

Lista de lucrări

Mitrea Delia-Alexandrina
Facultatea de Automatica si Calculatoare, Departamentul
Calculatoare, Universitatea Tehnica din Cluj-Napoca

Teza de doctorat

- **Titlul:** “Metode bazate pe textură pentru analiza și recunoașterea structurilor anatomice din imagini ultrasonografice”
- **Domeniul:** Știința Calculatoarelor
- **Data susținerii:** 21 octombrie 2011
- **Calificativ:** Foarte Bine, **Distincția:** Magna cum Laude
- *Conform* ordinului Ministrului Educației, Cercetării, Tineretului și Sportului, nr. 6697 din 21 decembrie 2011.

Co-autor la **brevet deus la OSIM** (Organizația de Stat pentru Invenții și Mărci), Radu Badea, Sergiu Nedevschi, Cristian Vicaș, Monica Lupșor, **Delia Mitrea**, Tiberiu Marița, Paulina Mitrea, "Metodă de detectare și evaluare neinvazivă a fibrozei, restructurării și a nodulilor displazici, bazată pe procesarea computerizată a imaginilor ultrasonografice achiziționate la nivel hepatic", Nr. de înregistrate OSIM A/00717/21.07.2011

Cărți de specialitate și capitole în cărți (8)

- [1] **D. Mitrea**, S. Nedevschi, M. Socaciu, R. Badea, “Deep Learning Techniques for Liver Tumor Recognition in Ultrasound Images”, book chapter in the book titled “Deep Learning - Recent Findings and Researches”, IntechOpen, 2023 (<https://www.intechopen.com/online-first/deep-learning-techniques-for-liver-tumor-recognition-in-ultrasound-images>)
- [2] S. Nedevschi, **D. Mitrea**, “Deep Learning for Pathology Detection and Diagnosis in Medical Imaging”, MDPI, 2024, 220 pg, <https://www.mdpi.com/books/reprint/9901-deep-learning-for-pathology-detection-and-diagnosis-in-medical-imaging>
- [3] **D. Mitrea**, “Metode bazate pe textură pentru analiza și recunoașterea structurilor anatomice din imagini ultrasonografice”, Editura Mediamira, 2017, ISBN: 978-973-713-351-9
- [4] **D. Mitrea**, "Introduction in Computational Intelligence", cap. in C. D. Sabau-Popa, "Computational Intelligence in Financial Management", Editura Universitara, Bucuresti, 2020, 36 pagini, limba engleza, ISBN 978-606-28-1148-8
- [5] **D. Mitrea**, S. Nedevschi, M. Platon-Lupsor, R. Badea. "Advanced texture analysis techniques for building textural models, with applications in the study of the

pathology evolution stages, based on ultrasound images", capitol de carte in "European Project Space on Intelligent Technologies, Software engineering, Computer Vision, Graphics, Optics and Photonics ", SCITEPRESS Digital Library, ISBN 978-989-758-206-6, 25 de pagini în limba engleza.

- [6] M. Lupșor, R. Badea, **D. Mitrea**, C. Vicaș, S. Nedevschi, "Evaluarea și caracterizarea steatozei, fibrozei și restructurării parenchimului hepatic cu ajutorul ultrasonografiei și a metodelor computerizate de analiză a imaginii", Capitol în M. Grigorescu, M. Beuran, "Actualități în patologia ficatului", ISBN 978-973-693-277-9, Editura Medicală Universitară „Iuliu Hațieganu” Cluj-Napoca, 2008, pp. 288-302, 15 pagini în limba română (lucrare cu caracter atât didactic, cât și științific)
- [7] Mitrea Alexandru, Nedevschi Sergiu, Ivan Mircea, **Mitrea Delia**, Gurzău Mircia, Lung Nicolaie, Cîmpean Dalia, "Modele deformabile 2D. Aplicații", Editura U.T.Press Cluj-Napoca, 2009, 106 pagini în limba romana, ISBN: 978-973-662-451-3 (lucrare cu caracter atât didactic, cât și științific); Contribuții în Capitolele 3, 4, 5; elaborarea integrală a Capitolului 7 ("Modelul programării dinamice") și a Paragrafului 10.7 ("Metoda programării dinamice")
- [8] Mitrea Alexandru, Nedevschi Sergiu, **Mitrea Delia**, Inoan Daniela, Lung Nicolaie, Ivan Dumitru Mircea, Gurzău Octavian Mircia, Mitrea Paulina, Cîmpean Dalia, "Modele deformabile 3D. Aplicații", Editura U.T.Press, Cluj-Napoca, 2010, 94 pagini, limba română, ISBN: 978-973-662-598-5 (lucrare cu caracter atât didactic, cât și științific); Contribuții în Capitolul 1 și elaborarea integrală a Capitolului 3 ("Metode de segmentare a imaginilor bazate pe modele deformabile")

Lucrările cu caracter didactic sunt destinate în special nivelului studiilor de Master și de Doctorat.

