

## LISTA DE LUCRĂRI

### 1. Teza(-ele) de doctorat

- T1.** C. Grava, *Compensarea mișcării cu rețele neuronale celulare. Aplicații în imagistica medicală*, Universitatea „POLITEHNICA” București, Domeniul Inginerie Electronică și Telecomunicații, 2003, <http://www.library.pub.ro/doc/teze/teze%20doctorat%202003.pdf>
- T2.** C. Grava, *Compensation de mouvement par réseaux neuronaux cellulaires. Applications en imagerie médicale*, Institut National des Sciences Appliquées (INSA), Lyon, France, Ecole Doctorale: Electrotechnique, Electronique, Automatique, Spécialité Images et Systèmes, 2003, <http://theses.insa-lyon.fr/publication/2003ISAL0096/these.pdf>

### 2. Publicații:

A) Cărți publicate, îndrumare/culegeri publicate,

- 2.A1. R. Albu, C. Grava, *Vedere Artificială. Aplicații*, Editura Universității din Oradea, ISBN 978-606-10-1727-0, 68 pag., 2016
- 2.A2. C. Grava, I. Buciu, *Computer Vision: Detecția și estimarea mișcării. Estimarea formelor 3D din imagini 2D*, Universitatea din Oradea, 2013
- 2.A3. C. Grava, *Grafică electronică pe calculator*, format electronic accesibil pe pagina [http://cgrava.webhost.uoradea.ro/teaching/Grafica/documentatie/Curs\\_Grafica.pdf](http://cgrava.webhost.uoradea.ro/teaching/Grafica/documentatie/Curs_Grafica.pdf), 107 pag., 2009
- 2.A4. C. Grava, *Vedere artificială și realitate virtuală*, Editura Universității din Oradea, ISBN 978-973-759-516-4, 210 pag., 2008
- 2.A5. C. Grava, V. Buzuloiu, *Elemente de prelucrarea și analiza imaginilor*, Editura Universității din Oradea, ISBN 978-973-759-377-1, 207 pag., 2007
- 2.A6. C. Grava, Ș. Ciurel, V. Buzuloiu, *Principii ale aparatelor de imagistică medicală*, Editura Universității din Oradea, ISBN 973-613-675-2, 201 pag., 2004
- 2.A7. A. Grava, C. Grava, T. Maghiar, *Instalații și echipamente electrice*, Editura Universității din Oradea, ISBN 973-613-673-6, 243 pag., 2004
- 2.A8. C. Grava, *Estimarea și compensarea mișcării în secvențe de imagini*, Seria de Matematici Aplicate și Industriale a Universității din Pitești, ISBN 973-86449-3-3, 278 pag., 2004
- 2.A9. C. Grava, C. Vertan, V. Buzuloiu, *Prelucrarea și analiza imaginilor. Îndrumar de laborator*, Editura Universității din Oradea, ISBN 973-8219-05-1, 105 pag., 2003
- 2.A10. T. Maghiar, A. Grava, T. Leuca, C. Grava, *Circuite electrice liniare de curent continuu. Îndrumător de laborator*, Editura Universității din Oradea, ISBN 973-8219-01-9, 76 pag., 2000
- 2.A11. C. Gordan, I. Popescu, C. Grava, *Dispozitive și circuite electronice. Îndrumar de proiect*, Editura Universității din Oradea, 95 pag., 1998

B) capitole publicate în volume colective,

C) capitole teoretice redactate,

D) sisteme de laborator funcționale, după caz, prin care se aduc contribuții la asigurarea și perfecționarea activităților didactice/profesionale.

- 2.D1. C. Grava, *Implementarea MATLAB a operațiilor și algoritmilor de bază în prelucrarea și analiza imaginilor*, Sistem de laborator, 2006

### 3. Articole/studii publicate:

A) în reviste de specialitate de circulație internațională recunoscute cotate ISI sau indexate în baze de date internaționale specifice domeniului, care fac un proces de selecție a revistelor pe baza unor criterii de performanță:

- 3.A1. T.S. Buda, T. Cerqueus, C. Grava, J. Murphy, *Rex: Representative Extrapolating Relational Databases*, Elsevier Journal of Information Systems, 67, pp. 83-99, ISSN 0306-4379, DOI 10.1016/j.is.2017.03.001, 2017, IF = 2,777, Accession Number: WOS:000401600100006
- 3.A2. A.M. Grava, C. Grava, *Bond-Graph Modeling of an Electrical Transmission Line*, Revue Roumaine des Sciences Techniques, Serie Électrotechnique et Énergétique, ISSN 0035-4066, pp. 398-401, Tome 61, Issue 4, 2016, IF = 1,036, Accession Number: WOS:000392357000016
- 3.A3. M. Curilă, S. Curilă, C. Grava, *Geometry Compression for 3D Models*, Revue Roumaine des Sciences Techniques, Serie Électrotechnique et Énergétique, ISSN 0035-4066, pp. 201-204, Tome 61, Issue 2, 2016, IF = 1,036, Accession Number: WOS:000381238000020
- 3.A4. C. Grava, A. Gacsádi, I. Buciu, *A Homogeneous Algorithm for Motion Estimation and Compensation by Using Cellular Neural Networks*, International Journal of Computers, Communications & Control, ISSN 1841-9836, E-ISSN 1841-9844, Vol.V (2010), No.5, pp.715-722, December 2010, IF = 1,374, <http://journal.univagora.ro/download/pdf/456.pdf> Accession Number: WOS:000283908700013

3.A5. A. Basarab, A. Lyshchik, **C. Grava**, V. Buzuloiu, P. Delachartre, *Ultrasound image sequence registration and its applications for thyroid nodular disease*, Springer Journal of Signal Processing Systems, ISSN 1939-8018 (formerly the Springer Journal of VLSI Signal Processing Systems for Signal, Image, and Video Technology, ISSN 0922-5773), Special Issue of Biomedical Imaging, pp. 127-137, IF = 0,893, Vol. 55, No 1-3, April 2009 (ISI Web of Science/ISI Master Journals), <http://link.springer.com/article/10.1007/s11265-008-0184-8>, Accession Number: WOS:000264133700011

B) indexate în baze de date internaționale recunoscute (BDI).

