

High Performance Computational Methods used in Nanomagnetic Materials Modeling and Design

Published articles

Synthetic table

No.	Place	Number of publications	The number of items
	-in Romania:	14	43
	- ISI	5	18
	-abroad:	8	15
	- ISI	4	11

Articles in Romania

No.	Publication Name	Article Title	Author/membership
1	Analele Univ. "Dunarea de Jos" din Galati, Matematica, Fizica, Mecanica teoretica, Fasc. II, anul (XXIX) 2006, pp. 179	<i>Magnetic nanostructures characterization with the neural network method</i>	S.H.Mohorianu, M.Lozovan, F.V. Rusu / INCDFT Iasi
2	Roumanian Journal of Physics, waiting for review	<i>A new IT strategy ANN based, for special nanomagnetic material design and characterisation</i>	S.Mohorianu, M. Lozovan / INCDFT Iasi
3	Scientific Bulletin of "Politehnica" University of Timișoara, Transactions on Automatic Control and Computer Science, vol. 50(64), no. 1, pp. 59-64, 2005 (publicat in 2006)	<i>The state of the art in using genetic algorithms for assembly line balancing</i>	Brudaru, O., Copaceanu, C. / Academia Romana – Filiala Iasi, Institutul de Informatica Teoretica
4	Academic Journal of Manufacturing Engineering, Universitatea "Politehnica" din Timișoara, vol. 3, No. 2/2005 (publicat in 2006)	<i>A survey of the assembly line balancing heuristics</i>	Brudaru, O., Copaceanu, C. / Academia Romana – Filiala Iasi, Institutul de Informatica Teoretica
5	Proceedings of ICCCC 2006, Baile Felix-Oradea, Romania, in: International Journal of Computes, Communicatons & Control, vol I, 2006, p146-149.	<i>Using Centrality Indices in Ant Systems</i>	Crisan, GC, Nechita, E, Talmaciu, M, Petrut, B / Academia Romana – Filiala Iasi, Institutul de Informatica Teoretica
6	Proceedings of ICCCC 2006, Baile Felix-Oradea, Romania, in: International Journal of Computes, Communicatons & Control, vol I, 2006, p332-335.	<i>Recognizing Dart-free Graphs</i>	Talmaciu, M Crisan, GC, E Nechita / Academia Romana – Filiala Iasi, Institutul de Informatica Teoretica
7	Proceedings of the ICMI45 Conference 2006, Bacau, Romania	<i>Structural Graph Search</i>	Cornelius Croitoru, Mihai Talmaciu / Academia Romana – Filiala Iasi, Institutul de Informatica Teoretica
8	Romanian Journal of Physics, Vol. 52, Nos. 3-4, p 361–374, Bucharest, 2007	<i>A new IT strategy ANN based for special nanomagnetic materials design and characterisation</i>	S. Mohorianu, M. Lozovan / CO - INCDFT
9	Proceedings electronic form BRAMAT 2007, p. 274, Brasov, 2007	<i>ANN Based New IT Method for the Nanomagnetic Materials Design</i>	S. Mohorianu, M. Lozovan / CO - INCDFT
10	Bul. Inst. Politehnic din Iasi, Tomul LIII (LVII), Fasc. 2, pag. 151, 2007	<i>New Model Based on ANN for Design and Characterisation of Ferromagnetic Alloys</i>	S. Mohorianu, M. Lozovan / CO - INCDFT
11	<i>Fuzzy Systems & A.I.</i> , vol. XI, nos. 1-3, 2005, Romanian Academy Publishing House, pp. 21 - 32	<i>Constructing Fuzzy Rational Approximators with an Insular Distributed Genetic Algorithm,</i>	Brudaru O., Buzatu O., /P2 - (IIT-AR)

