Da24. M. Iordache, Monica Colțeanu, N. Voicu**, "Asupra metodei combinatoriale de analiză a circuitelor electrice neliniare rezistive", E.E A. - Electrotehnica, nr. 3, 1981, pp. 99-107.

**Da25. M. Preda, M. Iordache, Ioana Dorobanțu**, "Formule topologice cu parametri omogeni și determinarea simplificată a factorului de semn", E.E.A. - Electrotehnica nr.4, 1981, pp.125-132, ISSN: 1582 - 5175.

**Da26. M. Iordache, Lucia Dumitriu**, "Asupra ecuațiilor circuitelor electrice cu surse comandate și nulori", E.E.A. - Electrotehnica, nr. 6, 1981, pp. 230-235, ISSN: 1582 - 5175.

**Da27. M. Iordache, Vl. Socaciu**, "O metodă generală de determinare a factorului de semn al perechilor de arbori și al perechilor de coarbori", Bulet. Inst. Politehnic București, Tomul XLIII, nr. 1, 1981, pp. 29-36.

**Da28. M. Iordache**, "An analysis method for nonlinear networks with controlled sources, magnetic couplings and excess elements in transient behaviour", Rev. Roum. Sci. Techn. - Électrotechn. et Énerg., nr. 3, Bucarest, 1981, pp. 401-413.

**Da29.** C. Fluerașu, **M. Iordache**, "On the use of the tableau method for the analysis of nonlinear electric networks in transient behaviour", Rev. Roum. Sci. Techn. - Électrotechn. et Énerg., nr.4, Bucarest, 1981, pp. 533-543.

**Da30.** **M. Iordache**, "A hybrid method for resistive nonlinear network analysis", Rev. Roum. Sci. Techn. - Électrotechn. et Énerg., nr. 1, Bucarest, 1982, pp. 27-39.

**Da31.** P. Cristea, **M. Iordache**, "Qualitative analysis method a dynamic electric network", Rev. Roum. Sci. Techn. - Électrotechn. et Énerg., nr.1, Bucarest, 1982, pp. 41-50.

**Da32.** **M. Iordache**, "Asupra ecuațiilor de stare ale circuitelor electrice cu surse comandate și elemente în exces", E.E.A. - Electrotehnica, 30, nr. 4, 1982, pp. 102-108. , ISSN: 1582 - 5175.

**Da33.** **M. Iordache**, "Utilizarea unei tehnici de calcul cu matrice rare în determinarea arborelui normal comun și a matricelor incidențelor esențiale", E.E.A. - Electrotehnica, 9, nr.5, 1982, pp. 189-194, ISSN: 1582 - 5175.

**Da36.** M. Preda, **M. Iordache**, Ioana Dorobanțu, "Scheme echivalente cu parametri omogeni și aplicarea lor în analiza topologică a circuitelor electrice", E.E.A. - Electrotehnica, 30, nr.6, 1982, pp. 234-238.

**Da35.** **M. Iordache**, D. Dornescu, "On the hybrid method for nonlinear resistive network analysis", Rev. Roum. Sci. Techn. - Électrotechn. et Énerg., nr.4, Bucarest, 1982, pp. 399-410.

**Da36.** **M. Iordache**, S. Chira, "Program de determinare a arborelui normal comun (ANC) și a matricelor incidențelor esențiale (MIE) într-un circuit electric neregiproc", Bulet. I.P.P.B., nr. 2, 1982, pp. 57-67.

**Da37.** **M. Iordache**, S. Chira, "A new determination method of the order of complexity for a nonreciprocal electric circuit", Rev. Roum. Sci. Techn. - Électrotechn. et Énerg., 8, nr. 1, Bucarest, 1983, pp. 37-43.

**Da38.** **M. Iordache**, "Algoritm și program de analiză a circuitelor electrice rezistive neliniare complexe", E.E.A. - Electrotehnica, 31, nr.5, 1983, pp. 184-191.

**Da39.** P. Cristea, **M. Iordache**, "Piecewise analysis of complex electric networks", Rev. Roum. Sci. Techn. - Électrotechn. et Énerg., 29, nr.1, Bucarest, 1984, pp. 25-29.

**Da40.** **M. Iordache**, "Asupra analizei circuitelor electrice rezistive neliniare de mare complexitate", E.E.A. - Electrotehnica 32, nr.2, 1984, pp. 68-72.

**Da41.** **M. Iordache**, "A canonical piecewise-linear hybrid analysis", Rev. Roum. Sci. Techn. - Électrotechn. et Énerg., 30, nr.1, Bucarest, 1985, pp. 43-50.

**Da42.** **M. Iordache**, D. Dornescu, "PSACELN - Program de Simulare și Analiză a Circuitelor Electrice Liniare sau Neliniare", E.E.A. - Electrotehnica 33, nr. 3, 1985, pp. 115-120.

**Da43.** **M. Iordache**, Lucia Dumitriu, N. Marinescu, "Modele discrete asociate de circuit pentru bobinele și condensatoarele parametrice", Bulet. I.P.B., seria Electrotehnică, Tomul XLVI-XLVII, 1984-1985, pp. 169-173.

**Da44.** P. Cristea, **M. Iordache**, Cl. Mihai, "Procedeu iterativ de analiză a circuitelor electrice neliniare cu surse comandate utilizând proiectorii", E.E.A. - Electrotehnica, 34, nr.4, 1986, pp. 177-181.

**Da45.** **M. Iordache**, P. Cristea, "Transient analysis of large-scale circuits by a new diakoptic method", Rev. Roum. Sci. Techn. - Électrotechn. et Énerg., 31, nr.3, Bucarest, 1986, pp. 277-285.

**Da46.** P. Cristea, **M. Iordache**, "A new interconnection method for nonlinear network analysis", Rev. Roum. Sci. Techn. - Électrotechn. et Énerg., 31, nr.4, Bucarest, 1986, pp. 399-407.

**Da47. M. Iordache** și alții, "PGFRCS - Program de Generare a Funcțiilor de Rețea și de Calcul al Sensitivităților", E.E.A. - Electrotehnica 35, nr.3, 1987, pp. 119-123.

**Da48. M. Iordache**, Lucia Dumitriu, "A new symbolic or numeric-symbolic generation method of the network functions", Modelling, Simulation & Control, A, AMSE Press Vol.10, No.3, 1987, pp. 48-63.

**Da49. M. Iordache** și alții, "Generarea fără repetiții a arborilor dintr-un graf printr-o tehnică de calcul cu matrice rare", Bulet. I.P.B., Tomul XLVIII, 1986, pp. 57-64.

**Da50. M. Iordache**, Lucia Dumitriu, M. Perpelea, "Analiza pe calculator a circuitelor electrice - primul pas în proiectarea asistată de calculator", E.E.A. - Electrotehnica 35, nr.5, 1987, pp. 101-112.

**Da51. M. Iordache**, Lucia Dumitriu, "A new analysis method for nonreciprocal and time-variable networks", Rev. Roum. Sci.Techn. - Électrotechn. et Énerg., 32, nr.2, Bucarest, 1987, pp. 171-180.

**Da52. M. Iordache**, Diana Iordache, Lucia Dumitriu, "A general method for computing full or partially symbolic network functions and network sensitivities", Rev. Roum. Sci. Techn. - Électrotechn. et Énerg., 33, nr.1, Bucarest, 1988, pp. 21-32.

**Da53. M. Iordache**, Lucia Dumitriu, M. Perpelea, "Analiza topologică: cheia formulării pe calculator a ecuațiilor circuitului", Bulet. I.P.B., Tomul XLIX, 1987, pp. 78-86.

**Da54. M. Iordache**, N. Voicu, "Modelarea încălzirii prin rezistențe termice a rotoarelor turbogeneratoarelor cu răcire indirectă", Bulet. I.P.B., Tomul XLX, 1988, pp. 81-90.

**Da55. M. Iordache**, "An efficient algorithm for tearing large-scale networks", Rev., Roum., Sci., Techn., Électrotechn. et Énerg., nr. 2, Bucarest, 1990, pp., 203-209, RM-ISSN 0035-4066.

**Da56. M. Iordache**, Lucia Dumitriu, "A new decomposition method for large-scale electrical network analysis", Rev., Roum., Sci., Techn. - Électrotechn. et Énerg., 35, nr. 3, Bucarest, 1990, pp. 319-324, RM-ISSN 0035-4066.

**Da57. M. Iordache**, "A hybrid tearing method for nonlinear large-scale circuit analysis", Rev., Roum., Sci., Techn.- Électrotechn. et Énerg., 36, 4, Bucarest, 1991, pp. 431-442, RM-ISSN 0035-4066.

**Da58. M. Iordache**, H. Andrei, "Determination method of the hybrid matrix for the steady-state nonlinear circuits", Polytechnic Institute of Bucharest Scientific Bulletin, Electrical-Engineering, Vol. 52, nr. 3-4, 1990, pp. 125-133.

**Da59. M. Iordache**, "On the analysis of large-scale circuits", Polytechnic Institute of Bucharest Scientific Bulletin, Electrical Engineering, Vol.52, No.2, 1990, pp.71-80.

**Da60. M. Iordache**, "Asupra metodei nodale modificate de analiza a circuitelor electrice; Partea I: Circuite electrice de c.c.", E.E.A.-Electrotehnica 40, nr.2, feb. 1992, pp. 29-33.

**Da61. M. Iordache**, "Asupra metodei nodale modificate de analiza a circuitelor electrice; Partea a II-a: Circuite electrice de curent alternativ si circuite electrice in regim tranzitoriu", E.E.A.-Electrotehnica 40, nr.3-4, aprilie-mai 1992, pp. 65-70, RM-ISSN 0035-4066.

**Da62. M. Iordache**, M. Perpelea, "Modified nodal analysis for large-scale piecewise-linear nonlinear electric circuits", Rev., Roum., Sci., Techn., Électrotechn. et Énerg., 37, nr. 4, Bucarest, 1992, pp. 487-496, RM-ISSN 0035-4066.

**Da63. M. Iordache**, "On the analysis and simulation of large-scale nonlinear circuits", Studies in Informatics and Control, Vol. 1, no. 4, Dec. 1992, pp. 315-324.

**Da64. M. Iordache**, Lucia Dumitriu, "Asupra analizei circuitelor electrice cu surse comandate", E.E.A. - Electrotehnica, 41, nr. 4-5, mai si iulie 1993, pp. 20-29, RM-ISSN 0035-4066.

**Da65. M. Iordache**, Lucia Dumitriu, N. Voicu, M. Perpelea "Generalized diakoptic analysis for large-scale electric circuits", Rev., Roum., Sci., Techn., Électrotechn. et Énerg., 38, nr. 3, Bucarest, 1993, pp. 365-384, RM-ISSN 0035-4066.

**Da66. N. Voicu, M. Iordache.**, "A computing method for thermal resistance modelling of the heating of indirect convection cooled turbo-generator rotors", Rev., Roum., Sci., Techn., Électrotechn. et Énerg., 38, nr. 4, Bucarest , 1993, pp. 547 - 555, RM-ISSN 0035-4066.

**Da67. M. Iordache**, Lucia Dumitriu, Roxana Oprea, M. Perpelea, "Generalized Hybrid Analysis for Large-Scale Nonlinear Electrical Circuits", Rev., Roum., Sci., Techn., Électrotechn. et Énerg., 39, no. 2, Bucarest , 1994, pp. 223 - 234, RM-ISSN 0035-4066.

**Da68. N. Voicu, M. Iordache**, "Modelarea încălzirii prin rezistențe termice a mașinii asincrone", E.E.A. - Electrotehnica, 31, nr. 1-2, ian. - febr., 1995, pp. 13-18.

**Da69. M. Iordache**, P. Cristea, F. Spinei, Lucia Dumitriu, N. Popescu, "A Diakoptic Method for Tree and S-Forest Generation without Duplication", Rev., Roum., Sci., Techn., Électrotechn. et Énerg., 40, no. 4, Bucarest , 1995, pp. 461 - 471, RM-ISSN 0035-4066.

**Da70. N. Voicu, M. Iordache**, "Modelarea încălzirii statorului motorului asincron trifazat cu rotorul în scurtcircuit în perioada pornirii", E.E.A. - Electrotehnica, 43, nr. 5-6, mai - iunie, Bucarest, 1995, pp. 16 – 21, ISSN: 1582 - 5175.