- 3.B1. A. Grava, **C. Grava**, M. Novac, M. Pantea, *Bond-graph Methods for Electric Circuits Analysis*, Journal of Electrical and Electronics Engineering, ISSN 1844-6035, Vol.5, No.2, pp. 63-66, October 2012 (Scopus)
- 3.B2. **C. Grava**, *Considerations regarding the CT image registration*, Journal of Electrical and Electronics Engineering, ISSN 1844-6035, Vol.4, No.2, pp. 37-40, October 2011 (Scopus)
- 3.B3. A. Grava, **C. Grava**, M. Pantea, M. Novac, *Bond-graph Analysis of an Equivalent Magnetic Scheme of a Damper with Magneto-rheological Fluid*, Journal of Electrical and Electronics Engineering, ISSN 1844-6035, Vol.4, No.2, pp. 33-36, October 2011 (Scopus)
- 3.B4. **C. Grava**, *A fast motion estimation algorithm in CT image sequences*, Journal of Electrical and Electronics Engineering, ISSN 1844-6035, Vol.3, No.1, pp. 87-90, June 2010 (Scopus)
- 3.B5. **C. Grava**, A. Gacsádi, I. Gavriluț, *Arterial elasticity maps obtained by using block-matching methods*, Journal of Electrical and Electronics Engineering, ISSN 1844-6035, Vol.2, No.1, pp. 151-154, June 2009 (Scopus)
- 3.B6. I. Gavriluț, A. Gacsádi, **C. Grava**, O. Straciuc, L. Țepelea, *Analysis methods of noise extraction from CT images*, Journal of Electrical and Electronics Engineering, ISSN 1844-6035, Vol.2, No.2, pp. 146-149, June 2009 (Scopus)
- 3.B7. **C. Grava**, B. Augereau, C. Fernandez-Maloigne, *Medical diagnosis by using the motion information in image sequences*, Journal of Electrical and Electronics Engineering, University of Oradea, Romania, ISSN 1844-6035, pp. 198-201, 2008 (Scopus)
- 3.B8. A. Grava, **C. Grava**, M. Pantea, L. Coroiu, *The influence of high voltage electrical lines on the living beings*, Journal of Electrical and Electronics Engineering, University of Oradea, Romania, ISSN 1844-6035, pp. 60-63, 2008 (Scopus)

C) în alte reviste de specialitate de circulație internațională ;

D) în reviste din țară recunoscute C.N.C.S.I.S. ;

E) în alte reviste de specialitate de circulație națională cu (ISBN, ISSN);

F) citări ISI/BDI/Alte reviste – exemple (34 citări - vezi anexă, fișa de îndeplinire a standardelor)

3.F1. Rosalia Leonardi, Daniela Giordano, Francesco Maiorana, *An Evaluation of Cellular Neural Networks for the Automatic Identification of Cephalometric Landmarks on Digital Images*, Journal of Biomedicine and Biotechnology, Volume 2009 (<http://www.hindawi.com/journals/jbb/2009/717102.html>), ISSN 1110-7243, Accession Number: WOS:000270575500001

Citare a lucrării:

A. Gacsádi, **C. Grava**, A. Grava, *Medical image enhancement by using cellular neural networks*, Proceedings of the 32<sup>th</sup> annual IEEE International Conference on Computers in Cardiology, CinC 2005, Lyon, France, ISBN 0-7803-9337-6, IEEE Catalog Number 05CH37712, pp. 821-824, 25-28 September 2005, Accession Number: WOS:000236378300207

3.F2. Thittai AK, Galaz B, Ophir J, *Importance of Axial Compression Verification to Correct Interpretation of Axial-Shear Strain Elastograms in Breast Lesions*, ULTRASONIC IMAGING Volume: 32 Issue: 3 Pages: 190-198 Published: JUL 2010, Accession Number: WOS:000280496200006

Citare a lucrării:

A. Basarab, A. Lyshchik, **C. Grava**, V. Buzuloiu, P. Delachartre, *Ultrasound image sequence registration and its applications for thyroid nodular disease*, Springer Journal of Signal Processing Systems, ISSN 1939-8018 (formerly the Springer Journal of VLSI Signal Processing Systems for Signal, Image, and Video Technology, ISSN 0922-5773), Special Issue of Biomedical Imaging, pp. 127-137, IF = 0,533, Vol. 55, No 1-3, April 2009, Accession Number: WOS:000258708400124

3.F3. Su, H.; Yang, F.; Song, J., *Packet-Layer Quality Assessment for Networked Video*, Source: INTERNATIONAL JOURNAL OF COMPUTERS COMMUNICATIONS & CONTROL Volume: 7 Issue: 3 Pages: 565-573 Published: SEP 2012, Accession Number: WOS:000305258800014

Citare a lucrării:

**C.Grava**, A.Gacsádi, I.Buciu, *A Homogeneous Algorithm for Motion Estimation and Compensation by Using Cellular Neural Networks*, International Journal of Computers, Communications & Control, ISSN 1841-9836, E-ISSN 1841-9844, Vol.V (2010), No.5, pp.715-722, December 2010, Accession Number: WOS:000283908700013

4. A)Articole/studii publicate în volumele unor manifestări științifice: (se precizeaza daca este cazul -cotate ISI sau indexate în baze de date internaționale-BDI):

4.A1. A.M. Grava, **C. Grava**, *Bond-Graph Modeling of the Equivalent Circuit of an On-Chip Spiral Inductor*, Proceedings of the 22nd IEEE International Symposium for Design and Technology in Electronic Packaging (SIITME), pp. 88-91, DOI: 10.1109/SIITME.2016.7777274, 2016, Accession Number: WOS:000390557400039

