

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. Buciuc, *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, 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, 2016

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. Sorin Curila, Ioan Buciuc, Cristian Grava, Daniel Nistor Trip, Oreste-Mihai Straciuc, COVID-19 lung infection segmentation from CT imaging using statistics and edge-region-based active contour, December 2024, International Journal of Computers Communications & Control, Vol. 19 No. 6, DOI: <https://doi.org/10.15837/ijccc.2024.6.6862>, ISSN: 1841-9836, Accession Number: WOS:001348582100001
- 3.A2. Adriana-Maria Cuc, Florin Lucian Morgoș, Adriana-Marcela Grava, Cristian Grava, Estimation of the Impulse Response of the AWGN Channel with ISI within an Iterative Equalization and Decoding System That Uses LDPC Codes, August 2024, Entropy 26(9):720, Q2, ISSN 1099-4300, DOI: 10.3390/e26090720, Accession Number: WOS:001322936100001
- 3.A3. Adriana-Maria Cuc, Florin Lucian Morgoș, Adriana-Marcela Grava, Cristian Grava, Iterative Equalization and Decoding over an Additive White Gaussian Noise Channel with ISI Using Low-Density Parity-Check Codes, November 2023, Applied Sciences, Q2, ISSN 2076-3417, DOI: 10.3390/app132212294, Accession Number: WOS:001120386800001

- 3.A4. Sorin Curila, Mircea Curila, Diana Curila (Popescu), **Cristian Grava**, Levenberg-Marquardt Algorithm Applied for Foggy Image Enhancement, October 2023, Informatica, ISSN print 0868-4952, ISSN online 1822-8844, DOI: 10.15388/23-INFOR533
- 3.A5. Adriana-Marcela Grava, Melinda Marian, **Cristian Grava**, Sorin Curilă, Nistor-Daniel Trip, Bond-graph analysis and modelling of a metal detector as an example of electro-magnetic system, Elsevier, Ain Shams Engineering Journal, Volume 14, Issue 10, October 2023, 102204, ISSN 2090-4479, Q1, <https://doi.org/10.1016/j.asej.2023.102204>, Accession Number: WOS:001001762200001
- 3.A6. Adriana-Maria Cuc, Florin Lucian Morgoș, **Cristian Grava**, Performances Analysis of Turbo Codes, LDPC Codes and Polar Codes over an AWGN Channel in the Presence of Inter Symbol In-terference, Sensors - Special Issue "Performance, Simulation and Modelling of Sensors Networks in the Context of IoT, Edge Computing, and AI", Sensors 2023, 23(4), 1942, ISSN 1424-8220, Q2, <https://doi.org/10.3390/s23041942>, Accession Number: WOS:000941731200001
- 3.A7. David C. Marcu, **Cristian Grava**, Loredana G. Marcu, Current role of delta-radiomics in head and neck oncology, International Journal of Molecular Sciences, ISSN 1422-0067, 24(3), 2214, Q1, February 2023, <https://doi.org/10.3390/ijms24032214>, 2023, Accession Number: WOS:000930102800001
- 3.A8. Lisa Craiut, Constantin Bungau, Tudor Bungau, **Cristian Grava**, Pavel Otrisal and Andrei-Flavius Radu, Technology transfer, sustainability, and development, world-wide and in Romania, Sustainability 2022, 14(23), 15728, Q2, ISSN 2071-1050, <https://www.mdpi.com/2071-1050/14/23/15728>, <https://doi.org/10.3390/su142315728>, Accession Number: WOS:000896106500001
- 3.A9. S. Curilă, M. Curilă, D. Curilă, (Popescu), **C. Grava**, A Mathematical model and an Experimental Setup for the Rendering of the Sky Scene in a Foggy Day, Revue Roumaine des Sciences Techniques, Serie Électrotechnique et Énergétique, ISSN 0035-4066, pp. 265-270, Vol. 65, Issue 3-4, 2020, Accession Number: WOS:000608261900018
- 3.A10. 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
- 3.A11. 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
- 3.A12. 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
- 3.A13. **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 = 0,65, <http://journal.univagora.ro/download/pdf/456.pdf>
- 3.A14. A. Basarab, A. Lyschik, **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 (ISI Web of Science/ISI Master Journals), <http://link.springer.com/article/10.1007/s11265-008-0184-8>
B) indexate în baze de date internaționale recunoscute (BDI).
- 3.B1. G.C. Cret, A. Stan (Belei), **C. Grava**, *A short overview on navigation of mobile robots based on visual information*, Journal of Electrical and Electronics Engineering, ISSN 1844-6035, Vol.13, No.1, pp. 19-22, May 2020 / Scopus
- 3.B2. T. Moisa, **C. Grava**, F. Balint, A.-M. Grava, *Current trends in scientific research in IT and electrical and electronics engineering*, Journal of Electrical and Electronics Engineering, ISSN 1844-6035, Vol.11, No.1, pp. 9-14, May 2018 / Scopus
- 3.B3. 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.B4. **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.B5. 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.B6. **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.B7. **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.B8. 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.B9. **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.B10. 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 (111 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