**Da71. M, Iordache**, "Generalization Topological Formulae for Symbolic or Numeric-Symbolic Generation of Network Functions", Scientific Bulletin, Seria C: Electrical Engineering, Volume 55, Number 3-4, "Politehnica" University of Bucharest, 1993, pp. 189-210.

**Da72. M, Iordache**, R. Iordache, "Diakoptic analysis for large-scale piecewise-linear nonlinear electrical circuits", Rev., Roum., Sci., Techn., Électrotechn. et Énerg., 41, no. 3, Bucarest , 1996, pp. 297 - 315, RM-ISSN 0035-4066.

**Da73. Lucia Dumitriu, M. Iordache**, "Complex Hybrid Matrix Generation of Nonlinear Circuits Driven by Multi-Tone Signals", Rev., Roum., Sci., Techn., Électrotechn. et Énerg., 42, no. 1, Bucarest , 1997, pp. 49 - 60, RM-ISSN 0035-4066.

**Da74. M. Iordache**, Lucia Dumitriu, "An Approximation Symbolic Analysis of Large Analog Integrated Circuits", Rev., Roum., Sci., Techn., Électrotechn. et Énerg., 42, no. 4, Bucarest , 1997, pp. 445 - 458, RM-ISSN 0035-4066.

**Da75. Lucia Dumitriu, M. Iordache**, "On the nodal analysis of linear resistive reciprocal circuits", Revue Roum. Sci. Techn.- Électrotechn. et Énerg., 43, 2, Bucarest, 1998, pp. 173-182, RM-ISSN 0035-4066, RM-ISSN 0035-4066.

**Da76. M. Iordache**, Lucia Dumitriu, "Generalized Nonlinear Source Method for Large-Scale Circuit Analysis", Revue Roum. Sci. Techn.- Électrotechn. et Énerg., 44, 2, Bucarest, 1999, pp. 143-154, RM-ISSN 0035-4066.

**Da77. M. Iordache**, Lucia Dumitriu, R. Muntean, A. Botinant, "An algorithm for generation weighted spanning trees in order" Revue Roum. Sci. Techn.- Électrotechn. et Énerg., 44, 3, Bucarest, 1999, pp. 317-325, RM-ISSN 0035-4066.

**Da78. Lucia, Dumitriu, M. Iordache**. "Generalisation of Nodal Analysis for Linear Resistive Nonreciprocal Circuits". Revue Roum. Sci. Techn.- Électrotechn. et Énerg., 44, 4, Bucarest, 1999, pp. 395-408, RM-ISSN 0035-4066.

**Da79. M. Iordache**, Lucia Dumitriu, "Symbolic state equations for analog circuits", Revue Roum. Sci. Techn.- Électrotechn. et Énerg., Bucarest , Tome 45, No. 1, Bucarest, 2000, pp. 21-37, RM-ISSN 005-4066.

**Da80.** Lucia Dumitriu, **M. Iordache.** "A new Algorithm for Fast Generation of network Functions in Symbolic Reduced Form". Revue Roum. Sci. Techn.- Électrotechn. et Énerg., Tome 45, No. 1, Bucarest , 2000, pp. 3-19, RM-ISSN 0035-4066.

**Da81.** Lucia Dumitriu, **M. Iordache,** I. Matei, "Symbolic tool for analysis and design of analog linear circuits", Revue Roum. Sci. Techn.- Électrotechn. et Énerg., Tome 45, no. 2, Bucarest, 2000, pp. 253-265, RM-ISSN 005-4066.

**Da82.** **M. Iordache,** Lucia Dumitriu, D. Delion, "Computer formulation of symbolic state equations for nonlinear analog circuits with excess elements", Revue Roum. Sci. Techn.- Électrotechn. et Énerg., Tome 47, No. 4, Bucarest, 2000, pp. 657-672, RM-ISSN 0035-4066.

**Da83.** Lucia Dumitriu, **M. Iordache,** " A new approach for analysis of switched circuits with excess elements", Revue Roum. Sci. Techn.- Électrotechn. et Énerg., Tome 46, No. 2, Bucarest, 2001, pp. 159-169, RM-ISSN 0035-4066.

**Da84.** **M. Iordache,** Lucia Dumitriu, "Symbolic state equations for linear analog circuits with degeneracies", E.E.A., 49, nr. 7-8, iul. - aug., Bucarest, 2001, pp. 6 - 17, ISSN: 1582 - 5175.

**Da85.** **M. Iordache,** Lucia Dumitriu, "A Hierarchical Approach to Automatically Formulate the Symbolic State Equations of Large-Scale Analog Circuits", Revue Roum. Sci. Techn.- Électrotechn. et Énerg., Tome 46, No. 4, Bucarest, 2001, pp. 401-417, RM-ISSN 0035-4066.

**Da86.** **M. Iordache, Lucia Dumitriu, I. Matei,** "Hybrid Symbolic Analysis of resistive Nonlinear Circuits", Revue Roum. Sci. Techn.- Électrotechn. et Énerg., Bucarest , Tome 47, No. 1, Bucarest , 2002, pp. 49-63, RM-ISSN 0035-4066.

**Da87.** **M. Iordache,** I. Luican, Lucia Dumitriu, L. Mandache, "An Efficient Symbolic Analysis Method for Analog Circuits in Transient Behaviour", EMES'03, 29-30 Mai, 2003, Analele Universității din Oradea, Fascicola Eletrotehnică, pp. 221-227.

**Da88.** **M. Iordache,** Lucia Dumitriu, "Diakoptic Techniques for Symbolic Analysis of Large-Scale Analog Circuits", Revue Roum. Sci. Techn.- Électrotechn. et Énerg., Bucarest , Tome 47, No. 3 , Bucarest, 2002, pp. 279-294, RM-ISSN 0035-4066.

**Da89.** **M. Iordache,** Lucia Dumitriu, L. Mandache, "Time-Domain Modified Nodal Analysis for Large-Scale Analog Circuits", Revue Roum. Sci. Techn.- Électrotechn. et Énerg., Bucarest, Tome 48, No. 2-3, Bucarest, 2003, pp. 257-268, RM-ISSN 0035-4066.

**Da90.** **M. Iordache,** Lucia Dumitriu, I. Luican, "Tearing Approach in Circuit Function Symbolic Generation and in Large-Change Multiparameter Sensitivity Calculation", Revue Roum. Sci. Techn.- Électrotechn. et Énerg., Bucarest, Tome 49, No. 3, Bucarest, 2004, pp. 309-317, RM-ISSN 0035-4066.

**Da91.** N. Voicu, **M. Iordache,** "Steady-State Thermal Field Analysis from the Turbo-Generator Rotor with Direct Cooling", Revue Roum. Sci. Techn.- Électrotechn. et Énerg., Bucarest, Tome 49, No. 3 , Bucarest , 2004, pp. 343-354, RM-ISSN 0035-4066.

**Da92.** , **M. Iordache,** Lucia Dumitriu, I. Matei, "A Numerical Multi-Rate Method for Steady-State Analysis of Radio Frequency Integrated Circuits", Revue Roum. Sci. Techn.- Électrotechn. et Énerg., Bucarest , Tome 51, No. 3 , Bucarest , 2006, pp. 281-291, RM-ISSN 0035-4066.**Revistă cotată ISI.**

**Da93.** **M. Iordache,** Lucia Dumitriu, G. Stamatescu, "A Numerical Two-Time Approach for RF-IC Analysis", Analele Universității din Craiova, Seria Inginerie Electrică, Anul 30, nr. 30, 2006, pp. 2-7, ISSN 1842-4805.

**Da94.** **M. Iordache,** Lucia Dumitriu, Cătălina Popescu, "A novel time method for the simulation of the Analog circuits driven by multi-tone signals", WSEAS Transaction on Signal Processing, Issue 10, Volume 2, October 2006, pp. 1400-1407, ISSN: 1790-5022.

**Da95. Mihai Iordache**, Lucia Dumitriu, Catalin Dumitriu, Nicolae Voicu, Dragos Niculae, "Hybrid symbolic method for steady-state thermal field analysis", Conference, Excellence Research – A Way to E.R.A, October 24-26, Brasov, Romania, 2007, Editura Tehnică, ISSN: 1843 – 5904, pp. 258\_1 – 258\_6.

**Da96.** Lucia Dumitriu, Mihai Iordache, „A New Symbolic Hybrid Method for Analog Circuits”, The Scientific Bulletin of Electrical Engineering Faculty, Year 7, No. 1 (7), pp. 77-80, 2007, ISSN 1843-6188.

**Da97. Mihai Iordache**, Lucia Dumitriu, Elena Rotar, Gabriela Nicolescu, Aurora Joga, Nicolae Voicu, Catalin Dumitriu, Dragos Niculae, "A new electro insulating varnish in H class used to improve the electrical motor performances", Conference, Excellence Research – A Way to Innovation, July 27-29, Brasov, Romania, 2008, Editura Tehnică, ISSN: 1844 – 7090, pp. 258-1 – 258-6.

**Da98. Mihai Iordache**, Lucia Dumitriu, Dragos Niculae, "A New Reduced-Order Technique Based on State Equations", ACTA Electrotehnica Proceedings of the 2<sup>nd</sup> International Conference on Modern Power Systems, MPS 2008, Mediamira Science Publisher, ISSN: 1841 – 3323, pp. 444 – 449.

**Da99.** Lucia Dumitriu, **Mihai Iordache**, "Increasing Analysis Efficiency of Analogue Circuits by Order Reduction", ACTA Electrotehnica Proceedings of the 2<sup>nd</sup> International Conference on Modern Power Systems, MPS 2008, Mediamira Science Publisher, ISSN: 1841 – 3323, pp. 352 – 356.

**Da100. Mihai Iordache**, Lucia Dumitriu, Elena Rotar, Gabriela Nicolescu "Changing the Thermal Class of the Electrical Machines by Using a New Electro Insulating Varnish", ACTA Electrotehnica Proceedings of the 2<sup>nd</sup> International Conference on Modern Power Systems, MPS 2008, Mediamira Science Publisher, ISSN: 1841 – 3323, pp. 361 – 365.

**Da101.** M. Iordache, Lucia Dumitriu, M. Mandache, „Efficient Time-Domain Analysis of Nonlinear Analog Circuits Driven by Multi-Tone”, The Scientific Bulletin of Electrical Engineering Faculty, Year 9, No. 2, pp. 47-51, 2009, ISSN 1843-6188.

**Da102.** Iulia Dumitrescu, Mihaela Ioniță, Jean-Marie Paillot, **M. Iordache**, „Théorie des oscillateurs couplés appliquée aux antennes réseaux”, The Scientific Bulletin of Electrical Engineering Faculty, Year 9, No. 2, pp. 27-36, 2009, ISSN 1843-6188.

**Da103. M. Iordache**, M. Dogaru, D. Niculae, „Aupra modelării regimurilor dinamice ale mașinii sincrone”, EEA - Electrotehnica, Electronica, Automatica, 57, Nr.4, 2009, pp. 42-46.

**Da104.** N. Voicu, Lucia Dumitriu, **M. Iordache**, D. Niculae "Modeling of the Induction Motor Ventilation by Electric Circuits", U.P.B. Sci. Bull. Series C, Vol. 71, Iss 4, pp. 175-182, ISSN 1454-234x.

**Da105.** Ioana - Gabriela Sârbu, **Mihai Iordache**, Lucian Mandache, "A New Model for ac Plunger-Type Magnets in Steady-State Regime", Annals of the University of Craiova, Electrical Engineering, No. 34, 2010, pp. 19 - 24, ISSN 1842 - 4805.

**Da106. Mihai Iordache**, Jean-Marie Paillot, Iulia Dumitrescu, Mihaela Ioniță, "Analysis of Coupled Oscillators Applied to Antenna Arrays", Annals of the University of Craiova, Electrical Engineering, No. 34, 2010, pp. 25 - 28, ISSN 1842 - 4805.

**Da107. Mihai Iordache**, Mihai Dogaru, Dragoș Niculae, Ileana Calomfirescu, "Computer – Aided Analysis of Induction Motor", Annals of the University of Craiova, Electrical Engineering, No. 34, 2010, pp. 224 - 228, ISSN 1842 – 4805.

**Da108.** Lucia Dumitriu, **M. Iordache**, L. Mandache, Ioana-Gabriela Sirbu, Iulia Dumitrescu, "SPICE-like Models for Nonlinear Capacitors", ACTA Electrotehnica Proceedings of the 4<sup>th</sup> International Conference on Modern Power Systems, MPS 2011, Mediamira Science Publisher, ISSN: 1841 – 3323, indexare: Viniti, DOAJ, pp. 151 – 154.