- 4.A2. A.M. Grava, **C. Grava**, O. Novac, *Bond-graph Modeling of the Equivalent Scheme of an Electrical Transmission Line*, Proceedings of the 13th International Conference on Engineering of Modern Electric Systems (EMES'2015), pp. 107-110, ISBN 978-1-4799-7650-8, Oradea, Romania, 11-12 June 2015 (ISI Proceedings/IEEEXplore), Accession Number: WOS:000363815100027
- 4.A3. A.M. Grava, **C. Grava**, M. Novac, *Bond-Graph Modeling of the Equivalent RL and RC Scheme of the Circuits Composing an Electrical Transmission Line*, Proceedings of the 13th International Conference on Engineering of Modern Electric Systems (EMES'2015), pp.103-106, ISBN 978-1-4799-7650-8, Oradea, Romania, 11-12 June 2015 (ISI Proceedings/IEEEXplore), Accession Number: WOS:000363815100026
- 4.A4. O. Novac, J. Sztrik, **C. Grava**, *Comparative Study Regarding two Implementations of an SEC-DED Code with FPGA Circuits*, Proceedings of the 13th International Conference on Engineering of Modern Electric Systems (EMES'2015), pp.181-184, ISBN 978-1-4799-7650-8, Oradea, Romania, 11-12 June 2015 (ISI Proceedings/IEEEXplore), Accession Number: WOS:000363815100045
- 4.A5. I. Buciu, A. Gacsadi, **C. Grava**, *Vision based Approaches for Driver Assistance Systems*, Recent Advances in Automation and Information, pp. 92-97, ISSN 1790-5117, Proceedings of the 11<sup>th</sup> WSEAS International Conference on Automation and Information (ICAI), ISBN 978-960-474-193-9, Iași, 13-15 June 2010 (IEEEXplore)
- 4.A6. A. Gacsádi, **C. Grava**, O. Straciuc, I. Gavriluț, *PDE-Based Medical Images Denoising Using Cellular Neural Networks*, IEEE Proceedings of the International Symposium on Signals Circuits and Systems (ISSCS 2009), Iasi, Romania, ISBN 978-1-4244-3784-9, Vol. 2, pp. 397-400, July 9-10, 2009 (ISI Proceedings/IEEEXplore), Accession Number: WOS:000275854200098
- 4.A7. **C. Grava**, A. Bartoli, V. Gay-Bellile, V. Buzuloiu, J.M. Lavest, *An Adaptive Multi-Resolution Algorithm for Motion Estimation in Medical Image Sequences*, Proceedings of the IEEE European Conference on Circuit Theory and Design (ECCTD'07), Sevilla, Spain, ISBN 1-4244-1342-7, IEEE Catalog Number 07EX1835C, pp. 507-510, 26-30 August 2007 (ISI Proceedings/IEEEXplore), Accession Number: WOS:000258708400124
- 4.A8. I. Gavriluț, V. Tiponuț, A. Gacsádi, **C. Grava**, *CNN Processing Techniques for Multi-robot Coordination*, Proceedings of the IEEE International Symposium on Signals, Circuits and Systems (ISSCS 2007), Vol.1, Iași, Romania, ISBN 1-4244-0969-1, IEEE Catalog Number 07EX1678C, pp. 269-272, 12-13 July 2007 (ISI Proceedings/IEEEXplore/INSPEC), Accession Number: WOS:000250471700068
- 4.A9. **C. Grava**, A. Gacsádi, C. Gordan, A. Grava, I. Gavriluț, *Applications of the Iterated Conditional Modes Algorithm for Motion Estimation in Medical Image Sequences*, Proceedings of IEEE International Symposium on Signals, Circuits and Systems (ISSCS 2007), Vol.2, Iași, Romania, ISBN 1-4244-0969-1, IEEE Catalog Number 07EX1678C, pp. 373-376, 12-13 July 2007 (ISI Proceedings/IEEEXplore/INSPEC), Accession Number: WOS:000250471700096
- 4.A10. **C. Grava**, V. Buzuloiu, B. Augereau, C. Fernandez-Maloigne, *A Multi-Resolution Mean Field Annealing Algorithm for Motion Estimation in Medical CT Image Sequences*, Proceedings of IEEE International Symposium on Signals, Circuits and Systems (ISSCS 2007), Vol.2, Iași, Romania, ISBN 1-4244-0969-1, IEEE Catalog Number 07EX1678C, pp. 307-310, 12-13 July 2007 (ISI Proceedings/IEEEXplore/INSPEC), Accession Number: WOS:000250471700078
- 4.A11. A. Gacsádi, **C. Grava**, V. Tiponuț, P. Szolgay, *A CNN implementation of the Horn & Schunck motion estimation method*, Proceedings of the 10th IEEE International Workshop on Cellular Neural Networks and Their Applications, CNNA 2006, Istanbul, Turkey, ISBN 1-4244-0640-4, IEEE Catalog Number 06TH8915C, pp. 120-124, 28-30 August 2006 (ISI Proceedings/IEEEXplore/INSPEC), Accession Number: WOS:000245392200031
- 4.A12. A. Basarab, H. Liebgott, **C. Grava**, P. Delachartre, *Two-Dimensional Sub-Sample Shift Estimation Using Plane Phase Fitting*, Proceedings of the IEEE International Conference on Acoustics, Speech and Signal Processing, ICASSP 2006, Vol. 2, Toulouse, France, ISBN 1520-6149, IEEE Catalog Number 1-4244-0469-X/06, pp. II-1152 – II-1155, 14-19 May 2006 (ISI Proceedings/IEEEXplore), Accession Number: WOS:000245559903011
- 4.A13. I. Gavriluț, A. Gacsádi, **C. Grava**, V. Tiponuț, *Vision based algorithm for path planning of a mobile robot by using cellular neural networks*, Proceedings of the IEEE International Conference on Automation, Quality&Testing, Robotics (AQTR 2006), Cluj-Napoca, Romania, ISBN 1-4244-0360-X, IEEE Catalog Number 06EX1370, pp. 306-311, 25-28 May 2006 (IEEEXplore/INSPEC), Accession Number: WOS:000241464000055
- 4.A14. A. Gacsádi, **C. Grava**, A. Grava, *Medical image enhancement by using cellular neural networks*, Proceedings of the 32<sup>th</sup> annual IEEE International Conference on Computers in Cardiology, CinC 2005, Lyon, France, ISBN 0-7803-9337-6, IEEE Catalog Number 05CH37712, pp. 821-824, 25-28 September 2005 (ISI Proceedings/IEEEXplore), Accession Number: WOS:000236378300207
- 4.A15. **C. Grava**, V. Buzuloiu, A. Gacsádi A., A. Grava, *Mean field annealing for motion estimation in medical image sequences*, Proceedings of the IEEE International Symposium on Signals, Circuits and Systems (ISSCS 2005), Vol. I, Iași, Romania, ISBN 0-7803-9029-6, IEEE Catalog Number 05EX1038, pp. 35-38, 14-15 July 2005 (ISI Proceedings/IEEEXplore/INSPEC), Accession Number: WOS:000231532900009
- 4.A16. A. Gacsádi, **C. Grava**, T. Maghiar, C. Gordan, A. Grava, R. Reiz, *Inter-Slice Interpolation based on Matching Information, using Cellular Neural Networks*, Proceedings of the 8th IEEE International Biannual Workshop on Cellular Neural Networks and their Applications (CNNA), Budapest, Hungary, ISBN 963-311-357-1, pp. 417-422, 22-24 July 2004 (Google Scholar)
- 4.A17. **C. Grava**, A. Gacsádi, C. Gordan, T. Maghiar, K. Bondor, *Motion compensation using cellular neural networks*, Proceedings of the IEEE European Conference on Circuit Theory and Design (ECCTD'03), Vol. I, Crakow, Poland, ISBN 83-88309-951, pp. 397-400, 1-4 September 2003 (Google Scholar) <http://www.gbv.de/dms/tib-ub-hannover/376878843.pdf>