Citare a lucrării:

A. Gacsádi, C. Grava, A. Grava, *Medical image enhancement by using cellular neural networks*, Proceedings of the 32th 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

- 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

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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

- 3.F3. https://www.researchgate.net/publication/360485262_Navigation_Visuelle_d'un_Robot_Mobile/references

- 3.F4. 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

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

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

- 4.A1. David C. Marcu; Cristian Grava; Corina Cinezan; Camelia Bianca Rus; *Considerations About Using Large Language Models to Enhance the Prediction of Pedestrian Trajectories*, Proceedings of the 18th IEEE International Conference on Engineering of Modern Electric Systems (EMES'2025), 29-30 May 2025, Oradea, Romania, IEEEExplore, Electronic ISBN:979-8-3315-2577-4, DOI: 10.1109/EMES65692.2025.11045578, <https://ieeexplore.ieee.org/document/11045578>
- 4.A2. Bogdan Sebeșan; Gábor-Dániel Kovács; Cristian Grava; *Considerations About Using Large Language Models to Enhance the Prediction of Pedestrian Trajectories*, Proceedings of the 18th IEEE International Conference on Engineering of Modern Electric Systems (EMES'2025), 29-30 May 2025, Oradea, Romania, IEEEExplore, Electronic ISBN:979-8-3315-2577-4, DOI: 10.1109/EMES65692.2025.11045592, <https://ieeexplore.ieee.org/document/11045592>
- 4.A3. Daniel Trip; Adrian Schiop; Adriana Grava; Cristian Grava, *Analysis and Simulation of a Control Method for a ZCS-QRC Buck Topology with Constant Switching Frequency*, Proceedings of the 16th International Symposium on Electronics and Telecommunications (ISETC'24), 7-8 November 2024, Timisoara, Romania, DOI: 10.1109/ISETC63109.2024.10797248, ISBN:979-8-3503-9086-5, Electronic ISSN: 2475-7861, <https://ieeexplore.ieee.org/document/10797248>, IEEEExplore
- 4.A4. Gabriel-Călin Creț, Lavinia Țepelea, Cristian Grava, Ioan Gavriluț, Toma Suru, *Using Raspberry Pi and the OpenCV Library to Command a Robot for Tracking a Colored Object*, Proceedings of the 17th IEEE International Conference on Engineering of Modern Electric Systems (EMES'2023), 09-10 June 2023, Oradea, Romania, IEEEExplore, ISBN:979-8-3503-1063-4, DOI: 10.1109/EMES58375.2023.10171765, <https://ieeexplore.ieee.org/document/10171765>
- 4.A5. David C. Marcu, Cristian Grava, *The Importance of Data Quality in Training a Deep Convolutional Neural Network*, Proceedings of the 17th IEEE International Conference on Engineering of Modern Electric Systems (EMES'2023), 09-10 June 2023, Oradea, Romania, IEEEExplore, Electronic ISBN:979-8-3503-1063-4, DOI: 10.1109/EMES58375.2023.10171785, <https://ieeexplore.ieee.org/document/10171785>
- 4.A6. A.M. Cuc, C. Grava, F.L. Mogoș, T.A. Burcă, *Performances Comparison between Low Density Parity Check Codes and Polar Codes*, Proceedings of 2022 29th International Conference on Systems, Signals and Image Processing (IWSSIP), Sofia, Bulgaria, 01-03 June 2022, DOI: 10.1109/IWSSIP55020.2022.9854483, Accession Number: WOS:000859804900060
- 4.A7. A.M. Cuc, F.L. Mogoș, C. Grava, *Performances Analysis of Turbo Codes, LDPC Codes and Polar Codes using AWGN channel with and without Inter Symbol Interference*, Proceedings of 15th International Symposium on Electronics and Telecommunications, ISETC 2022, Timisoara, Romania November 10-11, 2022, ISI+IEEEExplore
- 4.A8. D. Marcu, C. Grava, *The impact of activation functions on training and performance of a deep neural network*, Proceedings of the 16th IEEE International Conference on Engineering of Modern Electric Systems (EMES'2021), ISBN 978-1-6654-4995-3, DOI: 10.1109/EMES52337.2021.9484108, Oradea, Romania, 10-11 June 2021
- 4.A9. G.C. Creț, L. Țepelea, I. Buciu, I. Gavriluț, C. Grava, *Using Block-Matching Methods to Help Navigating Visually Impaired People using Raspberry PI Platform*, Proceedings of the 16th IEEE International Conference on Engineering