Alte lucrări didactice

- [1] **D. Mitrea**, C. Cenan, P. Mitrea, „Relational Databases, SQL and Specific Data Structures, in Practice. Database Laboratory Guide, 2nd year”, Editura Mediamira, 2017, ISBN: 978-973-713-349-6, 69 pagini în limba engleză
- [2] **D. Mitrea**, C. Cenan, P. Mitrea, „Database Laboratory Guide (Baze de Date – îndrumător de laborator)”, editura U.T.Press, Cluj-Napoca, 2012, ISBN: 978-973-662-750-7, 50 pagini în limba engleză; Varianta online: http://users.utcluj.ro/~dmitrea/Pagina_persDM/labs/DB_Laboratory.pdf
- [3] Curs „Databases” – An II, automatica, limba engleza, Autori: **D. Mitrea**, C. Cenan, Universitatea Tehnică din Cluj-Napoca, 2011, Online: http://users.utcluj.ro/~dmitrea/Pagina_persDM/DB_Course_2016.zip
- [4] Curs „Baze de Date” – An II, automatica, limba română, Autori: **D. Mitrea**, P. Mitrea, Universitatea Tehnică din Cluj-Napoca, 2016, Online: http://users.utcluj.ro/~dmitrea/Pagina_persDM/BDCurs2016.zip
- [5] Curs “Industrial Informatics. C# Basics and Applications within Robotic Systems”; Autor: D. Mitrea, Universitatea Tehnică din Cluj-Napoca, 2012, Online: http://users.utcluj.ro/~dmitrea/Pagina_persDM/II.zip
- [6] „Proiectarea Bazelor de Date – lucrări de laborator”; Autori: **D. Mitrea**, C. Cenan, Online: http://users.utcluj.ro/~dmitrea/Pagina_persDM/labs/Laborator_PBD.pdf

- [7] “Administrarea Bazelor de Date – lucrări de laborator”; Autori: **D. Mitrea**, P. Mitrea,
Online: http://users.utcluj.ro/~dmitrea/Pagina_persDM/labs/Laborator_ABD.pdf

Aceste lucrări sunt destinate nivelului studiilor de licență, secțiile calculatoare, tehnologia informației și roboți industriali, în limbile română și engleză.

Lucrări (articole) științifice (89)

Articole/studii in extenso, publicate în reviste din fluxul științific internațional principal (33)

Articole în reviste ISI (15)