- 4.A18. C. Gordan, A. Gacsádi, **C. Grava**, R. Reiz, *Using Wavelet Transform for the Ridges Extraction of a Polynomial Frequency Modulated Signal Covered with a Zero-Mean Gaussian Noise*, Proceedings of the International Conference on Computer, Communication and Control Technologies (CCCT'03), Orlando, Florida, USA, ISBN 980-6560-06-X, pp. 37-40, 1-2 August 2003 (ISI Proceedings/IEEEExplore), Accession Number: WOS:000189125000016
- 4.A19. C. Gordan, A. Gacsádi, **C. Grava**, R. Reiz, *Using Mathematical Morphology Elements for the Ridges Extraction of a Polynomial FM Signal Covered by a Low-Pass Filtered Gaussian Noise*, Proceedings of the 7th World Multiconference on Systemics, Cybernetics and Informatics, Orlando, Florida, USA, ISBN 980-6560-06-X, pp. 84-87, 27-30 July 2003 (ISI Proceedings/IEEEExplore), Accession Number: WOS:000189329700008
- 4.A20. **C. Grava**, A. Gacsádi, C. Gordan, T. Maghiar, A. Grava, R. Reiz, *3D Interpolation using Cellular Neural Networks*, Proceedings of Progress in Electromagnetics Research Symposium, (PIERS), Pisa, Italy, ISBN 88-8492-268-2, pp. 341-344, 28-31 March 2004 (Scopus)
- 4.A21. A. Grava, T. Maghiar, **C. Grava**, N. Maghiar, V. Şoproni, M. Pantea, M. Novac, L. Moldovan, *Microwave Heating Treatment at Low Temperature Gradient Using a Wave-Guide with Networks of Serial and Parallel Nozzles*, Proceedings of Progress in Electromagnetics Research Symposium, (PIERS), Pisa, Italy, ISBN 88-8492-268-2, pp. 225-228, 28-31 March 2004 (Scopus)
- 4.A22. A. Grava, T. Maghiar, **C. Grava**, V. Şoproni, *The analysis of the asynchronous motor using a multiport inductive-capacitive bond-graph model*, Proceedings of the XII International Symposium on Theoretical Electrical Engineering ISTET'03, Vol. II, Warsaw, Poland, ISBN 83-916444-1-3, pp. 433-436, 6-9 July 2003 (Google Scholar)
- 4.A23. **C. Grava**, T. Maghiar, A. Gacsádi, A. Grava, *A deterministic algorithm for motion estimation in medical image sequences*, Proceedings of the International Workshop on "Computational Problems of Electrical Engineering" (CPEE), Zakopane, Poland, ISBN 83-916444-4-8, pp. 21-24, 1-4 September 2004 (Google Scholar)
- 4.A24. A. Grava, T. Maghiar, **C. Grava**, N. Maghiar, V. Şoproni, M. Pantea, M. Novac, L. Coroiu, *Optimization of the Energy Transfer in Microwave Ovens using a Wave-Guide with Sloped Slits*, Proceedings of the International Workshop on "Computational Problems of Electrical Engineering" (CPEE), Zakopane, Poland, ISBN 83-916444-4-8, pp. 90-92, 1-4 September 2004 (Google Scholar)
- 4.A25. **C. Grava**, S.B. Golemati, P. Asvestas, K.S. Nikita, G.K. Matsopoulos, *Estimation of Arterial Wall Motion from Ultrasound Images*, Proceedings of the 5<sup>th</sup> International Conference on New Trends in Signal Processing, Military Academy of Slovakia, Liptovski Mikulas, ISBN 80-8040-071-7, pp. 195-202, 24-26 May 2000 (Google Scholar)
- 4.A26. **C. Grava**, A. Bartoli, V. Gay-Bellile, V. Buzuloiu, J.M. Lavest, *Direct Image Registration with Adaptive Multi-Resolution*, Proceedings of the Vision, Video and Graphics (VVG) Workshop, University of Warwick, UK, Warwick, United Kingdom, 10 pages, 116-125, 14 September 2007 (Google Scholar)
- 4.A27. A. Basarab, **C. Grava**, V. Buzuloiu, P. Delachartre, *Estimation de décalages subpixeliques par ajustement de la phase des signaux complexes*, Proceedings of the XXI<sup>e</sup> Colloque GRETSI (Groupe de Recherche et d'Etudes de Traitement du Signal et des Images), Troyes, France, pp. 149-152, 11-14 September 2007 (Google Scholar)
- 4.A28. **C. Grava**, V. Buzuloiu, A. Grava, *Comparative study of motion estimation methods for spatio-temporal interpolation*, Proceedings of the IEEE International Symposium on Signals, Circuits and Systems (ISSCS 2003), Vol.1, Iaşi, Romania, ISBN 0-7803-7979-9, IEEE Catalog Number 03EX720, pp. 153-156, 10-11 July 2003 (ISI Proceedings/IEEEExplore/INSPEC), Accession Number: WOS:000186628100040.