- of Modern Electric Systems (EMES'2021), ISBN 978-1-6654-4995-3, DOI: 10.1109/EMES52337.2021.9484126, Oradea, Romania, 10-11 June 2021
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 - 4.A11. A.M. Grava, M. Marian, C. Grava, Bond-graph modelling of sub-models using LC oscillators, Proceedings of the 16th IEEE International Conference on Engineering of Modern Electric Systems (EMES'2021), ISBN 978-1-6654-4995-3, DOI: 10.1109/EMES52337.2021.9484147, Oradea, Romania, 10-11 June 2021
 - 4.A12. A.M. Grava, M. Marian, C. Grava, BBond-graph modelling of sub-models using sensors, Proceedings of the 16th IEEE International Conference on Engineering of Modern Electric Systems (EMES'2021), ISBN 978-1-6654-4995-3, DOI: 10.1109/EMES52337.2021.9484147, Oradea, Romania, 10-11 June 2021
 - 4.A13. I. Gavriluț, G.C. Creț, C. Grava, L. Tepelea, I. Buciu, Exploration Algorithm for a Mobile Robot. An Experiment, Proceedings of the 16th IEEE International Conference on Engineering of Modern Electric Systems (EMES'2021), ISBN 978-1-6654-4995-3, DOI: 10.1109/EMES52337.2021.9484122, Oradea, Romania, 10-11 June 2021
 - 4.A14. I. Buciu, **C. Grava**, A. Gacsádi, *Facial Biometric Template Post-processing by Factorization*, Proceedings of the IEEE International Symposium on Signals, Circuits and Systems (ISSCS 2019), Iași, Romania, ISBN 978-1-7281-3896-1, DOI: 10.1109/ISSCS.2019.8801730, 11-12 July 2019
 - 4.A15. A.M. Grava, **C. Grava**, *Bond-graph modeling of an electric thermogenerator*, Proceedings of the 15th IEEE International Conference on Engineering of Modern Electric Systems (EMES'2019), pp. 213-216, ISBN 978-1-7281-0773-8, DOI: 10.1109/EMES.2019.8795188, Oradea, Romania, 13-14 June 2019
 - 4.A16. L. Tepelea, I. Gavriluț, I. Buciu, A. Gacsádi, **C. Grava**, *A Vision Module for Visually Impaired People by Using Raspberry PI Platform*, Proceedings of the 15th IEEE International Conference on Engineering of Modern Electric Systems (EMES'2019), pp. 209-212, ISBN 978-1-7281-0773-8, DOI: 10.1109/EMES.2019.8795205, Oradea, Romania, 13-14 June 2019
 - 4.A17. I. Buciu, **C. Grava**, L. Tepelea, A. Gacsadi, *Mammogram Classification with Local Phase Quantization Features*, The 16th International Workshop on Cellular Nanoscale Networks and their Applications (CNNA), ISBN 978-3-8007-4766-5, 28-30 August 2018, Budapest, Hungary
 - 4.A18. 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/IEEE Xplore)
 - 4.A19. 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/IEEE Xplore)
 - 4.A20. 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/IEEE Xplore)
 - 4.A21. 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 11th WSEAS International Conference on Automation and Information (ICAI), ISBN 978-960-474-193-9, Iași, 13-15 June 2010 (IEEE Xplore)
 - 4.A22. 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/IEEE Xplore)
 - 4.A23. **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/IEEE Xplore)
 - 4.A24. 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/IEEE Xplore/INSPEC)
 - 4.A25. **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/IEEE Xplore/INSPEC)
 - 4.A26. **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/IEEE Xplore/INSPEC)
 - 4.A27. 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/IEEE Xplore/INSPEC)
- 4.A28. 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/IEEE Xplore)
- 4.A29. I. Gavriluț, A. Gacsádi, **C. Grava**, V. Tiponut, *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 (IEEE Xplore/INSPEC)
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B) internaționale recunoscute (cu ISSN sau ISBN) țară și din străinătate