12	Buletinul Institutului Politehnic din Iasi, S. Textile. Pielarie, tom LIII(LVII), fasc. 5, 2007, pag. 807-816, The XIII-th Romanian Textile and Leather Conference, 18-20 October, 2007, Iasi.	"U-shaped assembly line balancing: a review",	Copaceanu, C., Brudaru, O., / P2 - (IIT-AR)
13	Bul. IPI, Sectia Automatica si Calculatoare, 2006, (sub tipar)	Mixed-Model Assembly Line Balancing Problem: A Review	Brudaru, O., Copăceanu, C., / P2 - (IIT-AR)
14	Bul. IPI, Sectia Automatica si Calculatoare, 2006, (sub tipar)	Integrating fuzzy arithmetic in Kohonen networks,	Brudaru, O., Buzatu, O., / P2 - (IIT-AR)
15	Buletinul Institutului Politehnic din Iasi, Sectia VIII (sub tipar)	A survey on meta-heuristic algorithms and other post-processing techniques in assembly line balancing - Part I+ Part II,	Brudaru, O., Copăceanu, C., / P2 - (IIT-AR)
16	Bul. Inst Pol. Iasi, Tom LIII, fasc. 2, 2007, pg. 122	<i>Nanostructures and Fractal space-time (II)</i>	M. Agop, P. Vizureanu, D.G. Galusca, I. Ionita / P5 - UTI
17	Bul. Inst Pol. Iasi, Tom LIII, fasc. 2, 2007, pg. 109	<i>Nanostructures and Fractal space-time (I)</i>	M. Agop, P. Vizureanu, D.G. Galusca, I. Ionita / P5 - UTI
16	Bul. Inst Pol. Iasi, 2007, trimis spre publicare	<i>The anomaly of the heat transfer in nanofluids by means of a differential negative thermal conductance</i>	M. Agop, E. Mamut, P. Nica / P5 - UTI
19	Bul. Inst Pol. Iasi, 2007, trimis spre publicare	<i>El Naschie's $\epsilon^{(\infty)}$ space time and Scale Relativity Theory in the topological dimension D=4</i>	M. Agop, M. Vasilica, D. Abacioaiei / P5 - UTI
20	<i>Romanian Journal of Physics, Volume 53, Nos. 1-2, P.239-244, Bucharest, 2008</i>	EXTRINSIC MAGNETORESISTANCE OF $Sr_{1.8}Ca_{0.2}Fe_{1-x}Gd_xMoO_6$ DOUBLE PEROVSKITES	M.-L.CRAUS, M. LOZOVAN/ CO - INCDFT
21	<i>RECEIVED Romanian Journal of Physics</i>	A DATABASE FOR NANOMAGNETIC MATERIALS – IT IS REALLY A NECESSITY	MOHORIANU, F.-V. RUSU, M. LOZOVAN/ CO - INCDFT
22	<i>RECEIVED Romanian Journal of Physics</i>	Simulation and Design Method in Advanced Nanomaterials fine-tuning for some Perovskites type AHE Study	S. MOHORIANU, M. LOZOVAN, F.-V. RUSU/ CO - INCDFT
23	Stud.Cercet.Stiint., Ser.Mat., 17 (2007), Supplement, Proceedings of CNMI 2007, Bacău, Nov. 2007, pp. 239-244	A recognition algorithm for trivially perfect graphs	Talmaciu, M, Nechita, E. /P2 - AR_IIT
24	Stud.Cercet.Stiint., Ser.Mat., 17 (2007), Supplement, Proceedings of CNMI 2007, Bacău, Nov. 2007, pp. 245-256	A recognition algorithm for bull-free graphs	Talmaciu, M, Nechita, E /P2 - AR_IIT
25	Bul. Inst. Politehnic Iasi, Fasc 1-2 (2007) pp. 115-120	Ball Lightning as a self-organizing process of a plasma-plasma interface	C. Murgulet, M. Agop /P5 -UTI
26	Bul. Inst. Politehnic Iasi, Fasc 3-4 (2007) pp. 85-94.	Ball Lightning by means of an equivalent electrical circuit	C. Murgulet, M. Agop /P5 -UTI