B) internațională recunoscută (cu ISSN sau ISBN) țară și din străinătate

- 4.B1. O. Straciuc, Zs. Lengyel, C. Oncu, L. Unita, R. Vlad, A. Gacsadi, **C. Grava**, *The current role of positron emission tomography/computed tomography (PET/CT) exam in evaluation of non-small cell lung cancer (NSCLC) patients*, prezentat la 8th Balkan Congress of Radiology, 29-31 oct. 2010, Alexandroupolis, Grecia
- 4.B2. A. Grava, **C. Grava**, M. Pantea, L. Coroiu, *The study of the electric field into activity with microwaves of a thin fiber for an uniform heating*, Proceedings of the 11th International Conference on Microwaves and High Frequency Heating, Ampere 11, Oradea, Romania, ISBN 978-973-756-333-7, pp. 125-128, 3-6 September 2007
- 4.B3. **C. Grava**, A. Grava, *A modified search elimination algorithm for motion estimation in image sequences*, Proceedings of the International Workshop on Control and Information Technology IWCIT 2005, Ostrava, Czech Republic, ISBN 80-248-0906-0, pp. 191-194, 15-16 September 2005
- 4.B4. A. Grava, **C. Grava**, L. Coroiu, *The analysis of the resonant frequency of a wave-guide*, Proceedings of the International Workshop on Control and Information Technology IWCIT 2005, Ostrava, Czech Republic, ISBN 80-248-0906-0, pp. 355-358, 15-16 September 2005
- 4.B5. **C. Grava**, *A comparative study of basic motion estimation methods*, Proceedings of the International Workshop on Control and Information Technology IWCIT 2005, Ostrava, Czech Republic, ISBN 80-248-0906-0, pp. 187-190, 15-16 September 2005
- 4.B6. A. Grava, T. Maghiar, **C. Grava**, V. Şoproni, *The bond-graph analysis of the DC motor with permanent magnets*, Proceedings of the XII International Symposium on Theoretical Electrical Engineering ISTET'03, Vol. II, Warsaw, Poland, ISBN 83-916444-1-3, pp. 429-432, 6-9 July 2003
- 4.B7. A. Gacsádi, T. Maghiar, K. Bondor, **C. Grava**, D. Trip Nistor, *Position determination of an object in an image using cellular neural networks*, Proceedings of the 6<sup>th</sup> International Conference on New Trends of Signal Processing, Military Academy of Slovakia, Tatranske Zruby, Slovakia, ISBN 80-8040-071-7, pp. 261-266, May 2002