**DA109.** Ioana-Gabriela Sirbu, L. Mandache, Lucia Dumitriu, **M. Iordache**, "DC Shunt Motor Nonlinear Model for Dynamic Simulations", ACTA Electrotehnica Proceedings of the 4<sup>nd</sup> International Conference on Modern Power Systems, MPS 2011, Mediamira Science Publisher, ISSN: 1841 – 3323, ; indexare: Viniti, DOAJ, pp. 434 – 439.

**Da110. M. Iordache**, M. Dogaru, D. Cazacu, D. Niculae, "Dynamic Simulation of the Asynchronous Machines", The Scientific Bulletin of Electrical Engineering Faculty, Year 11, No. 1 (15) , pp. 25-30, 2011, ISSN 1843-6188.

**Da111.** D. Niculae, Lucia Dumitriu, **M. Iordache**, A. Ilie, L. Mandache, "Magnetic Resonant Couplings Used in Wireless Power Transfer to Charge the Electric Vehicle Batteries", Buletinul AGIR, anul xvi, No. 4, Octombrie - Decembrie, 2011, Proceedings of the 4<sup>nd</sup> ELS 2011, Editura AGIR, ISSN: 1224 – 7928, pp. 155 – 158.

**Da112.** Lucia Dumitriu, **M. Iordache**, C. Dumitriu, Georgiana Zainea, L. Mandache, Y. Neau, "Circuit Theory VS Coupled Mode Theory in Witricity Concept Description", Buletinul AGIR, anul xvi, No. 4, Octombrie - Decembrie, 2011, Proceedings of the 4<sup>nd</sup> ELS 2011, Editura AGIR, ISSN: 1224 – 7928, pp. 177 – 180.

**Da113.** D. Niculae, Lucia Dumitriu, **M. Iordache**, L. Mandache, Georgiana Zainea, „Wireless Power Optimal Transfer in Magnetic Coupled Resonators”, ”, The Scientific Bulletin of Electrical Engineering Faculty, Year 911 No. 2 (16), pp. 47-51, 2011, ISSN 1843-6188.

**Da114.** L. Mandache, D. Topan, **M. Iordache**, I.G. Sirbu, *SPICE Model for Fast Time Domain Simulation of Power Transformers, Exploiting the Ferromagnetic Hysteresis and Eddy-Currents*, Advances in Nonlinear Dynamics & Synchronization with Selected Applications in Theoretical Electrical Engineering; Series Studies in Computational Intelligence, ISSN 1860-949X (accepted for publication); indexare: SpringerLink.

#### **Db. Lucrări publicate în volume cu referenți (neindexate)**

**Db1. M. Iordache**, "O metodă de analiză a circuitelor electrice și electronice neliniare în regim tranzitoriu", Com. la Ses. Șt. Optimizarea echipamentelor electrice și electronice, Universitatea din Brașov, noiembrie 1978, pp. 107-115.

**Db2. M. Iordache**, "A new algorithm and program of the analysis of linear network with controlled sources, magnetic couplings and excess elements in transient behaviour", "3rd International Symp. on Control Systems and Computer Science", Bucharest 14-16 iunie, 1979, pp. 123-131.

**Db3. M. Iordache**, "Asupra ecuațiilor de stare ale circuite-lor electrice", Com. la Ses. de Comunicări Tehnico-științifice, I.P.P. Timișoara, 27-28 oct., 1978, pp. 46-55.

**Db4. M. Iordache**, "A sparse matrix technique for tree generation and sign factor calculation", "4th International Conference on Control Systems and Computer Science", Bucharest 17-20 June, 1981, 93-102.

**Db5. M. Iordache**, Diana Iordache, "A tableau method for the analysis of nonlinear electrical networks in transient behaviour", "4th International Conference on Control Systems and Computer Science", Bucharest 17-20 June, 1981, 179-187.

**Db6. M. Iordache**, Lucia Dumitriu, "Metodă de analiză pentru circuitele parametrice", A VI-a Conferință de Sisteme Automate și Informaționale în Industrie, București, 22-25 mai, 1985, pp. 48-59.

**Db7.** R. Voinea, M. Atanasiu, **M. Iordache**, I. Talpășanu, "Kinematics analysis through the independent loop method of a plane mechanisms", Fourth IFtoMM International Symposium on Linkages and Computer-Aided Design Methods SYROM'85, Bucharest July 4-9, 1985, 89-101.

**Db8.** R. Voinea, M. Atanasiu, **M. Iordache**, I. Talpășanu, "L'analyse cinetostatique des mecanisme plans a l'aide d'une methode matriciele; le programme VAIT", Fourth IFtoMM International Symposium on Linkages and Computer-Aided Design Methods SYROM'85, Bucharest July 4-9, 1985, pp. 145-156.

**Db9.** **M. Iordache**, M. Dogaru, N. Voicu, "Digital computer-aided mathematical modeling of the high power turbogenerator operating condition in case of a sudden three-phase short-circuit and asynchronous operation", INCEMADS'86 International Conference on Electrical Machines and Drive Systems Eforie Nord, România, 16-17 sept., 1986, 232-241.

**Db10.** **M. Iordache**, "Time analysis of large-scale circuits by a new diakoptic method", Sixth International Symposium on Networks, Systems and Signal Processing, ISYNT'89, June 27-29, Zagreb, Yugoslavia, pp. 129-137.

**Db11.** **M. Iordache**, "On the analysis of large-scale circuits", International 90 Cetinje Conference Signals & Systems Sept. 3-5, 1990, pp. 39-47.

**Db12.** **M. Iordache**, Lucia Dumitriu, "A new decomposition method for large-scale electrical network analysis", 8th International Conference on Control Systems and Computer Science, Bucharest 22-25 May, 1991, 231-241.

**Db13.** **M. Iordache**, N. Voicu, "A Method for Thermal Field Determination in Turbo-Generator Rotors with Direct Cooling", Proceedings Part 2, International Conference on the Evolution and Modern Aspects of Synchronous Machines Zurich, Switzerland, 27-29 August 1991, pp. 580-586.

**Db14.** **M. Iordache**, "Modified Nodal Analysis for Large-scale Piecewise-Linear Nonlinear Electric Circuits", Workshop on Nonlinear Circuits and Systems IEEE Romania CAS/CS Chapter, "Politehnica" University of Bucharest October 31-st 1992, pp. 15-72.

**Db15.** **M. Iordache**, "A new symbolic or numeric-symbolic generation method of the network functions", Second International Workshop on Symbolic Methods and Applications to Circuit Design, SMACD'92, Universita di Firenze, ITALY, October, 8-9, 1992, pp. 147-151. **Proceeding cotat ISI.**

**Db16.** **M. Iordache**, Lucia Dumitriu, M. Perpelea, "Diakoptic Analysis for Large-Scale Nonreciprocal Electrical Circuits", 9th International Conference on Control Systems and Computer Science, CSCS 9, Bucharest 25-28 May 1993, Volume 1, pp. 101-110.

**Db17.** **M. Iordache**, Diana Iordache, "The Digital Computer as a Tool for Large-Scale Nonlinear Circuit Simulation", International Conference on Computer Aided Learning and Instruction in Science and Engineering, CALISCE'94, August 31, September 1-2 1994, Paris, France, pp. 361-368.

**Db18.** **M. Iordache**, Lucia Dumitriu, "Tree or S-Forest Generation Diakoptic Method Used in Large-Scale Electric and Electronic Circuit Symbolic Analysis", Third International Workshop on Symbolic Methods and Applications to Circuit Design, SMACD'94, Sevilla - Spain, October 6-7, 1994, pp. 103-113.

**Db189.** **M. Iordache**, Lucia Dumitriu, "O metodă de analiză hibridă generalizată a circuitelor electrice neliniare de mari dimensiuni", Sesiunea Științifică dedicată Domnului Profesor Alexandru Timotin, Universitatea "Politehnica" din București, 6-7 Mai 1995, pp. 71-82.

**Db19.** **M. Iordache**, N. Voicu, "Modelarea încălzirii statorului motorului asincron trifazat în perioada pornirii", Sesiunea Științifică dedicată Domnului Profesor Alexandru Timotin, Universitatea "Politehnica" din București, 6-7 Mai 1995, 82-91.

**Db20.** **M. Iordache**, Lucia, Dumitriu, "Diakoptic Analysis for Large-Scale Complex Nonlinear Electrical Circuits", Proceedings of A XXVI Sesiune de Comunicări Științifice cu Participare Internațională, Vol. 6, București, 16-17 Noiembrie, 1995, pp. 5-12.



**Db21. M. Iordache**, Lucia Dumitriu, “Analiza ierarhică a circuitelor electrice de mari dimensiuni”, Sesiunea științifică a catedrei de Electrotehnică, U.P.P.B., București 14-16 aprilie 1996, pp. 125-131.

**Db22. M. Iordache**, Lucia Dumitriu, “A New Method for Common Normal Tree Generation”, Proceedings of The Symposium on Electronics and Telecommunications, Timișoara, September 26-27, 1996, Vol. III, pp.33-38.

**Db23. M. Iordache**, N. Voicu, “Modelarea încălzirii statorului motorului asincron trifazat cu rotorul în scurtcircuit în perioada pornirii”, Sesiunea de Comunicări în Domeniul Mașinilor Electrice, MES’96, 28-29 Noiembrie 1996, U.P.B., București, pp.44-52..

**Db24.** Lucia Dumitriu, **M. Iordache**, “Complex Hybrid Matrix Generation of Nonlinear Circuits Driven by Multi-Tone Signals”,. SIMPOZIONUL JUBILIAR “ELECTROTEHNICA 1921-1996”, 06-07 Decembrie, 1996, U.P.P.B., București, 52-62.

**Db25.** F. Spinei, **M. Iordache**, “On the Analysis of Some Resistive Nonlinear Electrical Circuits”, SIMPOZIONUL JUBILIAR “ELECTROTEHNICA 1921-1996”, 06-07 Decembrie, 1996, U.P.P.B., București, pp.113-117.

**Db26. M, Iordache**, “The digital computer as a tool for large-scale circuit simulation”, Proceedings of the 1<sup>st</sup> International Workshop, CAD IN ELECTROMAGNETISM AND ELECTRICAL CIRCUITS CADEMEC 97, 5-7 August, 1997, Cluj-Napoca, România, pp. 80-86.

**Db27.** D. Ioan, M. Rebican, **M. Iordache**, “Approximated SPICE Models of Nonlinear Magnetic Circuit Based on Field Solution”, ENDE’97, Reggio Calabria, Italy, Sept. 13-14, 1997, pp. 312-317

**Db28. M. Iordache**, Lucia Dumitriu, “SCAP - Symbolic Circuit Analysis Program”, Proceedings SCS’97, International Symposium on Signal Circuits and Systems, Iași, România, October 2-3, 1997, Volume 1 of 2, pp. 43-46.

**Db29. M. Iordache**, Lucia Dumitriu, A. Botinaț, R. Muntean, “A New Approach to Approximate Symbolic Analysis of Large Analog Integrated Circuits”, Workshop on Symbolic Analysis of Electrical Circuits, IEEE Romania CAS Chapter, "Politehnica" University of Bucharest December 5-th 1997, pp.1-11.

**Db30.** Lucia Dumitriu, **M. Iordache**, “A Nodal Generalized Approach for Nonreciprocal Electrical Circuits”, Proceedings of the International Conference on Applied and Theoretical Electricity ICATE’98, Volume I, Theoretical Electricity & Avionics and Navigation System, Editura Sitech Craiova, Romania, June 4-6, 1998, pp. 48-53.

**Db31.** Lucia Dumitriu, **M. Iordache**, “New analysis methods for nonreciprocal circuits”, Analele Universității din Oradea, Fascicola ELECTROTEHNICA, Session:A, 1998, Second International Conference on Renewable Sources and Environmental Electro-Technologies, RSEE’98, May 27-30 1998, Hotel MUNCCELUL, Felix-Spa, ROMANIA, pp. 30-35.

**Db32. M. Iordache**, Lucia Dumitriu, R. Muntean, R. Botinaț, “A new algorithm for scanning all spanning trees of undirected or directed graphs in increasing weight order”, Analele Universității din Oradea, Fascicola ELECTROTEHNICA, Session:A, 1998, Second International Conference on Renewable Sources and Environmental Electro-Technologies, RSEE’98, May 27-30 1998, Hotel MUNCCELUL, Felix-Spa, ROMANIA, pp. 42-49.