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- 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
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- 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 6th 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 5th 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 5th 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
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- 4.B11. A. Grava, T. Maghiar, T. Maghiar, **C. Grava**, E. Lung, M. Novac, D. Șoproni, M. Pantea, L. Coroiu, L. Moldovan, *A simplified magneto-electrical model of the three-phased asynchronous motor*, Proceedings of the 5th 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
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- 4.B21. **C. Grava**, A. Chișu, *System for output control of a magnetron equipped with an electromagnet*, Proceedings of the 4th 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 9th 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
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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 8th 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.B30. **C. Grava**, A. Gacsádi, A. Grava, *The study of basic motion estimation methods for motion compensation*, Proceedings of the 4th 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 4th 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 27th 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 5th 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

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- 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 sânuului*, 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)
- 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, Director, Proiect PNIII, "Motoare de căutare în WEB-ul invizibil și aplicații ale acestora. Exportul de servicii IT în SUA", PN-III-P1-1.1-MCD-2017-0084, 2017
- 6.B2. C. Grava (membru în echipa de cercetare): "Aplicații software pentru efectuarea automată și adaptivă a unor măsurători și a evoluției în timp a tumorilor din imagini CT", PN-III-P2-2.1-CI-2018-1389, 239CI/2018
- 6.B3. 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
- 6.B4. 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.B5. 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)
- 6.B6. C. Grava (membru în echipa de cercetare): *Metode de îmbunătățire a imaginilor digitale prin reducerea imperfecțiunilor cauzate de praful și zgărieturile din sistemul optic al camerei digitale*, (LUMERO), număr UPB: 17-03-01, 2003
- 6.B7. 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.B8. C. Grava (membru în echipa de cercetare): *Sistem de căutare a imaginilor prin similaritatea vizuală a conținutului*, Grant CNCIS, UPB: 17-01-18
- 6.B9. 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.B10. **C. Grava** (membru în echipa de cercetare): *Caracterizarea fețelor persoanelor în imagini*, Institutul pentru tehnologii avansate, număr UPB: 17-98-04, 1998-2000
- 6.B11. **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.B12. **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.B13. **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