Articles in Romania in ISI Publication

No.	Publication Name	ISI Quotation	Article Title	Author / Membership
1.	Journal of Optoelectronic and Advanced Materials (JOAM) vol. 8, No.5, October 2006, p. 1741 – 1743	1.138	<i>A theoretical approach of the heat transfer in nanofluids</i>	S.H.Mohorianu, M.Agop / INCDFT Iasi, UTI Iasi
2.	JOAM, waiting for review	1.138	<i>A new simulation method based on ANN for a special class of nanomagnetic materials design</i>	S.Mohorianu, M. Lozovan / INCDFT Iasi
3.	J. Optoelectronics and Advance Materials	1.138	<i>Nanostructured magnetic materials obtained by mechanical alloying/milling</i>	V. Pop, I. Chicinas / UBB
4.	J. Optoelectronics and Advance Materials	1.138	<i>Nanocomposite (Nd,Dy)₂Fe₁₄B/α-Fe magnetic materials coupled by exchange interactions</i>	E. Dorolti, V. Pop, O. Isnard, D. Givord, I. Chicinas / UBB
5.	Journal of Optoelectronic and Advanced Materials 8 (5) 2006, pp. 1889-1891	1.138	<i>Effect of ultrasounds sonication on surface Microstructure of the Electrodeposited Ni-Zn Thin Films</i>	N.Sulitanu / UAIC C. Pirghie / UAIC F. Brinza / UAIC
6.	JOURNAL OF OPTOELECTRONICS AND ADVANCED MATERIALS Vol. 9, No. 5, May 2007, p. 1499 – 1504	1,106	A new simulation method based on artificial neural networks for a special class of nanomagnetic materials design	S. MOHORIANU, M. LOZOVAN, C. BACIU / CO - INCDFT
7.	Journal of Optoelectronics and Advanced Materials Vol 9, no. 6, 2007 p.1825-1828	1,106	"Influence of the recrystallization processes on the structure and magnetic properties of the Nd ₂ Fe ₁₄ B/ α Fe nanocomposites"	W. KAPPEL, M. M. CODESCU, M. VALEANU, N. STANCU, J. PINTEA, F. LIFEI, A. JIANU, D. PATROI, Eros-Alexandru PĂTROI / P1 – ICPE-CA
8.	Journal of Optoelectronics and Advanced Materials Vol 9, no. 4, 2007 p.1120-1126	1,106	"Hysteresis loop measurements in rare-earth based permanent magnets: the role of applied field rate and sample geometry"	Cinzia Beatrice, Oriano Bottauscio, Fausto Fiorillo and Eros-Alexandru PĂTROI / P1 - ICPE-CA
9.	Journal of Optoelectronics and Advanced Materials (in print)	1,03	Magnetic and Structural Behaviour of (Nd,Dy) ₂ Fe ₁₄ B/ α -Fe Nanocomposites Obtained by Mechanical Milling and Annealing	O. Isnard - Institut Néel, CNRS - Université Joseph Fourier, BP 166, 38042 Grenoble cedex 9, France D. Givord - Institut Néel, CNRS - Université Joseph Fourier, BP 166, 38042 Grenoble cedex 9, France E. Dorolti - Faculty of Physics, Babes-Bolyai University, 4000480 Cluj-Napoca, Romania V. Pop - Faculty of Physics, Babes-Bolyai University, 4000480 Cluj-Napoca, Romania L. Nistor - Faculty of Physics, Babes-Bolyai University, 4000480 Cluj-Napoca, Romania I. Chicinas - Materials Sciences and Technology Dept., Technical University of Cluj-Napoca, 103-105 Muncii ave., 400641 Cluj-Napoca, Romania / P3 - UBB