**Db33. M. Iordache**, Lucia Dumitriu, R. Muntean, R. Botinaț, “An algorithm for finding all spanning trees in increasing weight order”, Proceedings of the Fifth International Workshop on Symbolic Methods and Applications in Circuit Design, SMACD’98, Kaiserslautern, October 8-9, 1998, pp. 99-105.

**Db205.** Fl. Constantinescu, Miruna Nițescu, **M. Iordache**, Lucia Dumitriu, R. Muntean, R. Botinaț, “Selection of the best hierarchical structure in symbolic analysis problems”, Proceedings of the Fifth International

Workshop on Symbolic Methods and Applications in Circuit Design, SMACD'98, Kaiserslautern, October 8-9, 1998, pp. 187-190.

**Db34.** Lucia Dumitriu, **M. Iordache**, R. Muntean, R. Botinaș, "Efficient generation on symbolic network functions using two-graph decomposition on levels", Proceedings of the Fifth International Workshop on Symbolic Methods and Applications in Circuit Design, SMACD'98, Kaiserslautern, October 8-9, 1998, pp. 191-198.

**Db35.** Lucia, Dumitriu, **M. Iordache**. "Techniques for Fast Symbolic Analysis of Large Analog Integrated Circuits", SCS' 99, Iași, Romania, July 6-7, 1999, pp. 57-60.

**Db36.** **M. Iordache**, Lucia Dumitriu. "Diakoptic Analysis for Large-Scale Circuits", EMES'99, 27-29 Mai, 1999, Analele Universității din Oradea, Fascicola Eletrotehnică, pp. 33-39.

**Db37.** **M. Iordache**, Lucia Dumitriu, "A Method for Solving Large-Scale Nonlinear Circuits", Proceedings of the 2<sup>nd</sup> International Workshop, CAD in Electromagnetism and Electrical Circuits, CADEMEC'99, 7-9 September, 1999, Cluj-Napoca, Romania, pp. 52-58.

**Db38.** **M. Iordache**, Lucia Dumitriu, "Nonlinear Source Method for Large-Scale Circuit Analysis", Proceedings on the International Conference on Applied and Theoretical Electricity, Symposium on Cryoelectrotechnics and Cryogenics, ICATE'2000, SCC 7, Sitech Publisher, Craiova, May 25-26, 2000, ROMANIA, pp. 37-43.

**Db39.** Lucia Dumitriu, **M. Iordache** "Analog Circuits with Excess Elements and Inconsistent Initial Conditions", Proceedings on the International Conference on Applied and Theoretical Electricity, Symposium on Cryoelectrotechnics and Cryogenics, ICATE'2000, SCC 7, Sitech Publisher, Craiova, May 25-26, 2000, ROMANIA, pp. 44-50.

**Db40.** **M. Iordache**, Lucia Dumitriu, "Symbolic state equations for analog circuits with excess elements", Istanbul, June, 2000, on CD.

**Db41.** **M. Iordache**, Lucia Dumitriu, "Symbolic state equations for linear analog circuits with degeneracies", ISEM-2000, Universitatea Valahia Târgoviste, 4-5 Septembrie 2000, on CD.

**Db42.** Lucia Dumitriu, **M. Iordache**, "Enhanced symbolic or partial symbolic techniques for circuit function generation", ISEM-2000, Universitatea Valahia Târgoviste, 4-5 Septembrie 2000, on CD.

**Db43.** Lucia Dumitriu, **M. Iordache**, "High performance techniques for symbolic analysis and design of analog circuits", European Conference on Intelligent Technologies, ECIT 2000, Iasi, Romania, sept. 25-28, 2000, on CD.

**Db44.** **M. Iordache**, Lucia Dumitriu, "Symbolic state equations for analog circuits with degeneracies", European Conference on Intelligent Technologies, ECIT 2000, Iasi, Romania, sept. 25-28, 2000, on CD.

**Db45.** **M. Iordache**, Lucia Dumitriu, "Computer Formulation of Symbolic State Equations for Analog Nonlinear Circuits with Excess Elements", Proceedings of 2000 International Symposium on Nonlinear Theory and its Applications, NOLTA2000, Volume 1, TU Dresden Conference Center, Dresden, Germany, September 17-21, 2000, pp. 355-358.

**Db46.** Lucia Dumitriu, **M. Iordache**, I. Matei, "A Complex Tool for Symbolic Analysis and Design of Linear Analog Circuits", Proceedings of 6<sup>th</sup> International Workshop on Symbolic Methods and Applications in Circuit Design, SMACD 2000, Instituto Superior Técnico, Lisbon, Portugal, October 12-13, 2000, pp. 21-27.

**Db47.** **M. Iordache**, Lucia Dumitriu, D. Delion, "Automatic Formulation of Symbolic State Equations for Analog Circuits with Degeneracies", Proceedings of 6<sup>th</sup> International Workshop on Symbolic Methods and Applications in Circuit Design, SMACD 2000, Instituto Superior Técnico, Lisbon, Portugal, October 12-13, 2000, pp. 65-72.

**Db48.** F. Constantinescu, Miruna Nițescu, **M. Iordache**, Lucia Dumitriu, “Finding Approximative Symbolic Pole/Zero Expressions Using the Eigenvalue Computation for State-Like Matrices”, Proceedings of 6<sup>th</sup> International Workshop on Symbolic Methods and Applications in Circuit Design, SMACD 2000, Instituto Superior Técnico, Lisbon, Portugal, October 12-13, 2000, pp. 79-82.

**Db49.** Lucia Dumitriu, **M. Iordache**, I. Matei, Computer-aided analysis and design of linear analog circuits, Symposium on Advanced Topics in Electrical Engineering, ATEE 2000, Univ. Politehnica Bucuresti, pp. 7-12.

**Db50.** **M. Iordache**, Lucia Dumitriu, D. Delion, “Symbolic computation of circuit functions using state equations”, Symposium on Advanced Topics in Electrical Engineering, ATEE Dec. 2000, Univ. Politehnica Bucuresti, pp. 1-6.

**Db51.** **M. Iordache**, Lucia Dumitriu, “Hybrid Symbolic Analysis of Resistive Nonlinear Circuits”, Third International Conference on Renewable Sources and Environmental Electro-Technologies, RSEE’01, May 27-30, 2001, Oradea, ROMANIA, pp. 30-35.

**Db52.** **M. Iordache**, Lucia Dumitriu, “A Hierarchical Approach to Automatically Formulate the Symbolic State Equations of Large-Scale Analog Circuits”, SCS’ 01, Iași, Romania, July 10-11, 2001, pp. 221-224.

**Db53.** **M. Iordache**, Lucia Dumitriu, “A Decomposition Technique for Setting up the Symbolic State Equations of Large-Scale Analog Circuits”, Proceedings of The 115<sup>th</sup> European Conference on Circuit Theory and Design, ECCTD’01, Helsinki University of Technology, Espoo, Finland, 28-31 August 2001, Volume 1 of 3, pp. 201-204.

**Db54.** Fl. Constantinescu, Miruna Nițescu, **M. Iordache**, Lucia Dumitriu, “A Program for the Computation of the Approximate Symbolic Pole-Zero Expressions”, Proceedings of The 115<sup>th</sup> European Conference on Circuit Theory and Design, ECCTD’01, Helsinki University of Technology, Espoo, Finland, 28-31 August 2001, Volume 1 of 3, pp. 197-200.

**Db55.** **M. Iordache**, Lucia Dumitriu, “A diakoptic approach to automatically formulate the symbolic state equations of large-scale analog circuits”, Proc. of The Third Japan Romania Joint Seminar on Applied Electromagnetics and Mechanical Systems, Sept. 11-15, 2001, Felix Spa, Oradea, pp. 93-100.

**Db56.** **M. Iordache**, Lucia Dumitriu, Fl. Hăntilă, N. Voicu, ” A Computing Method for Thermal Field Determination in Turbo-Generator Rotors”, Proc. of The Third Japan Romania Joint Seminar on Applied Electromagnetics and Mechanical Systems, Sept. 11-15, 2001, Felix Spa, Oradea, pp. 101-108.

**Db57.** F. Constantinescu, Miruna Nitescu, **M. Iordache**, Lucia Dumitriu, ”A Program for the Computation of the Approximate Symbolic Pole/Zero Expressions for linear Electromechanical Systems”, Proc. of The Third Japan Romania Joint Seminar on Applied Electromagnetics and Mechanical Systems, Sept. 11-15, 2001, Felix Spa, Oradea, pp. 49-54.

**Db58.** **M. Iordache**, Lucia Dumitriu, “Setting up the symbolic state equations of large-scale circuits by a diakoptic method”, ISEM-2000, Universitatea Valahia Târgoviste, 4-5 Septembrie 2001, on CD.

**Db59.** **M. Iordache**, Lucia Dumitriu, Fl. Hăntilă, N. Voicu, “Thermal field computation in turbo-generator rotors with direct or indirect cooling”, ISEM-2000, Universitatea Valahia Târgoviste, 4-5 Septembrie 2001, on CD.

**Db60.** L. Mandache, **M. Iordache**, Lucia Dumitriu, “Time-Domain Modified Nodal Analysis for Analog Circuits”, Proceedings of 7<sup>th</sup> International Workshop on Symbolic Methods and Applications in Circuit Design, SMACD 2002, October 10-11, 2002, Sinaia, Romania, pp. 71-76.

**Db61. M. Iordache**, Lucia Dumitriu, I. Matei, “A Method for Nonlinear Analog Circuit Analysis in Transient Behaviour”, Proceedings of 7<sup>th</sup> International Workshop on Symbolic Methods and Applications in Circuit Design, SMACD 2002, October 10-11, 2002, Sinaia, Romania, pp. 77-82.

**Db62. M. Iordache**, Lucia Dumitriu, A. Kossir, “Efficient Decomposition Techniques for Symbolic analysis of Large-Scale Analog Circuits”, Proceedings of 7<sup>th</sup> International Workshop on Symbolic Methods and Applications in Circuit Design, SMACD 2007, October 10-11, 2002, Sinaia, Romania, pp. 83-88.

**Db63.** Lucia Dumitriu, **M. Iordache**, L. Mandache, “Diakoptic Modified Nodal Method for Symbolic Analysis of Analog Circuits”, Proceedings of 7<sup>th</sup> International Workshop on Symbolic Methods and Applications in Circuit Design, SMACD 2002, October 10-11, 2002, Sinaia, Romania, pp. 89-94

**Db64. M. Iordache**, Lucia Dumitriu, Z. Erdei, “Tolerance analysis of analog circuits”, Advanced Topics in Electrical Engineering (ATEE’02), Politehnica University of Bucharest, 29<sup>th</sup> November 2002, ISBN: 973-652-674-7, pp. 25-30.

**Db65. M. Iordache**, Lucia Dumitriu, “Diakoptic techniques for symbolic analysis of analog circuits”, Advanced Topics in Electrical Engineering (ATEE’02), Politehnica University of Bucharest, 29<sup>th</sup> November 2002, ISBN: 973-652-674-7, pp. 31-34.

**Db67.** M. Iordache, **Lucia Dumitriu**, “Setting up the Symbolic State Equations of Large-Scale Circuits by a Diakoptic Method”, Proc. ISEE’02, Universitatea Valahia Târgoviste, 3-4 June 2002, pp. 6-24.

**Db68. M. Iordache**, Lucia Dumitriu, Z. Erdei, “A Tearing Approach for Symbolic Analysis Based on Large-Change Multiparameter Sensitivities”, Seminarul Național de Electrotehnică Teoretică SNET’03, Bucuresti, Romania, 18 iunie, 2003, on CD.

**Db69.** Lucia Dumitriu, **M. Iordache**, **Z. Erdei**, “Topological Techniques for Fast Symbolic Analysis of Large Analogue Integrated Circuits” Seminarul Național de Electrotehnică Teoretică SNET’03, Bucuresti, Romania, 18 iunie, 2003, on CD.

**Db70. M. Iordache**, Lucia Dumitriu, “A Diakoptic Approach to Symbolic Computation of the Circuit Functions and of Large-change Multiparameter Sensitivities”, Proc. of the European Conference on Circuit Theory and Design, ECCTD’03, Cracow, Poland, 1-4 Sept. 2003, pp. III-61-III-64.

**Db71.** Lucia Dumitriu, **M. Iordache**, “Efficient Procedures for the Automatic Generation of Transfer Functions in Symbolic Form by Two-Graph Tree Enumeration”, Proc. of the European Conference on Circuit Theory and Design, ECCTD’03, Cracow, Poland, 1-4 Sept. 2003, pp. II-398-II-401.