- [1] **D. Mitrea**, R. Brehar, S. Nedevschi, M. Platon-Lupsor, M. Socaciu, R. Badea, “Hepatocellular Carcinoma Recognition from Ultrasound Images Using Combinations of Conventional and Deep Learning Techniques”, *Sensors*, Vol. 23, No. 5, pp. 1-29, 2023, <https://www.mdpi.com/1424-8220/23/5/2520> [ISI, Q2]
- [2] **D. Mitrea**, R. Badea, P. Mitrea, S. Brad, S. Nedevschi, “Hepatocellular Carcinoma Automatic Diagnosis within CEUS and B-Mode Ultrasound Images Using Advanced Machine Learning Methods”, *Sensors*, Vol. 21, No. 6, pp. 1-31, 2021, <https://doi.org/10.3390/s21062202> [ISI, Q2]
- [3] C. Radu, P. Fisher, **D. Mitrea**, I. Birlescu, T. Marita, F. Vancea, V. Florian, C. Tefas, R. Badea, H. Ștefănescu, S. Nedevschi, D. Pisla, N. Al Hajjar, “Integration of Real-Time Image Fusion in the Robotic-Assisted Treatment of Hepatocellular Carcinoma, *Biology-Basel*, Vol. 9, No.11, pp. 1-13, Nov. 2020, ISSN: 2079-7737”, [ISI, Q1]
- [4] R. Brehar, **D. Mitrea**, F. Vancea, T. Marita, S. Nedevschi, M. Lupsor Platon, M. Rotaru, R. Badea, “Comparison of Deep-Learning and Conventional Machine-Learning Methods for the Automatic Recognition of the Hepatocellular Carcinoma Areas from Ultrasound Images”, *Sensors*, Vol.20, No. 11, 2020, pp. 1-22, <https://www.mdpi.com/1424-8220/20/11/3085/htm> [ISI, Q1]
- [5] S. Nicoara, S. Szamoskozi, **D. Mitrea**, D. Leucuta, “Concept Mapping, an Effective Tool for Long-Term Memorization of Anatomy-A Quasi-Experimental Research Carried out among 1st Year General Medicine Students”, *European Journal of Investigation in Health Psychology and Education*, Vol. 10, No. 1, pp. 530-543, 2020, ISSN: 2254-9625 [ISI, Q2]
- [6] **D. Mitrea**, L. Tamas, “Manufacturing Execution System Specific Data Analysis-Use Case With a Cobot”, *IEEE Access*, Vol. 6, pp. 50245-50259, 2018, ISSN: 2169-3536 <https://ieeexplore.ieee.org/document/8457197> [ISI, Q2]
- [7] D. Petcu, **D. Mitrea**, C. Bondor, E. Perciun, “The potential of ultrasonography in the evaluation of foot orthotics therapy”, *Medical Ultrasonography Journal*, Vol.19, No. 4, pp. 416-422, 2017, ISSN: 2066-8643
- [8] **D. Mitrea**, S. Nedevschi, M. Abrudean, M. Platon-Lupsor, R. Badea, “The Role of the Textural Microstructure Co-occurrence Matrices in the Automatic Detection of the

- Cirrhosis Severity Grades from Ultrasound Images”, *Journal of Control Engineering and Applied Informatics* (ISI), ISSN: 1454-8658, Vol. 18, Nr.4, pp. 96-106, decembrie 2016, Online: <http://www.ceai.srait.ro/index.php?journal=ceai&page=article&op=view&path%5B%5D=3561>
- [9] **D. Mitrea**, S. Nedevschi, M. Socaciu, R. Badea, “The role of the superior order GLCM in the characterization and recognition of the liver tumors from ultrasound images”, *Radioengineering* (ISI), ISSN: 1210-2512, Vol. 21, Nr.1, Partea 1: “Special Issue on Signal Processing”, pp. 79-85, aprilie 2012, Online: <http://www.radioeng.cz/papers/2012-1.htm>,
- [10] **D. Mitrea**, P. Mitrea, S. Nedevschi, R. Badea, M. Lupșor, M. Socaciu, A. Golea, C. Hagi, L. Ciobanu, “Abdominal tumor characterization and recognition using superior order cooccurrence matrices, based on ultrasound images”, *Computational and Mathematical Methods in Medicine – Jurnal Hindawi* (ISI, Q2), ISSN 1748-670X, Vol. 2012, 17 pages, doi:10.1155/2012/348135 Online: <http://www.hindawi.com/journals/cmmm/2012/348135/>
- [11] A. Mesaros, S. Sava, **D. Mitrea**, C. Gasparik, M. Mesaros, C. Alb, M. Badea, D. Duda, “In vitro assessment of tooth color changes due to orthodontic treatment using knowledge discovery methods”, *Journal of Adhesion Science and Technology* (ISI), ISSN: 0169-4243 , Vol. 29, Nr. 20, pp. 2256-2279, 2015 [ISI, Q2], Online: <http://www.tandfonline.com/doi/abs/10.1080/01694243.2015.1062067>
- [12] R. Chifor, M. Badea, **D. Mitrea**, I. Badea, M. Crisan, I. Chifor, R. Avram, „Computer-assisted identification of the gingival sulcus and periodontal epithelial junction on high-frequency ultrasound images”, *Medical Ultrasonography Journal* (ISI), ISSN: 1844-4172, Vol. 17, Nr. 3, pp. 273-279, 2015, <http://www.medultrason.ro/computer-assisted-identification-of-the-gingival-sulcus-and-periodontal-epithelial-junction-on-high-frequency-ultrasound-images/index.htm>
- [13] A.I. Mitrea, R. Badea, **D. Mitrea**, S. Nedevschi, P. Mitrea, D. M. Ivan, O. M. Gurzău, “Iterative methods for obtaining energy-minimizing parametric snakes with applications to medical imaging”, *Computational and Mathematical Methods in Medicine* (ISI), ISSN: 1748-670X, Vol. 01, 11 pagini, 2012 Online: <http://www.hindawi.com/journals/cmmm/2012/918510/>
- [14] A. I. Mitrea, **D. Mitrea**, “Two-sided estimates of projection operators norm, with applications to deformable models”, *Journal of Mathematical Inequalities & Applications* (ISI, Q2), ISSN: 1331-4343, Vol. 12, Nr. 4, pp. 845-852, octombrie 2009, Online: <http://mia.ele-math.com/12-68/Two-sided-estimates-of-projection-operators-norm,-with-applications-to-deformable-models> [ISI – Q2]
- [15] H. Stefanescu, M. Lupșor, O. Dancea, T. Marita, T. Suteu, D. Capatana, R. Cazan, **D. Mitrea**, R. Badea, „Evaluation of an ultrasound telescreening network for hepatocellular carcinoma”, in *Journal of Hepatology* (ISI), ISSN: 0168-8278, vol. 48, pp. S157, 2008, [http://www.journal-of-hepatology.eu/article/S0168-8278\(08\)60409-2/abstract](http://www.journal-of-hepatology.eu/article/S0168-8278(08)60409-2/abstract) [ISI, Q1]