- 4.B8. S. Curilă, M. Curilă, **C.Grava**, *3D Pose Estimation by Directly Matching Polyhedral Models to Gray Value Gradients*, Proceedings of the 5<sup>th</sup> International Conference on New Trends in Signal Processing, Military Academy of Slovakia, Liptovski Mikulas, ISBN 80-8040-071-7, pp. 238-243, 24-26 May 2000
- 4.B9. A Gacsádi, **C. Grava**, *Linear interpolation of 2D-images using Cellular Neural Networks*, Proceedings of the 5<sup>th</sup> International Conference on New Trends in Signal Processing, Military Academy of Slovakia, Liptovski Mikulas, ISBN 80-8040-071-7, pp. 178-183, 24-26 May 2000
- 4.B10. A. Grava, **C. Grava**, M. Pantea, D. Şoproni, L. Coroiu, *The bond-graph design of the DC motor with separate excitation*, Proceedings of the 9<sup>th</sup> International Conference on Engineering of Modern Electric System EMES'07, Annals of the University of Oradea, Fascicle of Electrotechnics, Oradea, Romania, ISSN 1223-2106, pp. 157-160, 24-26 May 2007
- 4.B11. A. Grava, T. Maghiar, T. Maghiar, **C. Grava**, E. Lung, M. Novac, D. Şoproni, M. Pantea, L. Coroiu, L. Moldovan, *A simplified magneto-electrical model of the three-phased asynchronous motor*, Proceedings of the 5<sup>th</sup> International Conference on Renewable Sources and Environmental Electro-Technologies (RSEE 2004), Annals of the University of Oradea, Fascicle of Electrotechnics, Stâna de Vale Spa, Romania, ISSN 1223-2106, pp. 118-121, 27-29 May 2004
- 4.B12. N. Maghiar, A. Grava, T. Maghiar, **C. Grava**, E. Lung, M. Novac, D. Şoproni, M. Pantea, L. Coroiu, L. Moldovan, *The Influence of Space Harmonic on the Biphasic Asynchronous Motor Performances*, Proceedings of the 5<sup>th</sup> International Conference on Renewable Sources and Environmental Electro-Technologies (RSEE 2004), Annals of the University of Oradea, Fascicle of Electrotechnics, Stâna de Vale Spa, Romania, ISSN 1223-2106, pp. 128-131, 27-29 May 2004
- 4.B13. N. Maghiar, T. Maghiar, A.Grava, **C.Grava**, D. Şoproni, M. Pantea, *A theoretical study of the magnetic circuit of an electrical machine using reluctances*, Proceedings of the 7<sup>th</sup> International Conference on Engineering of Modern Electric Systems (EMES'03), Annals of the University of Oradea, Fascicle of Electrotechnics, Oradea, ISSN 1223-2106, pp. 284-288, 29-31 May 2003
- 4.B14. A. Grava, N. Maghiar, T.Maghiar, **C. Grava**, D. Şoproni, M. Pantea, *The bond-graph modeling of the star-delta starting of an induction machine*, Proceedings of the 7<sup>th</sup> International Conference on Engineering of Modern Electric Systems (EMES'03), Annals of the University of Oradea, Fascicle of Electrotechnics, Oradea, Romania, ISSN 1223-2106, pp. 271-277, 29-31 May 2003
- 4.B15. A. Grava, N. Maghiar, T.Maghiar, **C. Grava**, D. Şoproni, M. Pantea, *The bond-graph modeling of the unexpected disconnection of one supplying-phase of an induction machine*, Proceedings of the 7<sup>th</sup> International Conference on Engineering of Modern Electric Systems (EMES'03), Annals of the University of Oradea, Fascicle of Electrotechnics, Oradea, Romania, ISSN 1223-2106, pp. 278-285, 29-31 May 2003
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- 4.B18. A Gacsádi, **C. Grava**, *Simulation of Discrete Time Cellular Neural Networks - DTCNN*, Proceedings of the Second International Conference on Renewable Sources and Environmental electro-Technologies (RSEE'98), Annals of the University of Oradea, Fascicle of Electrotechnics, Felix-Spa, Romania, ISSN 1223-2106, pp. 99-104, 27-30 May 1998
- 4.B19. C. Vertan, **C. Grava**, V. Buzuloiu, *Cluster filtering revisited: probabilistic and possibilistic approaches to multichannel signal filtering*, Proceedings of the 4<sup>th</sup> International Conference on Engineering of Modern Electric Systems (EMES'97), Annals of the University of Oradea, Fascicle of Electrotechnics, Băile Felix, ISSN 1223-2106, pp. 276-281, 30 May-1 June 1997
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- 4.B21. **C. Grava**, A. Chişu, *System for output control of a magnetron equipped with an electromagnet*, Proceedings of the 4<sup>th</sup> International Conference on Engineering of Modern Electric Systems (EMES'97), Annals of the University of Oradea, Fascicle of Electrotechnics, Băile Felix, Romania, ISSN 1223-2106, pp. 110-114, 30 May-1 June 1997
- 4.B22. **C. Grava**, A. Bartoli, V. Gay-Bellile, *A Multi-Resolution Algorithm for Motion Estimation in Image Sequences*, Proceedings of the 9<sup>th</sup> International Conference on Engineering of Modern Electric Systems (EMES'07), Annals of the University of Oradea, Fascicle of Electrotechnics, Section of Electronics, Oradea, Romania, ISSN 1454-9239, pp.45-49, 24-26 May 2007
- 4.B23. **C. Grava**, B. Augereau, C. Fernandez-Maloigne, *Applications of Mean Field Annealing Algorithm for Motion Estimation in Image Sequences*, Proceedings of the 9<sup>th</sup> International Conference on Engineering of Modern Electric Systems (EMES'07), Annals of the University of Oradea, Fascicle of Electrotechnics, Section of Electronics, Oradea, Romania, ISSN 1454-9239, pp. 40-44, 24-26 May 2007
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- 4.B25. **C. Grava**, A. Grava, G. Chereji, *Iterated conditional modes algorithm for motion estimation in medical image sequences*, Proceedings of the 8<sup>th</sup> International Conference on Engineering of Modern Electric Systems (EMES'05), Annals of the University of Oradea, Fascicle of Electrotechnics, Section of Electronics, Oradea, Romania, 26-28 May 2005, ISSN 1454-9239, pp. 70-73
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- 4.B27. **C. Grava**, A. Grava, G. Chereji, *The implementation of a pseudo-stochastic algorithm for motion estimation*, Proceedings of the 5<sup>th</sup> International Conference on Renewable Sources and Environmental Electro-Technologies (RSEE 2004), Annals of the University of Oradea, Fascicle of Electrotechnics, Section of Electronics, Oradea, Romania, May 2004, ISSN 1454-9239, pp. 77-83
- 4.B28. **C. Grava**, A. Gacsádi, A. Grava, *The implementation of a fast motion estimation method in image sequences*, Proceedings of the 7<sup>th</sup> International Conference on Engineering of Modern Electric Systems (EMES'03), Annals of the University of Oradea, Fascicle of Electrotechnics, Section of Electronics, Oradea, Romania, 29-31 May 2003, ISSN 1454-9239, pp. 68-73
- 4.B29. R. Reiz, C. Gordan, **C. Grava**, A. Gacsádi, *Using neural networks for the ridges extraction of a parabolic frequency modulated signal*, Proceedings of the scientific conference with international participation "Interdisciplinarity in engineering" (Inter-Ing) 2003, Vol. II, "Petru Maior" University, Tg. Mureș, Romania, ISBN 973-8084-83-0, pp. 365-368, 6-7 November 2003
- 4.B30. **C. Grava**, A. Gacsádi, A. Grava, *The study of basic motion estimation methods for motion compensation*, Proceedings of the 4<sup>th</sup> International Conference on Renewable Sources and Environmental Electro-Technologies (RSEE'2002), Annals of the University of Oradea, Fascicle of Electrotechnics, Section of Electronics, Oradea, Romania, 6-9 June 2002, ISSN 1454-9239, pp.70-75
- 4.B31. A. Gacsádi, **C. Grava**, A. Grava, *Motion compensated CNN 2D interpolation*, Proceedings of the 4<sup>th</sup> International Conference on Renewable Sources and Environmental Electro-Technologies (RSEE 2002), Annals of the University of Oradea, Fascicle of Electrotechnics, Section of Electronics, Oradea, Romania, 6-9 June 2002, ISSN 1454-9239, pp. 49-54
- 4.B32. A. Grava, **C. Grava**, B. Chereji, *The bond-graph analysis for the blocked-rotor regime of the induction machine*, Proceedings of the 27<sup>th</sup> Annual Congress of the American Romanian Academy of Arts and Sciences (ARA 2002), Oradea, Romania, 29 May – 2 June 2002, ISBN 2-553-01024-9, pp. 701-703
- 4.B33. **C. Grava**, A. Gacsádi, *Enlargement and interpolation of 2D signals using Cellular Neural Networks*, Proceedings of the 5<sup>th</sup> International Conference on Engineering of Modern Electric Systems (EMES'99), Annals of the University of Oradea, Fascicle of Electrotechnics, Section of Electronics, Băile Felix, Romania, 27-29 May 1999, ISSN 1454-9239, pp. 183-188