**Db72. M. Iordache**, Lucia Dumitriu, Miruna Nițescu, F. Constantinescu, “An Efficient Symbolic Analysis Method for Large-Scale Analog Circuits”, ANCME 2003 – Advances in Numerical Computation Methods in Electromagnetism, Proceedings of the 2<sup>nd</sup> Flemish – Romanian Workshop, 15-16, May, 2003, Gent, Belgium, pp. 110-124, ISBN 973-686-460-X.

**Db73. M. Iordache**, I. Luican, Lucia Dumitriu, L. Mandache, “An Efficient Symbolic Analysis Method for Analog Circuits in Transient Behaviour”, EMES’03, 29-30 Mai, 2003, Analele Universității din Oradea, Fascicula Electrotehnică, pp. 213-219.

**Db74. M. Iordache**, Lucia Dumitriu, “A tearing technique for generation of the transfer functions and of large-change multiparameter sensitivities”, ISEE 2003 – International Symposium on Electrical Engineering, November 3-4, 2003, Târgoviște, Romania, pp. 331-337, on CD.

**Db75.** N. Voicu, **M. Iordache**, M. Perpelea, G. Andonescu, “Steady-state thermal field analysis from the turbo-generator rotor with direct cooling”, ISEE 2003 – International

Aymposium on Electrical Engineering, November 3-4, 2003, Târgoviște, Romania, pp. 163-169, on CD.

**Db76.** F. Constantinescu, Miruna Nițescu, **M. Iordache**, Lucia Dumitriu, “Selection of the Best Hierarchical Structure in Symolic Analysis Problems”, ANCME 2003 – Advances in Numerical Computation Methods in Electromagnetism, Proceedings of the 2<sup>nd</sup> Flemish – Romanian Workshop, 15-16, May, 2003, Gent, Belgium, pp. 192-1197.

**Db77.** Lucia Dumitriu, **M. Iordache**, I. Luican, “Symbolic analysis by decomposition of complex analog circuits”, CaVIS – Computer-Aided Verification of Information Systems - A Practical Industry-Oriented Approach, Febr. 27-28, 2004, Romanian-Austrian Workshop Timisoara, Romania, pp. 52-55, . **Db248.** Lucia Dumitriu, **Mihai Iordache**, Ion Matei, Zoltan Erdei, “Particular Aspects of Symbolic Analysis of the Analog Circuits with Exces Elements“, Proceedings of 7<sup>th</sup> International Conference on Applied on Theoretical Electricity, ICATE’ 04, Baile Herculane, Romania, October 14-15, 2004, pp. 29-34, ISBN: 973-8043-554-4.

**Db78.** **Mihai Iordache**, Lucian Mandache, Lucia Dumitriu, "The Semistate Method for the Time-Domain Analysis of Large Scale Analog Circuits", Proceedings of 7<sup>th</sup> International Conference on Applied on Theoretical Electricity, ICATE’ 04, Baile Herculane, Romania, October 14-15, 2004, pp. 35-40, ISBN: 973-8043-554-4.

**Db79.** Lucia Dumitriu, **Mihai Iordache**, Ilie Luican, "Complex Hybrid Symbolic Analysis of Nonlinear Analog Circuits Driven by Multi-Tone Signals", Proceedings of ICCSC’04, Moscow, June 27-28, 2004, pp. 123-130.

**Db80.** Lucia Dumitriu, **Mihai Iordache**, “Procedural and Computational aspects of circuit functions’ generation by state variable approach”, Proceedings of 8<sup>th</sup> International Workshop on Symbolic Methods and Applications in Circuit Design, SMACD 2004, September 23-24, 2004, Wroclaw, Poland, pp. 16-19, ISBN 0-9752353-1-1.

**Db81.** L. Mandache, Lucia Dumitriu, **Mihai Iordache**, “An Efficient Method for the Nonlinear and Parameter Analog Circuit Analysis in the Time Domain”, Proceedings of 8<sup>th</sup> International Workshop on Symbolic Methods and Applications in Circuit Design, SMACD 2004, September 23-24, 2004, Wroclaw, Poland, pp. 71-74, ISBN 0-9752353-1-1.

**Db82.** **Mihai Iordache**, Lucia Dumitriu, “A hierarchical tearing approach for symbolic analysis and calculation of large-change multiparameter symbolic sensitivities”, Proceedings of 8<sup>th</sup> International Workshop on Symbolic Methods and Applications in Circuit Design, SMACD 2004, September 23-24, 2004, Wroclaw, Poland, pp. 92-95, ISBN 0-9752353-1-1.

**Db83.** Lucia, Dumitriu, **Mihai Iordache**, “Performant techniques for symbolic analysis and optimal design of analog integrated circuits”, TIB-2004, 5-11 octombrie, 2004, Bucuresti.

**Db84.** **Mihai Iordache**, Lucia Dumitriu, “Reduced-ordin modeling techniques based on state variable space and their use in circuit simulation”, Proceeding of The International Symposium on Electrical Engineering, ISEE ‘04, October 27-28, 2004, Tirgoviste, Romania, on CD, pp. 101-118, ISBN: 973-712-038-8.

**Db85** Lucia Dumitriu, **Mihai Iordache**, ”Performant Techniques for Symbolic Analysis and Optimal Design of Analog Integrated Circuits”, Simpozionul National de Electrotehnica Teoretica, SNET’04, 22-23 October 2004, Bucharest, UPB, on CD, ISBN: 973-718-096-8.

**Db86.** **Mihai Iordache**, L. Mandache, Lucia Dumitriu, ”Analysis of Large-Scale Nonlinear Analog Circuits by Semistate Approach”, Simpozionul National de Electrotehnica Teoretica, SNET’04, 22-23 October 2004, Bucharest, UPB, on CD, ISBN: 973-718-096-8.

**Db87. M. Iordache**, Lucia Dumitriu, “Analog Circuit Analysis Based on the Reduce-Order of the State Equations”, Proceeding of Advanced Topics in Electrical Engineering – ATEE’04, 27-28 November 2004, U.P.P.B., Bucharest, on CD, ISBN: 973-652-674-7.

**Db88. L. Mandache**, Lucia Dumitriu, **M. Iordache**, “Nonlinear and Time-Variable Analog Circuit Analysis in Time Domain”, Proceeding of Advanced Topics in Electrical Engineering – ATEE’04, 27-28 November 2004, U.P.P.B., Bucharest, on CD, ISBN :973-652-674-7.

**Db89. N. Voicu, M. Iordache**, Lucia Dumitriu, “Thermal Field Analysis from the Turbo-Generator Rotor with Direct Cooling”, Proceeding of Advanced Topics in Electrical Engineering – ATEE’04, 27-28 November 2004, U.P.P.B., Bucharest, on CD, ISBN :973-652-674-7.

**Db90. M. Iordache**, Lucia Dumitriu, I. Matei, ”A numerical multi-rate method for steady-state analysis of RF-IC” , Simpozionul National de Electrotehnica Teoretica, SNET’05, May 12-14 2005, Bucharest, UPB, on CD, pp. 255-260, ISBN: 973-618-268-5.

**Db91. O. Stanica, M. Iordache**, Lucia Dumitriu, ”Determinarea factorului de semn” , Simpozionul National de Electrotehnica Teoretica, SNET’05, May 12-14 2005, Bucharest, UPB, on CD, pp. 228-233, ISBN: 973-618-268-5.

**Db92. M. Iordache**, Lucia Dumitriu, “Numerical Steady-State Analysis of RF-IC Driven by Multi-Tone Signals”, International Workshop on Genomic Signal Processing, GSP’05, 11-13 July, Bucharest, Romania, on CD, pp. 120-127.

**Db93. Lucia Dumitriu, M. Iordache**, “Symbolic Generation of Network Functions by Two-Graph Tree Enumeration Method”, 1<sup>st</sup> International Conference on Electronics, Computers and Artificial Intellingence, ECAI’05, July 1-2 2005, Pitesti, Romania, on CD, pp. 33-43.

**Db94. Lucia Dumitriu, M. Iordache**, “Numerical Steady-State Analysis of Nonlinear Analog Circuits Driven by Multi-Tone Signals”, NDES’05, September 18-20 2005, Postdam, Germany, pp. 59-63.

**Db95. M. Iordache**, Lucia Dumitriu, “Time Domain Diakoptic Analysis Based on Reduce-Order State Equations”, NDES’05, September 18-20 2005, Postdam, Germany, pp. 126-170.

**Db96. Lucia Dumitriu, M. Iordache**, “Numerical Steady-State Analysis of Nonlinear Analog Circuits with Widely Separated Time Scales”, ISEE 2005 – International Symposium on Electrical Engineering, 17-19 October, 2005, Târgoviște, Romania, pp. 25-28, ISBN: 973-712-101-5, Bibliotheca Publishing House, 2005.

**Db97. M. Iordache**, Nicoleta Ban, Otilia Nedelcu, “Circuit Analysis by Multi-Time Methods, Using Partial Differential Equations”, ISEE 2005 – International Symposium on Electrical Engineering, 17-19 October, 2005, Târgoviște, Romania, pp. 41-44, ISBN: 973-712-101-5, Bibliotheca Publishing House, 2005.

**Db98. Lucia Dumitriu, M. Iordache**, F. Constantinescu, M. Nitescu, “Techniques and Algorithms for Symbolic Computation Improvement of the Network Functions by Tree Enumeration”, Proc. of the European Conference on Circuit Theory and Design, ECCTD’05, Aug. 29- Sept. 2, 2005, Cork, Ireland, on CD.

**Db99. M. Iordache**, Lucia Dumitriu, “A multi-time method based on state equations for analog circuit analysis”, Proc. of 14<sup>th</sup> of Nonlinear Dynamic Electronic Systems 2006, NDES’06, June 6-9, 2006, Université de Bourgogne DIJON, France, pp. 57-60.

**Db100. Otilia Nedelcu, M. Iordache**, Diana Enescu, ”An efficient method for computing of the electric machine ventilation”, Proc. Of the 6th World Energy System Conference WESC’06, 10-12 July, 2006, Torino, Italy, pp.246-251, ISBN 10: 88-87380-51-1, ISBN 13: 978-88-87380-51-4.

**Db101. Mihai Iordache,** Lucia Dumitriu, “Companion Models and Boundary Conditions for Multi-Rate Steady-State Analysis of Integrated Analog Circuits”, Proceedings of Scientific Computing in Electrical Engineering, SCEE’06, September 17-22, 2006, Sinaia, România, <http://scee06.org>, Editura PRINTECH, pp. 41-54.

**Db102. Mihai Iordache,** Lucia Dumitriu, Zoltan Erdei, “Large-Scale Circuit Analysis Using a New Reduced-Order Technique Based on State Equations”, Proceedings of 9<sup>th</sup> International Workshop on Symbolic Methods and Applications in Circuit Design, SMACD 2006, October 12-13, 2006, Firenze, Italia, on CD, Firenze University Press, pp. 20-26, ISBN 88-8453-509-3.

**Db103.** Dragoş Neculai, Lucia Dumitriu, **Mihai Iordache,** “Fault detection and location in analog resistive circuits”, Proceedings of 9<sup>th</sup> International Workshop on Symbolic Methods and Applications in Circuit Design, SMACD 2006, October 12-13, 2006, Firenze, Italia, on CD, Firenze University Press, pp. 12-19, ISBN 88-8453-509-3.

**Db104.** Lucia Dumitriu, **Mihai Iordache,** Dragos Niculae, “State Variable Approach in Steady-State Analysis of Circuits Driven by Multi-Tone Signals”, Proceedings of 9<sup>th</sup> International Workshop on Symbolic Methods and Applications in Circuit Design, SMACD 2006, October 12-13, 2006, Firenze, Italia, on CD, Firenze University Press, pp. 12-19, ISBN 88-8453-509-3.

**Db105. M., Iordache,** Lucia Dumitriu, D. Niculae, Cătălina Popescu “Metode moderne pentru studiul regimului periodic al circuitelor integrate de radio frecventa”, TIB - 2006, 5-7 Octombrie 2006, Bucureşti.

**Db106. M. Iordache,** Lucia Dumitriu, Cătălina Popescu, “A novel time method for the simulation of the analog circuits driven by multi-tone signals”, Invited Paper at 5<sup>th</sup> WSEAS International Conference on Non-Linear Analysis, Non-Linear Systems and Chaos (NOLASC '06), October 16-18, 2006, Bucharest, România.