Articole în jurnale CNCSIS B+(11)

- [1] **D. Mitrea**, S. Nedevschi, M. Abrudean, R. Badea, „Detecting the evolution phases of the hepatocellular carcinoma from ultrasound images, using generalized co-occurrence matrices”, *Acta Electrotehnica*, ISSN: 1841-3323, Vol. 56, Nr. 1-2, pp.46-54, 2015

- [2] **D. Mitrea**, S. Nedevschi, M. Abrudean, „Abdominal tumor recognition from ultrasound images using Complex Extended Textural Microstructure Co-occurrence Matrices”, *Automation, Computers, Applied Mathematics (ACAM)*, ISSN: 1221-437X, Vol. 23, Nr.1, pp. 9-19, 2014
- [3] **D. Mitrea**, S. Nedevschi, M. Lupsor, M. Socaciu, R. Badea, „Improving the textural model of the hepatocellular carcinoma through multiclass division using clustering methods”, *Automation, Computers, Applied Mathematics (ACAM)*, ISSN: 1221-437X, Vol. 19, Nr. 3, pp. 409-415, 2010
- [4] **D. Mitrea**, P. Mitrea, R. Badea, M. Socaciu, L. Ciobanu, A. Golea, C. Hagiu, A. Seicean, „Relevant feature selection and automatic recognition of the inflammatory bowel diseases and colon cancer from B-mode and contrast-enhanced ultrasound images”, *Automation, Computers, Applied Mathematics (ACAM)* , ISSN: 1221-437X, Vol. 19, Nr. 3, pp. 403-409, 2010
- [5] **D. Mitrea**, S. Nedevschi, M. Lupsor, M. Socaciu, R. Badea, “Improving the imagistic textural model of the hepatocellular carcinoma through, dimensionality reduction techniques and classifier combinations”, *Automation, Computers, Applied Mathematics (ACAM)*, ISSN: 1221-437X, Vol. 18, Nr. 2, pp. 218-223, 2009
- [6] **D. Mitrea**, S. Nedevschi, P. Mitrea, M. Lupșor, M. Socaciu, T. Pop, O. Moșteanu, R. Badea, „The Imagistic Textural Model of the Hepatocellular Carcinoma. Comparisons, discussions, conclusions”, *Automation Computers Applied Mathematics (ACAM)*, ISSN: 1221-437X, Vol. 17, Nr. 1, pp. 28-35, 2008
- [7] R. Badea, T. Pop, M. Socaciu, O. Moșteanu, C. Caraiani, M. Lupșor, P. Raica, M. Mănișor, L. Miclea, **D. Mitrea**, M. Lupșor, S. Nedevschi, „The value of the ultrasound image processing procedures, combined with circulation assessment and mathematical modelling techniques for HCC characterization, nature specification and disease prognosis”, *Automation Computers Applied Mathematics (ACAM)*, , ISSN: 1221-437X, Vol. 17, Nr. 1, pp. 18-27, 2008
- [8] S. Nedevschi, I. Salomie, R. Potolea, M. Dînsoreanu, R. Badea, A. Floares, I. Coman, B. Petruț, **D. Mitrea**, C. Vidrighin-Bratu, O. Dancea, C.-B. Pop, „Intelligent system for assisting the therapeutic decision at patients with prostate cancer – INTELPRO”, *Automation Computers Applied Mathematics (ACAM)*, , ISSN: 1221-437X, Vol. 17, Nr. 1, pp. 36-46, 2008
- [9] R. Badea, M. Lupșor, H. Ștefănescu, C. Vicaș, **D. Mitrea**, M. Socaciu, S. Nedevschi, “Integrated procedures of evaluating the hepatic morphology, for the non-invasive detection and quantification of steatosis and fibrosis based on the ultrasound diagnosis”, *Automation Computers Applied Mathematics (ACAM)*, ISSN: 1221-437X, Vol. 17, Nr. 1, pp. 1-11, 2008
- [10] **D. Mitrea**, S. Nedevschi, M. Lupsor, R. Badea, I. Coman „Exploring the textural parameters of ultrasound images to build an imagistic model for prostatic adenocarcinoma (ADKP)”, *Automation, Computers and Applied Mathematics (ACAM)*, ISSN: 1221-437X, Vol. 16 , Nr. 3, pp.11-19, 2007
- [11] **D. Mitrea**, S. Nedevschi, P. Mitrea, M. Lupsor, R. Badea, M. Grigorescu, S. Tripon, C. Radu, “Texture-based Methods and Data-Mining in Ultrasound Images for Diffuse Liver Disease Severity Characterization”, *Acta Electrotehnica (Special Issue)*, ISSN: 1841-3323, Vol. 48, Nr. 4, pp. 211-216, 2007