10.	Rev. Roum. Chem. 58, 1, 20-24, 2007	0.208	Effect of ultrasounds irradiation on the electrolytic growth of nanocrystalline Ni films	N. Sulitanu/P4 UAIC, C. Pirghie/ P4 UAIC, I. Sandu / P4 – UAIC
11.	JOURNAL OF OPTOELECTRONICS AND ADVANCED MATERIALS Vol. 9, No. 5, May 2007, p. 1462 - 1464	1.106	Microstructure and magnetic properties of the Ni-Zn thin films electrodeposited in ultrasound field	C. Pirghie, N. Sulitanu, V. Nica / P4 UAIC
12.	<i>OPTOELECTRONICS AND ADVANCED MATERIALS–RAPID COMMUNICATIONS</i> Vol. 2, No. 1, January 2008, p. 33 - 36	1,02	Microstructure of $\text{La}_{0.54}\text{Ho}_{0.11}\text{Ca}_{0.35-x}\text{Na}_x\text{Mn}_{1-y}\text{Cu}_y\text{O}_3$ manganites	M. L. CRAUS, N. CORNEI, C. MITA, M. LOZOVAN/ CO - INCDFE
13.	<i>JOURNAL OF OPTOELECTRONICS AND ADVANCED MATERIALS</i> Vol. 10, No. 3, March 2008, p. 632 - 634	1,02	Permalloy thin films obtained by pulsed laser deposition: magnetic and galvanomagnetic behaviour	M. NEAGU, M. LOZOVAN, M. DOBROMIR, L. VELICU, C. HISON, S. STRATULAT/ CO - INCDFE
14.	<i>Trimis la</i> JOURNAL OF OPTOELECTRONICS AND ADVANCED MATERIALS	1,02	Advanced Knowledge-Based Computer Simulation Methods for the Nanomagnetic Materials Investigation	S-H . MOHORIANU, F.-V. RUSU, M. LOZOVAN/ CO - INCDFE
15.	Journal of Optoelectronics and Advanced Materials, ISSN 1454-4164, vol.10, no.7, 2008, p.1814-1818	1.02	Extraction of hysteresis model parameters from magneto-optical experiments	V.Ionita/UPB, G.Epureanu/UPB, E.A.Patroi/INCIE ICPE-CA
16.	Journal of Optoelectronics and Advanced Materials, 10 (2008) 1872 – 1876	1,02	<i>Structural Evolution of Some Hard/Soft Magnetic Heterostructures Obtained by Mechanical Milling and Annealing</i>	V. Pop, O. Isnard, D. Givord, J. M. Le Breton, I. Chicinaş / P3 - UBB
17.	JOURNAL OF OPTOELECTRONICS AND ADVANCED MATERIALS	1,02	ON THE PREPARATION AND STRUCTURAL PROPERTIES of Fe-S NANOCRYSTALLINE THIN FILMS	Nicolae Sulitanu, Florin Brînză, Valentin Nica / P4 - UAIC
18.	JOURNAL OF OPTOELECTRONICS AND ADVANCED MATERIALS	1,02	AN POSSIBLE MODEL FOR NUCLEATION AND GROWTH OF Fe-Co ALLOY NANOCCLUSERS	Cristina Carmen Hriban, Florin Brinza, Valentin Nica, Nicolae Sulitanu / P4 - UAIC

Abroad Articles

No.	Publication Name	Article Title	Author/membership
1.	<i>Institute "Carlos I" for Theoretical and Computational Physics</i> , University of Granada, Spain, in <i>AMERICAN INSTITUTE OF PHYSICS</i> series	Magnetic Nanomaterials modelling and Design using Classification Methods: from ANN to SVM	S-H . Mohorianu, Irina I. Mohorianu, F.-V. Rusu, M. Lozovan/ CO - INCDFE
2.	Proc. of XX Symp. Electromagnetic Phenomena in Nonlinear Circuits (EPNC 2008, Lille), ISBN 978-83-921340-5-3, 2008, pp. 81-82	Numerical design of an experimental device for vectorial magnetic measurements	V. Ionita/UPB, M. Rebican/UPB, E.A.PATROI/ INCIEICPE-CA

3	Proc.of 13th Biennial IEE Conference on Electromagnetic Field Computation (CEFC2008)May 11-15 Athens, Grece	Numerical Model of Vector Hysteresis for Magnetic Materials	M.Rebican, R.Popa, G.Preda, V.Ionita. L.Petrescu. E.A. Patroi/ P1 – ICPE-CA
4	Proceedings of the 12th World Multi-Conference on Systemics, Cybernetics and Informatics WMSCI 2008, Orlando, USA, 2008, pp. 48-51	Cooperative Ant Colonies for VRPTW. A Case Study in the Distribution of Dietary Products	Nechita E., Crişan C., Talmaciu M. /P2 - AR_IIT