**Db107.** Lucia Dumitriu, **M. Iordache,** “Order Reduction by Explicit Moment Matching Based on Modified Nodal Equations”, Proceeding of the 5<sup>th</sup> International Symposium Advanced Topics in Electrical Engineering – ATEE’06, 24-25 November 2006 – Bucharest, ROMANIA, Electrical Engineering Faculty, Politehnica University of Bucharest, pp. 186-190, CD, ISBN (10) 973-8987-12-1; ISBN (13) 978-973-8987-12-8, Vol. 2 -2006 – ISBN (10) 973-8987-14-8; ISBN (13) 978-973-8987-14-2.

**Db108.** D., Niculae, **M. Iordache,** Lucia Dumitriu, “Utilizarea funcțiilor de transfer în diagnosticarea circuitelor electrice analogice”, Proceeding of the 5<sup>th</sup> International Symposium Advanced Topics in Electrical Engineering – ATEE’06, 24-25 November 2006 – Bucharest, ROMANIA, Electrical Engineering Faculty, Politehnica University of Bucharest, pp. 249-252, ISBN (10) 973-8987-12-1; ISBN (13) 978-973-8987-12-8, Vol. 2 -2006 – ISBN (10) 973-8987-14-8; ISBN (13) 978-973-8987-14-2.

**Db109. M. Iordache,** N. Voicu, Lucia Dumitriu, Camelia Petrescu, ”Steady-State Thermal Field Analysis of the Turbo-Generator Rotor with Direct Cooling ,, Proceeding of the International Symposium on Electrical Engineering and Energy Converters ELS 2007, 27-28 September 2007, Suceava – ROMANIA, pp. 14 – 19, ISBN: 978 – 973 – 666 – 259 -1.

**Db110. Mihai Iordache,** ”Metoda Nodală Modificată”, Simpozionul National de Electrotehnica Teoretica, SNET’07, 12-14 October 2007, Bucharest, UPB, on CD, pp. 10 - 20, ISBN: 973-718-096-8.

**Db111. Mihai Iordache,** Lucia Dumitriu, Dragoş Niculae ”A New Generalised Hybrid Method for Nonlinear Analog Circuit Analysis”, Simpozionul National de Electrotehnica Teoretica, SNET’07, 12-14 October 2007, Bucharest, UPB, on CD, pp. 34 – 44, ISBN: 973-718-096-8.

**Db112. Mihai Iordache**, Mihai Dogaru, Dragos Niculae, "Asupra modelării regimurilor dinamice ale mașinii sincrone", Simpozionul National de Electrotehnica Teoretica, SNET'08, 5-7 Iunie 2008, București, UPB, on CD, pp. 10 - 20, ISBN: 978-606-521-045-5.

**Db113. Mihai Iordache**, Lucia Dumitriu, Elena Rotar, Gabriela Nicolescu, Aurora Joga, Nicolae Voicu, Catalin Dumitriu, Dragos Niculae, "A new electro insulating varnish in H class used to improve the electrical motor performances", Conferinta "Cercetarea de Excelenta – O cale catre Inovare", Iulie 27-29, Brasov, Romania, 2008, pp. 258\_1 – 258\_6.

**Db114. Mihai Iordache**, Lucia Dumitriu, Elena Rotar, Gabriela Nicolescu, Aurora Joga, Nicolae Voicu, Dragos Niculae, "Improvement of the electrical motor performances by using an electro insulating varnish in H class and a trickle impregnation procedure", 4<sup>th</sup> International Conference on Technical and Physical Problems of Power Engineering, TPE 2008, Sept. 4-6 2008, Pitesti Romania.

**Db115.** Arif Mammadov, Neculai Galan, Lucia Dumitriu, Hikmat Hasanov, **Mihai Iordache**, Mihai Predescu, "Three –Phase Asynchronous Motor with Axial Flux and General Mathematic Model", 4<sup>th</sup> International Conference on Technical and Physical Problems of Power Engineering, TPE 2008, Sept. 4-6 2008, Pitesti Romania.

**Db116. Mihai Iordache**, Lucia Dumitriu, Neculai Galan, Mihai Predescu, Nicolae Voicu, Arif Mammadov, Dragos Niculae, "Modeling the ventilation system of the electrical machines by electric circuits", TPE 2008, Sept. 4-6 2008, Pitesti Romania.

**Db117. M. Iordache**, Lucia Dumitriu, Catalina Popescu, "An Efficient Method for RF Integrated Circuit Analysis", Proc. Of the 13<sup>th</sup> International Symposium on Discharges and Electrical Insulation in Vacuum, ISDEIV 2008, 15-19 September 2008, Bucharest – Romania, Volume 2, pp. 454-457, IEEE Catalog Number: CFP08430-PRT, ISBN: 979-973-755-382-9, ISSN: 1093-2941, .

**Db118. Mihai Iordache**, Lucia Dumitriu, "Sensitivity Analysis Using Auxiliary Networks", Proceedings of X<sup>th</sup> International Workshop on Symbolic and Numerical Methods, Modeling and Applications to Circuit Design, SM<sup>2</sup>ACD 2008, October 7-8, 2008, Institut fur Mikroelektronik – und Mechatronik – Systeme gGmbH Erfurt, Germany, pp. 23-29, ISBN 978-3-00-025761-2.

**Db119. Mihai Iordache**, Lucia Dumitriu, "Network Function Generation for Large-Scale Analog Circuits", Proceedings of X<sup>th</sup> International Workshop on Symbolic and Numerical Methods, Modeling and Applications to Circuit Design, SM<sup>2</sup>ACD 2008, October 7-8, 2008, Institut fur Mikroelektronik – und Mechatronik – Systeme gGmbH Erfurt, Germany, pp. 85-89, ISBN 978-3-00-025761-2.

**Db120.** Andrei Marascu, Lucia Dumitriu, **Mihai Iordache**, Dragos Niculae, "Tolerance Analysis for Analog Circuits", Proceedings of X<sup>th</sup> International Workshop on Symbolic and Numerical Methods, Modeling and Applications to Circuit Design, SM<sup>2</sup>ACD 2006, October 7-8, 2008, Institut fur Mikroelektronik – und Mechatronik – Systeme gGmbH Erfurt, Germany, pp. 165-171, ISBN 978-3-00-025761-2.

**Db121. Mihai Iordache**, Lucia Dumitriu, Elena Rotar, Gabriela Nicolescu, Aurora Joga, Nicolae Voicu, Dragos Niculae, "Improvement of the Electrical Machine Performances by Using an Electro Insulating Varnish in H Class", Proceeding of the 6<sup>th</sup> International Symposium Advanced Topics in Electrical Engineering – ATEE'08, 20-21 November 2008 – Bucharest, ROMANIA, Editura Printech, pp. 67-70, ISBN 978-606-521-137-7.

**Db122.** Dragos Niculae, Lucia Dumitriu, **Mihai Iordache**, "Heat Transfer Computation Using Electrical Circuit Analogy", Proceeding of the 6<sup>th</sup> International Symposium Advanced Topics in Electrical Engineering – ATEE'08, 20-21 November 2008 – Bucharest, ROMANIA, Editura Printech, pp. 126-129, ISBN 978-606-521-137-7.



**Db123. Mihai Iordache**, Lucia Dumitriu, Catalina Popescu, “A New Approach for Steady-State Analysis of the RF Circuits”, Proceeding of the 6<sup>th</sup> International Symposium Advanced Topics in Electrical Engineering – ATEE’08, 20-21 November 2008 – Bucharest, ROMANIA, Editura Printech, pp. 130-134, ISBN 978-606-521-137-7.

**Db124.** Nicolae Voicu, Lucia Dumitriu, **Mihai Iordache**, Dragoș Niculae, “Modeling of the Induction Motor Ventilation by Electric Circuits”, Proceeding of the 6<sup>th</sup> International Symposium Advanced Topics in Electrical Engineering – ATEE’08, 20-21 November 2008 – Bucharest, ROMANIA, Editura Printech, pp. 147-150, ISBN 978-606-521-137-7.

**Db125. Mihai Iordache**, Lucia Dumitriu, Lucian Mandache, “Practical Approach of Symbolic Analysis of Large-Scale Analog Circuits in Transient Behavior”, Proceedings CSCS – 17, 17<sup>th</sup> International Conference on Control Systems and Computer Science, 26-29 May 2009, Vol.I, Editura POLITEHNICA Press, pp. 335 - 338.

**Db126.** Lucian Mandache, **Mihai Iordache**, Lucia Dumitriu, “An Optimal Macromodeling Technique”, Proceedings CSCS – 17, 17<sup>th</sup> International Conference on Control Systems and Computer Science, 26-29 May 2009, Vol.II, Editura POLITEHNICA Press, pp. 39 - 43.

**Db127.** Dumitru Cazacu, **Mihai Iordache**, Mihai Mocanu, “Evaluation of the Temperature Distribution into a CPU Cooler Using Finite Element Method”, Proceedings of the International Conference on Electronics, Computers and Artificial Intelligence – ECAI’09, 2<sup>nd</sup> – 5<sup>th</sup> July 2009, University of Pitesti, Series: Electronics, Computers and Artificial Intelligence, Number 2/2009, pp.110 – 114, ISSN – 1843 -2115.

**Db128. Mihai Iordache**, Lucia Dumitriu, Cătălina Polescu, Dragoș Niculae, “Sensitivity Computation for Analog Circuits”, Proceedings of the International Conference on Electronics, Computers and Artificial Intelligence – ECAI’09, 2<sup>nd</sup> – 5<sup>th</sup> July 2009, University of Pitesti, Series: Electronics, Computers and Artificial Intelligence, Number 2/2009, pp.110 – 114, ISSN – 1843 -2115.

**Db129.** Dragoș Niculae, Lucia Dumitriu, **Mihai Iordache**, “Electrical Circuit Methods for Heat Transfer Computation, Proceedings of the International Conference on Electronics, Computers and Artificial Intelligence – ECAI’09, 2<sup>nd</sup> – 5<sup>th</sup> July 2009, University of Pitesti, Series: Electronics, Computers and Artificial Intelligence, Number 4/2009, pp.140 – 144, ISSN – 1843 -2115.

**Db130.** A. Bujor, **M. Iordache**, ” Linear Circuit Synthesis Using Matlab”, Simpozionul National de Electrotehnica Teoretica, SNET’09, 26-27 November , Bucharest, UPB, on CD, pp. 12 - 16, ISBN: 973-718-096-8.

**Db131.** Lucian Mandache, **Mihai Iordache**, Lucia Dumitriu, “Sensitivity and Tolerance Analysis in Analog Circuits Using Symbolic Methods”, Proceedings of the 10<sup>th</sup> International Conference on Development and Application Systems DAS - 2010, 27-29 May 2010, Suceava, ROMANIA, ISSN 1844 - 5039, pp. 230- 234.

**Db132.** Iulia Dumitrescu, **Mihai Iordache**, Mihaela Ionita, “Analysis of Coupled Oscillators through a Series RLC Network”, Proceedings of the 10<sup>th</sup> International Conference on Development and Application Systems DAS - 2010, 27-29 May 2010, Suceava, ROMANIA, [www.dasconference.ro](http://www.dasconference.ro), ISSN 1844 - 5039, pp. 226- 229.

**Db133.** Lucia Dumitriu, **Mihai Iordache**, Lucian Mandache, “Reduced-Order Modeling of MIMO Systems”, Proceedings of XI<sup>th</sup> International Workshop on Symbolic and Numerical Methods, Modeling and Applications to Circuit Design (SM2ACD), October 4 - 6, 2010, Gammarth, TUNISIA, pp. 85-89, 978-1-4244-6815-7/10/\$26.00 ©2010 IEEE.

**Db134. Mihai Iordache**, Lucia Dumitriu, Lucian Mandache, “Companion Models in Two – Time Scale for Multitone Steady – State Simulation of the Nonlinear Circuits”, Proceedings of XI<sup>th</sup> International Workshop on Symbolic and Numerical Methods, Modeling

and Applications to Circuit Design (SM2ACD), October 4 - 6, 2010, Gammarth, TUNISIA, pp. 165-171, 978-1-4244-6815-7/10/\$26.00 ©2010 IEEE.