Articole în alte jurnale (7)

- [1] **D. Mitrea**, S. Nedevschi, R. Badea, "The role of the complex textural microstructure co-occurrence matrices, based on Laws' features, in the characterization and recognition of some pathological structures, from ultrasound images", *International Journal of Advances in Telecommunications, Electrotechnics, Signals and Systems (IJATES)*, ISSN: 1805-5443, Brno, Cehia, Vol. 5, Nr. 2, pp. 61-67, 2016, <http://www.ijates.org/index.php/ijates/article/view/144> [CrossRef, WorldCat, DOAJ]
- [2] **D. Mitrea**, S. Nedevschi, R. Badea, "Software system for the automatic and computer assisted diagnosis of some severe abdominal affections, based on ultrasound images", *Revista Română de Interacțiune Om-Calculator*, ISSN: 1843-4460, Vol.9, Nr.1, pp. 53-70, 2016, <http://rochi.utcluj.ro/rrioc/articole/RRIOC-9-1-Mitrea.pdf> [Index Copernicus, EBSCO]
- [3] **D. Mitrea**, S. Nedevschi, M. Abrudean, R. Badea, "Classification of the liver tumors Using Co-Occurrence Matrices of textural Microstructures", *Journal of Communication and Computers*, ISSN 1548-7709, Vol. 12, Nr. 1, pp. 6-12, 2015 [EBSCO]
- [4] **D. Mitrea**, S. Nedevschi, C. Cenan, M. Lupsor, R. Badea, "Exploring Texture-Based Parameters, Noninvasive Characterization and Modeling of Diffuse Liver Diseases and Liver Cancer from Ultrasound Images", *WSEAS Transactions on Computers*, ISSN: 1109-2750, Vol. 6, Nr.2, pp. 283-291, februarie 2007 [SCOPUS]
- [5] **D. Mitrea**, S. Nedevschi, M. Lupsor, R. Badea, "Textural models based on ultrasound images for the detection of hepatocellular carcinoma in early and advanced stages", *NAUN International Journal of Computers*, , ISSN: 1998-4308, Vol. 1, Nr. 2, pp. 66-73, 2008
- [6] Radu Badea, Monica Lupsor, Horia Stefanescu, Sergiu Nedevschi, **Delia Mitrea**, Alexandru Serban, Tudor Vasile, "Ultrasonography Contribution to the Detection and Characterization of Hepatic Restructuring: Is the *Virtual Biopsy* Taken into Consideration?", *Journal of Gastrointestinal and liver diseases (JGLD)*, ISSN: 1842-1121, Vol. 15, Nr.2, pp.189-194, 2006, Online: <http://www.ncbi.nlm.nih.gov/pubmed/16802017> [Scopus]
- [7] S. Nedevschi, **D. Mitrea**, "Contour detection based on active contour models", în *Bulletin of Applied Mathematics and Computer Science*, vol. 2275, pp. 107-118, 2003.