C) naționale:

- 4.C1. O. Straciuc, C. Oncu, Zs. Lengyel, A. Venter, O. Juhas, A. Gacsadi, C. Grava, L. Unita, *Aplicația curentă a tomografiei prin emisie de pozitroni / tomografie computerizată (PET/CT) în oncologie*, prezentat la Zilele Medicale Orădene, 25 – 27 noiembrie 2010, Oradea, România
- 4.C2. A. Gacsádi, O. Straciuc, C. Grava, I. Buciu, I. Gavriluț, L. Țepelea, *Procesarea imaginilor medicale utilizând rețele neuronale celulare*, prezentat la Zilele Medicale Orădene, 25 – 27 noiembrie 2010, Oradea, România
- 4.C3. C. Oncu, O. Straciuc, R. Vlad, A. Gacsadi, C. Grava, *Aspecte non-maligne captante FDG în examinarea PET/CT*, prezentat la Al III-lea Congres Național de Medicină Nucleară, 17-19 noiembrie 2010, București, România
- 4.C4. O. Straciuc, Zs. Lengyel, C. Oncu, R. Vlad, A. Gacsadi, C. Grava, *The current role of PET/CT evaluation in the global management of NSCLC and breast cancer*, prezentat la 8th Congress of The Balkan Union of Oncology, 8-11 sept.2010, Sibiu, România
- 4.C5. O. Straciuc, C. Oncu, Zs. Lengyel, A. Gacsadi, C. Grava, *Current Application of Positron Emission Tomography/Computed Tomography (PET/CT) in Oncology*, prezentat la International Congress Of Medical Oncology: ESMO-SNOMR Symposium „Principles Of Medical Oncology”, The Ninth National Conference Of Medical Oncology From Romania, 23-26 sept. 2010, Poiana Brasov, România
- 4.C6. O. Straciuc, A. Gacsádi, **C. Grava**, R. Vlad, *Actualități de diagnostic PET/CT în malignitățile sânelui*, Prima Conferință Națională de Senologie Imagistică, 13-14 noiembrie, 2009, Sibiu, România
- 4.C7. O. Straciuc, R. Vlad, A. Gacsádi, **C. Grava**, C. Oncu, *Aspecte PET CT ale tumorilor osoase maligne primitive*, Conferința Națională de Imagistică Musculoscheletală, 6-8 noiembrie, 2009, Timișoara, România

5 Brevete de invenție

6 Proiecte/contracte/granturi de cercetare-dezvoltare-inovare:

A) obținute prin competiție pe bază de contract/grant internaționale

- 6.A1. **C. Grava** (membru în echipa de cercetare): „*Joint development and implementation of an advanced training program in neurosciences*”, 2012-2013, Hu-Ro
- 6.A2. **C. Grava** (director de proiect internațional): *Imagerie in-vivo de l'élasticité par échographie*, Proiect în cadrul Programului Brâncuși de colaborări bilaterale între Ministerul Educației și Cercetării din România și Ministerul

Afacerilor Externe din Franța, 2006-2008, Proiect 14916XG/08.12.2006, ([http://cgrava.webhost.uoradea.ro/Brancusi\\_2006\\_2008.html](http://cgrava.webhost.uoradea.ro/Brancusi_2006_2008.html))

- 6.A3. **C. Grava** (responsabil de proiect): *Compensation de mouvement par réseaux neuronaux cellulaires*, Programme MIRA, CREATIS-INSA, Lyon, Franța, No. safir: 02006799/01, 2003
- 6.A4. **C. Grava** (responsabil de proiect): *Estimation du mouvement par approche Markovienne, avec prise en compte des discontinuités*, Programme MIRA, CREATIS-INSA, Lyon, Franța, No. safir: 010849/01, 2002
- 6.A5. **C. Grava** (responsabil de proiect): *Etude prospective en imagerie pour la tomographie dynamique*, EGIDE, CREATIS-INSA, Lyon + LETI CEA Grenoble, Franța, N/Ref.: 305586H/P262825B, 2001
- 6.A6. **C. Grava** (responsabil de proiect): *Méthodes de corrélation pour la détection et l'estimation du mouvement des parois artérielles*, Programme TEMPRA, CREATIS-INSA, Lyon, Franța, No. safir: 99020044, 2000
- 6.A7. **C. Grava** (membru în echipa de cercetare): *CERN Purchase order CA 1280166 – Software de generare și testare a traficului Ethernet pentru rețeaua CERN*, 2002-2003, CERN Geneva, număr UPB: 17-02-05, titular prof.dr.ing. V. Buzuloiu
- 6.A8. **C. Grava** (membru în echipa de cercetare): *Dezvoltare de software pentru societatea franceză ATLAS*, Atlas sarl, Franța, număr UPB: 17-01-07, titular prof.dr.ing. V. Buzuloiu, 2001-2002