**Db135.** Ioana - Gabriela Sârbu, **Mihai Iordache**, Lucian Mandache, "A New Model for ac Plunger-Type Magnets in Steady-State Regime", Proceedings of 10<sup>th</sup> International Conference on Applied on Theoretical Electricity, ICATE 2010, Craiova, Romania, October 8-9, 2010, pp. 19 - 24, Universitaria Publishing House, Craiova, 2010.

**Db136.** **Mihai Iordache**, Jean-Marie Paillot, Iulia Dumitrescu, Mihaela Ioniță, "Analysis of Coupled Oscillators Applied to Antenna Arrays", Proceedings of 10<sup>th</sup> International Conference on Applied on Theoretical Electricity, ICATE 2010, Craiova, Romania, October 8-9, 2010, pp. 25 - 28, Universitaria Publishing House, Craiova, 2010.

**Db137.** **Mihai Iordache**, Mihai Dogaru, Dragoș Niculae, Ileana Calomfirescu, "Computer – Aided Analysis of Induction Motor", Proceedings of 10<sup>th</sup> International Conference on Applied on Theoretical Electricity, ICATE 2010, Craiova, Romania, October 8-9, 2010, pp. 224 - 228, Universitaria Publishing House, Craiova, 2010.

**Db138.** Ioana – Gabriela SÎRBU, **M. Iordache**, L. Mandache, "Analysis and Simulation of AC Plunger-Type Magnets in Dynamic Regimes", Simpozionul National de Electrotehnica Teoretica, SNET 2010, 03-04 December, Bucharest, UPB, on CD, pp. 12 - 16, ISBN: 973-718-096-8.

**Db139.** Ileana Calomfirescu, M. Dogaru, **M. Iordache**, D. Niculae, Lucia Dumitriu, "Dynamic Behaviours of the Induction Motor", Simpozionul National de Electrotehnica Teoretica, SNET 2010, 03-04 December, Bucharest, UPB, on CD, pp. 12 - 16, ISBN: 973-718-096-8.

**Db140.** **M. Iordache**, Lucia Dumitriu, J. M. Paillot, Iulia Dumitrescu, D. Cordeau, „Analysis of Coupled Oscillators by State Variable Method”, Proceeding of the 7<sup>th</sup> International Symposium Advanced Topics in Electrical Engineering – ATEE'11, 12-14 May 2011 – Bucharest, ROMANIA, Editura Politehnica Press, pp. 17 - 10, ISSN: 2068-7966, Print ISBN: 978-1-4577-0507-6, INSPEC Accession Number: 12118910. (BDI).

**Db141.** Ioana-Gabriela Sîrbu, **M. Iordache**, L. Mandache, „Considerations on the Simulation Models of AC Plunger-Type Magnets”, Proceeding of the 7<sup>th</sup> International Symposium Advanced Topics in Electrical Engineering – ATEE'11, 12-14 May 2011 – Bucharest, ROMANIA, Editura Politehnica Press, pp. 25 - 30, ISSN: 2068-7966, Print ISBN: 978-1-4577-0507-6, INSPEC Accession Number: 12118914. (BDI).

**Db142.** **M. Iordache**, Ileana Calomfirescu, D. Niculae, M. Dogaru, „Simulation of Induction Motor Using State Equations”, Proceeding of the 7<sup>th</sup> International Symposium Advanced Topics in Electrical Engineering – ATEE'11, 12-14 May 2011 – Bucharest, ROMANIA, Editura Politehnica Press, pp. 59 - 64, ISSN: 2068-7966, Print ISBN: 978-1-4577-0507-6, INSPEC Accession Number: 12118939.

**Db143.** D. Niculae, **M. Iordache**, Lucia Dumitriu, „Magnetic Coupling Analysis in Wireless Transfer Energy”, Proceeding of the 7<sup>th</sup> International Symposium Advanced Topics in Electrical Engineering – ATEE'11, 12-14 May 2011 – Bucharest, ROMANIA, Editura Politehnica Press, ISSN: 2068-7966, pp. 405 - 408. Print ISBN: 978-1-4577-0507-6, INSPEC Accession Number: 12118908. (BDI).

**Db144.** **Mihai Iordache**, Lucia Dumitriu, Lucian Mandache, Georgian Zainea, "A New Method for Determination of Scattering Parameters in the Analog Circuits", Proceedings of the International Conference on Electronics, Computers and Artificial Intelligence – ECAI - 2011, June 30 – July 2, 2011, University of Pitesti, Series: Electronics, Computers and Artificial Intelligence, Vol. 4, No.2/2011, pp.110 – 114, ISSN – 1843 -2115.

**Db145.** L. Mandache, D. Topan, **M. Iordache**, Ioana Gabriela Sîrbu „SPICE Model of Effective and Accurate Time Domain Simulation of Power Transformers”, Proc. of the 3<sup>th</sup>

International Workshop on Nonlinear Dynamic and Synchronization – INDS'11, 16<sup>th</sup> International Symposium on Theoretical Electrical Engineering – ISTET'11, July 25-27, 2011, University of Klagenfurt, Austria, pp. 101-107, ISBN: 978-1-4577-0760-5, IEEE CFP1148G-PRT, ISBN: 978-1-4577-0761-2, IEEE CFP1148G\_CDR, IEEE Xplore Print ISBN: 978-1-4577-0617-2, Digital Object Identifier: 10.1109/INDS.2011.6024795.

**Db146.** D. Niculae, Lucia Dumitriu, **M. Iordache**, L. Mandache, Georgiana Zainea, „Wireless Power Optimal Transfer in Magnetic Coupled Resonators”, Proc. of The 9th Edition of International Symposium on Electrical Engineering, ISEE 2011, Universitatea Valahia Târgoviste, 22-23 November 2011, pp. 62-65.

**Db – 146; Da – 114 Ca – 12 ; Cb – 41 Total 313 lucrari**

## **E. Brevete**

**E1.** Lucian, Mandache, **Mihai Iordache**, Dumitru Topan, Oana Sîrbu, „Procedeu de determinare a pierderilor în fier la miezuri feromagnetice în regimuri de funcționare deformante”, (Depus la OSIM în 2011).

## **F. Contracte**

**F1.** "Studiul și realizarea unei instalații de măsurarea temperaturii la cuptoarele de tratament termic", 1976, beneficiar IUPS București. (Responsabil contract).

**F2.** "Proiectarea și construcția unui convertizor static de frecvență de 500 Hz", 1977, beneficiar Întrepr. Electroaparataj București. (Colaborare cu catedra de Aparate și măsurări electrice).

**F3.** "Proiectarea și construcția unui dispozitiv de medie frecvență pentru sudarea contactelor", 1978, beneficiar Întrepr. Electroaparataj București. (Colaborare cu catedra de Aparate și măsurări electrice).

**F4.** "Bilanțul electric pe secții și agregate al întreprinderii", 1979, beneficiar IUPS București. (Responsabil contract Prof. Dr. Ing. **Mihai Iordache**).

**F5.** "Studiul și determinarea experimentală a caracteristicilor amplidinelor cu regim special de funcționare", 1979, beneficiar IMEB București. (Responsabil contract Prof. Dr. Ing. **Mihai Iordache**).

**F6.** "Transmisii mecanice diferențiale pentru mașini agricole", 1980, beneficiar Întrepr. Semănătoarea București. (Colaborare cu catedra de Mecanică).

**F7.** "Proiectarea și realizarea unui generator de 50 kW și 25kHz", 1981, beneficiar Întrepr. Electroaparataj București. (Colaborare cu catedra de Aparate și măsurări electrice).

**F8.** "Baterie de mare capacitate de tip LiAl/FeS<sub>2</sub> cu electrolit topit", 1981, 1982. (Responsabil contract prof.dr.ing. Paul Cristea).

**F9.** "Studiul și proiectarea rețelei de supraveghere a mediului în zona sud sud-est a municipiului București", 1983, beneficiar CPMB. (Responsabil contract).

**F10.** Baterie de mare capacitate de tip LiAl/FeS cu electrolit topit. Faza a III-a. Beneficiar: CNST, 1984, responsabil contract- prof.dr.ing. PP. Cristea.

**F11.** Baterie de mare capacitate de tip LiAl/FeS cu electrolit topit. Faza a IV-a. Beneficiar: CNST, 1985, responsabil contract- prof.dr.ing. PP. Cristea.

**F12.** Baterie miniaturizată amorsabilă termic. Beneficiar: M.App.N., 1986, nr. 2-86-5/13 V 1986, responsabil contract- prof.dr.ing. PP. Cristea.

**F13.** Baterie miniaturizată de mare capacitate (două faze). Beneficiar: M.App.N., 1988, nr. 2-86-7/9 X 1986, responsabil contract- prof.dr.ing. P. Cristea.

**F14.** "Bilanțul electric al cuptorului cu arc și al secției de compresoare", 1988, beneficiar IUPS București. (Responsabil contract Prof. Dr. Ing. **Mihai Iordache**).

**F15.** "Analiza și proiectarea pe calculator a circuitelor electrice neliniare de mari dimensiuni" - Faza I : "Metode de analiză a circuitelor de mari dimensiuni" 1993 - 1994, beneficiar Ministerul Învățământului. (Responsabil contract Prof. Dr. Ing. **Mihai Iordache**).

**F16.** "Regimul periodic permanent al circuitelor trifazate neliniare - Faza II - Elaborarea programului de calcul", Beneficiar Ministerul Educație și Învățământului ,1994. (responsabil contract prof.dr.in. Florin Constantinescu).

**F17.** "Analiza și proiectarea pe calculator a circuitelor electrice neliniare de mari dimensiuni - Faza I și II/1995", 1995, Beneficiar Ministerul Educație și Învățământului. (responsabil contract Prof. Dr. Ing. **Mihai Iordache**).

**F18.** "Analiza și proiectarea pe calculator a circuitelor electrice", Faza 1996: "Elaborarea unor metode noi și eficiente de analiză pe calculator a circuitelor electrice", Beneficiar Ministerul Educație și Învățământului. (responsabil contract Prof. Dr. Ing. **Mihai Iordache**).

**F19.** "Analiza și proiectarea pe calculator a circuitelor electrice", Faza I/1997: "Elaborarea unei metode eficiente de analiză pe calculator a circuitelor electrice în regim tranzitoriu", Beneficiar Ministerul Educație Naționale. (responsabil contract Prof. Dr. Ing. **Mihai Iordache**).

**F20.** "Analiza și proiectarea pe calculator a circuitelor electrice", Faza II/1998: "Elaborarea unei metode eficiente de analiză pe calculator a circuitelor electrice în regim tranzitoriu", Beneficiar Ministerul Educație Naționale. (responsabil contract Prof. Dr. Ing. **Mihai Iordache**).

**F21.** "Analiza simbolică a circuitelor electrice", Faza I/1998, contract nr. 32, nr. temă 41. Beneficiar: CNSCU - Ministerul Educației Naționale, - responsabil contract- prof.dr.ing. Lucia Dumitriu.

**F22.** "Analiza simbolică a circuitelor electrice". Faza II/1999, Testarea metodelor simbolice, parțial simbolice și numerice existente și elaborarea unor metode noi pentru calculul simbolic al funcțiilor de rețea și al sensibilităților contract nr. 32, nr. temă 41. Beneficiar: CNSCU - Ministerul Educației Naționale, - responsabil contract- prof.dr.ing. Lucia Dumitriu.

**F23.** "Analiza și proiectarea pe calculator a circuitelor electrice neliniare" – Faza 1999 Elaborarea unui program de analiză a circuitelor electrice neliniare complexe bazat pe metoda nodală modificată, Beneficiar M.E.N. (responsabil Contract Prof.dr.ing. **Mihai Iordache**).

**F24.** Metode simbolice de învățare în ingineria electrică și electronică, Finanțat de Banca Mondială și Guvernul României, 1999, (responsabil Contract Prof.dr.ing. Florin Constantinescu).

**F25.** "Analiza simbolică a circuitelor electrice". Faza III/2000, *Elaborarea unui simulator pentru generarea simbolică, parțial-simbolică sau numerică a funcțiilor de circuit*, contract nr. 32, nr. temă 41. Beneficiar: CNSCU - Ministerul Educației Naționale (responsabil contract- prof.dr.ing. Lucia Dumitriu).

**F26.** "Analiza calitativă a circuitelor electrice și electronice" – Faza 2000, *Elaborarea unei metode noi de analiză simbolică a circuitelor electronice analogice liniare și/sau neliniare (liniarizate pe porțiuni), bazată pe formularea simbolică a ecuațiilor nodale modificate*, Beneficiar M.E.N. (responsabil Contract Prof.dr.ing. **Mihai Iordache**).