Publicații in extenso, apărute în lucrări ale principalelor conferințe internaționale de specialitate (49)

Lucrări la conferințe indexate ISI și BDI (46) ISI Proceedings (33)

- [1] **D. Mitrea**, R. Brehar, R. Itu, S. Nedevschi, M. Socaciu, R. Badea, "Pancreatic Tumor Recognition from CT Images through Advanced Deep Learning Techniques", IEEE International Conference on Automation, Quality and Testing, Robotics (AQTR 2024), Cluj-Napoca, May 16-18, 2024, Proceedings, pp. 299-304 (IEEE, ISI Proceedings).
- [2] **D. Mitrea**, P. Mitrea, E. Barna, "Employing Clustering Techniques and Association Rules for Client Segmentation and Attribute Dependency Mining in the Domain of

- Car Insurance”, Proc. of 2024 World Conference of AI-Powered Innovation and Inventive Design (TFC-TRAI 2024), Vol. 736, pp. 232-246 (ISI Proceedings)
- [3] **D. Mitrea**, R. Brehar, C. Mocan, S. Nedevschi, M. Socaciu, R. Badea, “Hepatocellular carcinoma recognition from ultrasound images by fusing convolutional neural networks at decision level”, The 46th International Conference on Telecommunications and Signal Processing (TSP 2023), 12-14 July 2023, Proceedings, pp. 238-243. (ISI Proceedings)
- [4] D. Bacea, **D. Mitrea**, S. Nedevschi, R. Badea, “Adversarial Graph Learning and Deep Learning Techniques for improving diagnosis within CT and Ultrasound images”, International Conference on Intelligent Computer Communication and Processing (ICCP), September 3-5, 2020, Cluj-Napoca, Proceedings, pp. 449-456.
- [5] **D. Mitrea**, T. Marita, F. Vancea, S. Nedevschi, P. Mitrea, G. M. Neamt, S. Timoftei, V. Florian, C. Radu, M. Socaciu, H. Stefanescu, N. Al Hajjar, “Towards building a computerized system for modelling advanced hcc tumors, in order to assist their minimum invasive surgical treatment”, European Conference on Mechanism Science (EuCoMeS 2020). New Trends in Mechanism and Machine Science, Springer, pp. 219-227, 2020 (ISI Proceedings)
- [6] F. Vancea, **D. Mitrea**, S. Nedevschi, M. Rotaru, H. Stefanescu, R. Badea, “Hepatocellular Carcinoma Segmentation within Ultrasound Images using Convolutional Neural Networks”, Proceedings of IEEE 15th International Conference on Intelligent Computer Communication and Processing (ICCP), Cluj-Napoca, Romania, September 05-07, 2019, pp. 491-497.
- [7] R. Brehar, **D. Mitrea**, S. Nedevschi, M. Platon-Lupsor, M. Rotaru, R. Badea, “Hepatocellular Carcinoma Recognition in Ultrasound Images Using Textural Descriptors and Classical Machine Learning”, Proceedings of IEEE 15th International Conference on Intelligent Computer Communication and Processing (ICCP) Location: Cluj Napoca, Romania, September 05-07, 2019, pp. 491-497 ,497,N 78-1-7281-4914-1
- [8] **D. Mitrea**, L. Tamas, “MES Specific Data Analysis. Case Study with the Baxter Robot”, Proceedings of 2018 20th International Symposium on Symbolic and Numeric Algorithms for Scientific Computing (SYNASC 2018), pp. 296-301.
- [9] **D. Mitrea**, S. Nedevschi, R. Badea, „Automatic Recognition of the Hepatocellular Carcinoma from Ultrasound Images using Complex Textural Microstructure Co-Occurrence Matrices (CTMCM)”, Proceedings of the 7th International Conference on Pattern Recognition Applications and Methods - Volume 1: ICPRAM, pp. 178-189, 2018, Funchal, Madeira, Portugal, ISBN: 978-989-758-276-9
- [10] **D. Mitrea**, R. Brehar, P. Mitrea, S. Nedevschi, M. Platon(Lupsor), R. Badea, “The Role of Convolutional Neural Networks in the Automatic Recognition of the Hepatocellular Carcinoma, Based on Ultrasound Images”, 6th International Conference on Advancements of Medicine and Health Care through Technology (MediTech) 17–20 October 2018, Cluj-Napoca, Romania; publicată în IFMBE Proceedings, book series, Editura Springer, vol. 71, pp. 169-175 (mai 2019), https://link.springer.com/chapter/10.1007/978-981-13-6207-1_27 [Scopus]
- [11] **D. Mitrea**, S. Nedevschi, P. Mitrea, M. Platon(Lupsor), R. Badea, “The role of the cooccurrence matrix based on complex extended microstructures in discovering the cirrhosis severity grades within US images”, 10th International Congress on