B) obținute prin competiție pe bază de contract/grant naționale

- 6.B1. **C. Grava** (membru în echipa de cercetare): *Dezvoltarea unor metode de prelucrare și analiză a imaginilor computer-tomografice, utilizând rețele neuronale celulare și integrarea acestora într-un sistem de asistare a diagnozei medicale*, Proiect de cercetare exploratorie în cadrul programului PNII – Idei, proiect ID – 668/2008, contract nr. 645/19.01.2009, 690.000 RON, [http://cgrava.webhost.uoradea.ro/PNII\\_2009\\_2011.html](http://cgrava.webhost.uoradea.ro/PNII_2009_2011.html)
- 6.B2. **C. Grava** (responsabil local de proiect): „*Tehnici de Analiză, Modelare și Simulare pentru Imagistică, Bioinformatică și Sisteme Complexe*”, POSDRU/86/1.2/S/61756, „Universitate pentru viitor”, 1.382.490 RON, contract nr. E4863/28.06.2010, <http://www.master-items.ro/>
- 6.B3. **C. Grava** (director de proiect național): *Elaborarea și implementarea unor metode de asistare a diagnozei medicale în bolile cardio-vasculare, pe baza estimării de mișcare în secvențe de imagini medicale*, Proiect în cadrul Programului Cercetare de Excelență (CeEx), 2006-2008, Grant CeEx RP4 5045/18.09.2006, 139.000 RON ([http://cgrava.webhost.uoradea.ro/CeEx\\_2006\\_2008.html](http://cgrava.webhost.uoradea.ro/CeEx_2006_2008.html))
- 6.B4. **C. Grava** (membru în echipa de cercetare): *Metode de îmbunătățire a imaginilor digitale prin reducerea imperfecțiunilor cauzate de praful și zgârieturile din sistemul optic al camerei digitale*, (LUMERO), număr UPB: 17-03-01, 2003
- 6.B5. **C. Grava** (membru în echipa de cercetare): *Metodă de înlăturare a efectului de ochi roșii din fotografii cu blitz, prin prelucrări de imagini*, (LUMERO), număr UPB: 17-02-04, 2002-2003
- 6.B6. **C. Grava** (membru în echipa de cercetare): *Sistem de căutare a imaginilor prin similaritatea vizuală a conținutului*, Grant CNCISIS, UPB: 17-01-18
- 6.B7. **C. Grava** (membru în echipa de cercetare): *Dezvoltarea unui algoritm de detecție și recunoaștere a fețelor umane în fotografii digitale*, (LUMERO), număr UPB: 17-03-02, 2003
- 6.B8. **C. Grava** (membru în echipa de cercetare): *Caracterizarea fețelor persoanelor în imagini*, Institutul pentru tehnologii avansate, număr UPB: 17-98-04, 1998-2000
- 6.B9. **C. Grava** (membru în echipa de cercetare): *Metode și algoritmi noi pentru prelucrarea și analiza semnalelor multidimensionale (imagini color, multispectrale și secvențe de imagini)*, Ministerul Cercetării și Tehnologiei, număr UPB: 17-97-11, 1997-1999
- 6.B10. **C. Grava** (membru în echipa de cercetare): *Algoritmi și aplicații ale detecției și estimării mișcării în secvențe de imagini*, Consiliul pentru Granturi al Academiei Române, număr UPB: 17-97-04, 1997
- 6.B11. **C. Grava** (membru în echipa de cercetare): *Algoritmi de prelucrare a imaginilor în domeniul eye-tracking*, (LIAMIS), număr UPB: 17-02-06, 2002-2003.

C) contracte de cercetare cu mediul socio-economic

D) alte lucrări de cercetare-dezvoltare, după caz.

7 A) Creații artistice prezentate la manifestări recunoscute, precum și, după caz, alte lucrări similare.

B) lucrări prezentate la diferite seminarii/expoziții și nepublicate, etc.

8. Recunoașterea prestigiului științific

A) Conducere de doctorat -

B) Referent în comisii de doctorat internaționale:

- 8.B1. Basarab Adrian – INSA Lyon, 2008
- 8.B2. Florea Corneliu – UPB, 2009
- 8.B3. Sîrbu Laura – UPB, 2009
- 8.B4. Filip Florea – UPB, 2009
- 8.B5. Dârlea Lavinia – UPB/Univ.Savoie, 2010
- 8.B6. Oprea Alina – UPB, 2010
- 8.B7. Berkane Mohamed, INSA Lyon, 2010

- 8.B8. Marta Zamfir, UPB 2011
- 8.B9. Marius Leahu, UPB 2012
- 8.B10. Lucian Leahu, UPB 2012
- 8.B11. Horațiu Sachelarie, UPB 2013
- 8.B12. Condorovici Răzvan George, UPB 2014
- 8.B13. Vrânceanu Ruxandra, UPB 2014
- 8.B14. Stan Mihaela, UPB 2015
- 8.B15. Radu Anca-Livia, UPB/Trento, 2016
- 8.B16. Cosmin Țoca, UPB 2017.

C) Membru in colective de redactie ale unor reviste științifice recunoscute

- 8.C1. Journal of Electrical and Electronics Engineering, <http://electroinf.uoradea.ro/index.php/reviste/jeee.html>
- 8.C2. Journal of Computer Science and Control Systems (2008-2012), <http://electroinf.uoradea.ro/reviste%20CSCS/default.htm>
- 8.C3. Scientific Journals International, ISSN 1556-67575, [http://www.scientificjournals.org/editorial\\_board.htm](http://www.scientificjournals.org/editorial_board.htm), 2004-

D) Referent atestat al unor reviste științifice cotate ISI sau indexate in BDI in ultimii 5 ani

- 8.D1. Journal of Electrical and Electronics Engineering, <http://electroinf.uoradea.ro/reviste%20EEE/default.htm>
- 8.D2. Journal of Computer Science and Control Systems, <http://electroinf.uoradea.ro/reviste%20CSCS/default.htm>
- 8.D3. Scientific Journals International, ISSN 1556-67575, [http://www.scientificjournals.org/editorial\\_board.htm](http://www.scientificjournals.org/editorial_board.htm), 2004-
- 8.D4. Journal of Visual Communication and Image Representation, <http://ees.elsevier.com/jvci/default.asp>, 2004-
- 8.D5. Journal of Biomedical Informatics, <http://ees.elsevier.com/jbi/>, 2004-

E) Expert științific atestat național / internațional

- 8.E1. expert FP7 din 2007 + evaluator REA Horizon'2020
- 8.E2. membru în RNE (Registrul Național al Evaluatoților) ARACIS
- 8.E3. expert CeEx, CNSIS

F) Premii

G) membru în asociații științifice și profesionale

- 8.G1. Membru AGIR din 2003
- 8.G2. Membru SRAIT = Societatea Română de Automatică și Informatică Tehnică din 2004
- 8.G3. Membru AIEER = Asociația Inginerilor Electricieni și Electroniști din România din 2009
- 8.G4. Membru IEEE, Signal Processing Soc. din 1999. În prezent, Senior Member
- 8.G5. Membru IAEng = Asociația Internațională a Inginerilor, din 2012.

**prof.dr.ing. Grava Cristian**