**F27.** Metode simbolice de învățare în ingineria electrică și electronică, Finanțat de Banca Mondială și Guvernul României, Faza 2000, (responsabil Contract Prof.dr.ing. Florin Constantinescu).

**F28.** . “Analiza calitativă a circuitelor electrice și electronice” – Faza 2001, *Analiza calitativă a circuitelor electrice și electronice bazată pe formularea simbolică a ecuațiilor de stare*, Beneficiar M.E.C. (responsabil Contract Prof.dr.ing. **Mihai Iordache**).

**F29.** Tehnici de înaltă performanță folosite în proiectarea asistată de calculator a circuitelor analogice, Faza I-2002, contract nr. 3378-23.07.2002, nr. Temă 12. Beneficiar. CNCSIS – Ministerul Educației și Cercetării, - responsabil contract- prof.dr.ing. Lucia Dumitriu.

**F30.** Analiza calitativă a circuitelor electrice și electronice. Faza III/2002, contract nr. 34967/2001, nr. temă 109. Beneficiar: CNCSIS - Ministerul Educației Naționale, - responsabil contract- prof.dr.ing. **Mihai Iordache**.

**F31.** Simularea regimurilor dinamice neliniare ale circuitelor analogice integrate. Faza I/2003, contract nr. 40528/05.11.2003, nr. temă 35, Cod CNCSIS 90, Beneficiar: CNCSIS - Ministerul Educației și Cercetării, - responsabil contract- prof.dr.ing. **Mihai Iordache**.

**F32.** Tehnici de înaltă performanță folosite în proiectarea asistată de calculator a circuitelor analogice, Faza II/2003, contract nr. 33552/01.07.2003, nr. Temă 20, Cod CNCSIS 468, Beneficiar. CNCSIS – Ministerul Educației și Cercetării, - responsabil contract- prof.dr.ing. Lucia Dumitriu.

**F33.** Simularea regimurilor dinamice neliniare ale circuitelor analogice integrate. Faza II/2004, contract nr. 40528/05.11.2003, nr. temă 46, Cod CNCSIS 90, Beneficiar: CNCSIS - Ministerul Educației și Cercetării, - responsabil contract- prof.dr.ing. **Mihai Iordache**.

**F34.** Tehnici de înaltă performanță folosite în proiectarea asistată de calculator a circuitelor analogice, Faza III/2004, contract nr. 33552/01.07.2003, nr. Temă 20, Cod CNCSIS 468, Beneficiar. CNCSIS – Ministerul Educației și Cercetării, - responsabil contract- prof.dr.ing. Lucia Dumitriu.

**F35.** Simularea regimurilor dinamice neliniare ale circuitelor analogice integrate. Faza III/2005, contract nr. 40528/05.11.2003, nr. temă 56, Cod CNCSIS 90, Beneficiar: CNCSIS - Ministerul Educației și Cercetării, - responsabil contract- prof.dr.ing. **Mihai Iordache**.

**F36.** Metode moderne de simulare a circuitelor analogice integrate în regim periodic, Faza I-2005, contract nr. 27692/14.03.2005, nr. Temă 18, Cod CNCSIS 292. Beneficiar. CNCSIS – Ministerul Educației și Cercetării, - responsabil contract- prof.dr.ing. Lucia Dumitriu.

**F37.** Generarea de macromodele comportamentale pentru circuitele analogice integrate Faza I/2006, nr. temă 38, Cod CNCSIS 90, Beneficiar: CNCSIS - Ministerul Educației și Cercetării, - responsabil contract- prof.dr.ing. **Mihai Iordache**.

**F38.** Metode moderne de simulare a circuitelor analogice integrate în regim periodic, Faza II-2006, contract nr. 27692/14.03.2006, nr. Temă 18, Cod CNCSIS 292. Beneficiar. CNCSIS – Ministerul Educației și Cercetării, - responsabil contract- prof.dr.ing. Lucia Dumitriu.

**F39.** Creșterea coeficientului de utilizare a echipamentelor electrotehnice prin utilizarea de noi materiale electroizolante în clasa de izolație H. Program CEEX, Modul I, contract nr. 258-11.09.2006, Etapa I/2006, . Beneficiar. AMCSIT – director de proiect - prof.dr.ing. **Mihai Iordache**.

**F40.** Metode moderne de simulare a circuitelor analogice integrate în regim periodic, Faza III-2007, contract nr. 27692/14.03.2006, nr. Temă 18, Cod CNCSIS 292. Beneficiar. CNCSIS – Ministerul Educației și Cercetării, - responsabil contract- prof.dr.ing. Lucia Dumitriu.

**F41.** Generarea de macromodele comportamentale pentru circuitele analogice integrate Faza/2007, nr. temă 38, Cod CNCSIS 90, Beneficiar: CNCSIS - Ministerul Educației și Cercetării, - responsabil contract- prof.dr.ing. **Mihai Iordache**.

**F42.** Creșterea coeficientului de utilizare a echipamentelor electrotehnice prin utilizarea de noi materiale electroizolante în clasa de izolație H. Program CEEEX, Modul I, contract nr. 258-11.09.2006, Faza 2007, . Beneficiar: AMCSIT – director de proiect - prof.dr.ing. **Mihai Iordache**.

**F43.** Creșterea coeficientului de utilizare a echipamentelor electrotehnice prin utilizarea de noi materiale electroizolante în clasa de izolație H. Program CEEEX, Modul I, contract nr. 258-11.09.2006, Faza 2008, . Beneficiar. AMCSIT – director de proiect - prof.dr.ing. **Mihai Iordache**.

**F44.** Generarea de macromodele comportamentale pentru circuitele analogice integrate Faza/2008, nr. temă 38, Cod CNCSIS 90, Beneficiar: CNCSIS - Ministerul Educației și Cercetării, - responsabil contract- prof.dr.ing. **Mihai Iordache**.

**F45.** Modele avansate și simularea de precizie a dispozitivelor cu miez feromagnetic în regimuri dinamice puternic deformante specifice aplicațiilor moderne, Program PN II, PCE 539/2008, Faza 2009, Beneficiar: CNCSIS - Ministerul Educației Cercetării și Tineretului, - responsabil contract- prof.dr.ing. **Lucian Mandache**.

**F46.** Modele avansate și simularea de precizie a dispozitivelor cu miez feromagnetic în regimuri dinamice puternic deformante specifice aplicațiilor moderne, Program PN II, PCE 539/2008, Faza 2011, Beneficiar: CNCSIS - Ministerul Educației Cercetării și Tineretului, - responsabil contract- prof.dr.ing. **Lucian Mandache**.

**F47.** Theory of wireless power transfer, beneficiar EDF - Franta, nr. 8610-BVW-4300225334, 2010, director de proiect, 2011 **Mihai Iordache**.

## **1. ANALIZA SI PROIECTAREA PE CALCULATOR A CIRCUITELOR ELECTRICE NELINIARE**

Faza 1997: Contract nr. **7001**, Tema nr. **4**, Cod CNCSU **953**

**Faza 1998:** Contract nr. 32, Tema nr. 40, Cod CNCSU 568

**Faza 1999:** Contract nr. 33084, Tema nr.71, Cod CNCSIS 701

Obiective realizate:

- **O metoda originala de formulare a ecuatiilor de stare pentru circuitele electrice neliniare cu elemente in exces.**
- **Un algoritm original de determinare a conditiilor initiale ale circuitelor electrice neliniare cu elemente in exces in regim tranzitoriu.**
- Generarea modelelor rezistive discrete asociate metodei generalizate de integrare numerica pentru condensatoarele si bobinele liniare si/sau neliniare.
- O metoda hibrida generalizata bazata pe “transferarea” neliniaritatilor elementelor neliniare la surse.
- O metoda rapida si eficienta de formulare a ecuatiilor corespunzatoare metodei nodale modificate pentru analiza in regim dinamic a circuitelor neliniare de mari dimensiuni.
- Elaborare unui program de analiză a circuitelor electrice neliniare complexe bazat pe metoda nodală modificată

## **2. ANALIZA CALITATIVĂ A CIRCUITELOR ELECTRICE ȘI ELECTRONICE**

Faza 2000: Contract nr. 34967/2000, Tema nr. 15, Cod CNCSIS 1155

Faza 2001: Contract nr. 34967/2001, Tema nr. 109, Cod CNCSU 107

Faza 2002: Contract nr. 3378/23.07.2002, Tema nr. 73, Cod CNCSIS 144

Obiective realizate:

- Elaborarea unei metode noi de analiza simbolica a circuitelor electronice analogice liniare si/sau neliniare (liniarizate pe portiuni) bazata pe formularea simbolica a ecuatiilor nodale modificate;
- Elaborarea unei metode complexe de analiza calitativa a circuitelor electrice si electronice bazata pe metoda variabilelor de stare;
- Identificarea unei metode eficiente de analiza a tolerantelor necesara in proiectarea circuitelor analogice.

### **3. SIMULAREA REGIMURILOR DINAMICE NELINIARE ALE CIRCUITELOR ANALOGICE INTEGRATE.**

Faza 2003: Contract nr. 40528/05.11.2003, Tema nr. 20, Cod CNCSIS 90

Faza 2004 Contract nr. 40528/05.11.2003, Tema nr. 20, Cod CNCSIS 90

Faza 2005: Contract nr. 40528/05.11.2003, Tema nr. 20, Cod CNCSIS 90

Obiective realizate:

- Formularea ecuatiilor de semi-stare pentru simularea regimurilor dinamice neliniare ale circuitelor analogice.
- Formularea ecuatiilor în domeniul frecvenței pentru simularea circuitelor de interconexiune.
- Aproximarea funcțiilor de transfer.
- Reducerea ordinului modelului în simularea regimurilor dinamice neliniare.
- Modelarea comportamentală a circuitelor analogice liniarizate pe porțiuni.
- Implementarea unui program de generare simbolică a modelelor comportamentale.

### **4. GENERAREA DE MACROMODELE COMPORTAMENTALE PENTRU CIRCUITELE ANALOGICE INTEGRATE**

Obiective realizate:

Faza 2006: Contract nr. 36 GR /02.06.2006, Tema nr. 15, Cod CNCSIS 38

Faza 2007: Contract nr. 36 GR /02.06.2006, Tema nr. 15, Cod CNCSIS 38

Faza 2008: Contract nr. 36 GR /02.06.2006, Tema nr. 15, Cod CNCSIS 38

- Generarea macromodelor pe baza ecuatiilor de stare în forma normal-simbolică și cu ordin redus.
- Generarea în forma simbolica sau partial simbolica a functiilor de circuit bazata pe ecuatiile de semi-stare ale circuitului.
- Reducerea modelului bazata pe potrivirea implicita a momentelor.
- Generarea simbolica a macromodelor comportamentale pentru circuitele analogice neliniare.

- Generarea macromodelelor comportamentale de ordin redus pe baza subspatiilor Krylov.

## **5. CRESTEREA COEFICIENTULUI DE UTILIZARE A ECHIPAMENTELOR ELECTROTEHNICE PRIN UTILIZAREA DE NOI MATERIALE ELECTROIZOLANTE IN CLASA DE IZOLATIE H**

**Faza 2006: Contract nr. 258-11.09.2006/1**

**Faza 2007: Contract nr. 258-11.09.2006/2**

**Faza 2008: Contract nr. 258-11.09.2006/3**

- Studiu de literatura privind sinteza rasinilor utilizate in obtinerea lacurilor electroizolante in doua componente;
- Studiu privind conformutatea noilor materiale electroizolante utilizate in echipamente electrotehnice cu cerintele normelor europene;
- Studiul privind posibilitatea de crestere a coeficientului de utilizare a echipamentelor electrotehnice;
- Metode de calcul al campului termic in echipamentele electrotehnice;
- Executie sarje de laborator lac rasini;
- Executie sarje pilot lac electroizolant;
- Caracterizare sarja pilot;
- Algoritmi de calcul de camp termic;
- Caracterizarea lacului de picurare in doua componente intr-un sistem de izolatie de clasa termica H (180<sup>0</sup>C);
- Realizare program de calcul termic;
- Constructia unui model echipament electromagnetic;
- Model experimental lac electroizolant;  
Model experimental echipament electrotehnic.

## **6. THEORY OF WIRELESS POWER TRANSFER, contract nr. 8610-BVW-4300225334, 2010, 2011, beneficiar: Electricite de France.**

București: 06.05.2012

Prof. dr. ing. **Mihai Iordache**