Abroad Articles in ISI Publication

No.	Publication Name	ISI Quotation	Article Title	Author / Membership
1.	INFORMATICA, VILNIUS, LITUANIA, acceptata pentru publicare	1.250	<i>Recognition Algorithm for diamond-free graphs</i>	Talmaciu,M., Nechita,E. / Academia Romana – Filiala Iasi, Institutul de Informatica Teoretica
2.	IEEE Transaction on Magnetics, Vol 43, No. 7, 2007	0,938	“Measuring the Hysteresis Loop of Permanent Magnets with the Pulsed Field Magnetometer”	Fausto Fiorillo, Cinzia Beatrice, Oriano Bottauscio and Eros-Alexandru PĂTROI / P1 – ICPE-CA
3.	Fundamenta Informaticae XXI (2007) p.1001–1012 1001 IOS Press	0.910	<i>The quasi-weakly decomposition of graphs and some applications</i>	Mihai Talmaciu, Elena Nechita / P2 – AR-IIT
4.	Learning and Intelligent Optimization LION 2007 II No 8-12, 2007, Trento, Italy.	0.600	A Hybrid Algorithm for the Bisection Problem in O-graphs,	Talmaciu, M., Nechita, E., / P2 - IIT-AR
5.	Journal of Magnetism and Magnetic Materials JMMM (in print)	1,212	Magnetic behaviour of Co and Ni in pseudoternary boron compounds	E. Burzo - Faculty of Physics, Babes-Bolyai University, 4000480 Cluj-Napoca, Romania R. Tetean - Faculty of Physics, Babes-Bolyai University, 4000480 Cluj-Napoca, Romania V. Pop - Faculty of Physics, Babes-Bolyai University, 4000480 Cluj-Napoca, Romania L. Chioncel - Institute for Theoretical Physics and Computational Physics, Graz University of Technology, Graz, A 8010, Austria / P3 - UBB
6.	Journal of Mathematical Physics 2007 (sub tipar)	1.018	<i>Theoretical Aspects of the Transport Mechanism in Nanostructures</i>	M. Agop, P. Nica, N. Forna /P5 – UTI
7.	Chaos, Solitons and Fractals, 2007 (sub tipar)	2.042	<i>Transport phenomena in nanostructures and non-differentiable space-time</i>	M. Agop, Liliانا Chicos, P. Nica / P5 – UTI
8.	Phys. stat. sol. (b), 1 – 6 (2008) / DOI 10.1002/pssb.200844233		Effects of substitution of Ni by Sb in MnNi	Roxana Pacurariu, Vasile Rednic, Marin Coldea, Diana Benea, Viorel Pop, Olivier Isnard, Manfred Neumann / P3 - UBB

9.	European Polymers / trimis spre publicare	1.125	New magnetic polymers with embedded nanoclusters from ferromagnetic materials	F. Brinza, N. Sulitanu /P4 - UAIC
10.	Acta Physica Polonica, 113 (2008) pp. 1557		Wave-Particle Duality through a Hydrodynamic Model of the Fractal Space-Time Theory	M. Agop, A. Harabagiu and P. Nica /P5 -UTI
11.	Eur. Phys. J. D 49, 239–248 (2008)		Fractal model of the atom and some properties of the matter through an extended model of scale relativity	M. Agop, P.E. Nica, P.D. Ioannou, A. Antici and V.P. Paun /P5 -UTI

Books Publication:

	No. Titles	No.	Title, Author / Membership
	5	1	Modelarea si optimizarea proceselor de asamblare, Editura Performantica, Iasi, ISBN: 978-973-730-323-2, Brudaru, O., Copaceanu, C. / Academia Romana – Filiala Iasi, Institutul de Informatica Teoretica
		2	O. Brudaru, M. Vieru, C. Iatco, Elemente de baze de date și tehnici de analiza, Editura Performantica Iasi, 2007, 120 pag. ISBN 978-973-730-360-8. / P1 – AR IIT
		3	Brudaru, O., Copaceanu, C., Modelarea si optimizarea proceselor de asamblare, Editura Performantica , Iasi, 2007, ISBN 978-973-730-323-3. / P1 – AR IIT
		4	Brudaru, O., Valmar, B. Algoritmi de optimizare pentru probleme de management, Editura TehnoPres, Iasi, (sub tipar) , ISBN 978-973-702-572-2
		5	Brudaru, O., Valmar, B., Inteligenta computationala in managementul operațional, Editura Performantica, 130 pag. , ISBN 978-973-730-444-5