1. Sistem de urmarire a privirii pentru masurarea acuitatii vizuale si a timpului de reactie pentru persoanele cu deficiente de vedere, Competitia de granturi "Cercetarea stiintifica de excelenta aferenta domeniilor prioritare, cu valorificare prin transfer tehnologic, INO-Transfer-UO", + SC OPTISAN Clinic SRL (<https://www.optisan.ro/>), 30.000 lei, 316/21.12.2021
2. Sistem interactiv de imagistica medicala pentru depistarea si masurarea nodulilor pulmonari, inclusiv a zonelor afectate de Covid, Competitia "Saptamana stiintifica a Universitatii din Oradea", 122/25.06.2021, 40.000 lei, 01.07.2021-30.11.2022
3. "Software pentru determinarea automată a concentrațiilor de pigmenți necesare pentru obținerea unei culori impuse, cu aplicații în industrie", Contract cu agentul economic SC Solar Eco Systems SRL, 50.000 lei, 16/17.12.2021, 20.12.2021-01.09.2022

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. Recunoasterea prestigiului științific

A) Conducere de doctorat = Da

8.A1. Cuc Adriana-Maria, 2024

8.A2. Marcu David Cristian, 2025

B) Referent in comisii de doctorat internationale și naționale:

8.B1. Basarab Adrian – INSA Lyon, 2008

8.B2. Florea Corneliu – UPB, 2009

8.B3. Sirbu 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

8.B17. Boteanu Bogdan, UPB 2019

8.B18. Fechete-Machidon Alina, Universitatea Transilvania Brașov, 2020

8.B19. Petcu Adrian, UPB 2023

8.B20. Ovreiu Silvia, UPB 2023

8.B21. Ștefan Ana-Maria, UPB 2024

8.B22. Abrudan Dumitru, UPB 2025

8.B23. Marandskyi Kamal, Universitatea Transilvania Brașov, 2025

Abilitare:

1. Alexandra Țapu, 6 iulie 2020

2. Mocanu Bogdan, UPB 2024

3. Marian Constantin Viorel, UPB 2024

4. Țarălungă Dragoș-Daniel, UPB 2024

5. Sultana Alina Elena, UPB 2025

6. Faur Daniela, UPB 2025

Concursuri pe post conf și prof:

- Florea Laura, conf, 2017
- Florea Corneliu
- Alina Sultana
- Bogdan Ionescu
- Mihai Ivanovici, prof, 2017
- Codruța Ancuți, Timișoara, prof, 2020
- Bogdan Florea, conf, 2021
- Ruxandra Țapu, prof, 2021
- Buciu Ioan, prof, 2024

C) Membru în colective de redacție 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, <http://electroinf.uoradea.ro/reviste%20CSCS/default.htm>
- 8.C3. Scientific Journals International, ISSN 1556-67575, http://www.scientificjournals.org/editorial_board.htm, 2004-
D) Referent atestat al unor reviste științifice cotate ISI sau indexate în BDI în ultimii 5 ani
- 8.D1. Journal of Electrical and Electronics Engineering, <http://electroinf.uoradea.ro/reviste%20EEE/default.htm>
- 8.D2. Scientific Journals International, ISSN 1556-67575, http://www.scientificjournals.org/editorial_board.htm, 2004-
- 8.D3. Journal of Visual Communication and Image Representation, <http://ees.elsevier.com/jvci/default.asp>, 2004-
- 8.D4. Journal of Biomedical Informatics, <http://ees.elsevier.com/jbi/>, 2004-

E) Expert științific atestat național / internațional

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

F) Premii

G) membru în asociații științifice și profesionale

- 8.G1. Membru AIEER = Asociația Inginerilor Electricieni și Electroniști din România din 2009
- 8.G2. Membru IEEE, Signal Processing Soc. din 1999. În prezent, Senior Member
- 8.G3. Membru IAEng = Asociația Internațională a Inginerilor, din 2012.

Oradea, la 01.10.2025

Grava Cristian