- Image and Signal Processing, BioMedical Engineering and Informatics, CISP-BMEI 2017, pp.1-6, Shanghai, China, October 14-16, 2017. IEEE 2017, ISBN 978-1-5386-1937-7
- [12] **D. Mitrea**, S. Nedevschi, M. Abrudean, R. Badea, "Colorectal cancer recognition from ultrasound images, using complex textural microstructure co-occurrence matrices, based on Laws' features", The 38th International Conference on Telecommunications and Signal Processing, July 9-11, 2015, Praga, pp. 458-462
 - [13] **D. Mitrea**, S. Nedevschi, R. Badea, "The role of the Textural Microstructure Cooccurrence Matrices in the classification of the abdominal tumors, based on ultrasound images", The 2014 IEEE 10th International Conference on Intelligent Computer Communication and Processing (ICCP 2014), September 4-6, 2014, Cluj-Napoca, pp. 187-190
 - [14] A. Mitrea, S. Nedevschi, **D. Mitrea**, P. Mitrea, R. Badea, "Diseased Tissue Area Detection and Delimitation, by Fusion between Finite Difference Methods and Textural Analysis", The 2014 IEEE International Conference On Automation, Quality and Testing, Robotics (AQTR 2014), 22-24 May, 2014, Cluj-Napoca, pp.1-5.
 - [15] **D. Mitrea**, M. Platon-Lupsor, S. Nedevschi, R. Badea, "Discovering the Cirrhosis Grades from Ultrasound Images by Using Textural Features and Clustering Methods", The 2013 36th International Conference on Telecommunications and Signal Processing (TSP 2013), 2-4 iulie 2013, Roma, pp. 633-637.
 - [16] **D. Mitrea**, S. Nedevschi, R. Badea, "The role of the multiresolution textural features in improving the characterization and recognition of the liver tumors, based on ultrasound images", The 14th International Symposium on Symbolic and Numeric Algorithms for Scientific Computing (SYNASC 2012), 26-29 septembrie 2012, Timișoara, pp. 192-199.
 - [17] **D. Mitrea**, P. Mitrea, R. Badea, M. Socaciu, L. Ciobanu, A. Golea, C. Hagi, A. Seiceanu, "Texture-Based Methods and Dimensionality Reduction Techniques Involved in the Detection of the Inflammatory Bowel Diseases from Ultrasound Images", International Conference on Advancements of Medicine and Health Care through Technology (MEDITECH 2011), 29 august – 2 septembrie 2011, Cluj-Napoca, vol. 36, pp. 220-225.
 - [18] **Delia Mitrea**, Sergiu Nedevschi, Mihai Socaciu, Radu Badea, "The Role of the Feature Extraction Methods in Improving the Textural Model of the Hepatocellular Carcinoma, Based on Ultrasound Images", International Conference on Digital Information Processing and Communications (ICDIPC 2011), 7-9 iulie 2011, Ostrava, Cehia; publicat în Communications in Computer and Information Science, editura Springer, vol. 188, pp. 496-509, 2011.
 - [19] **D. Mitrea**, S. Nedevschi, R. Badea, "The Role of The Superior Order GLCM in Improving The Automatic Diagnosis of The Hepatocellular Carcinoma Based on Ultrasound Images", The 2011 34th International Conference on Telecommunications and Signal Processing (TSP 2011), 18-20 august 2011, Budapesta, pp. 602-606.
 - [20] P. Mitrea, **D. Mitrea**, "The Role That Web 2.0 Currently Has and Could Have in the Future in Supporting the Teaching of ICT Design for All", Technology

- Enhanced Learning: Quality of Teaching and Educational Reform, Vol. 73, pp. 397-404, 2010.
- [21] M. Crisan, C. Cattani, R. Badea, P. Mitrea, M. Florea, D. Crisan, **D. Mitrea**, R. Bucur, G. Checiches, "Modeling Cutaneous Senescence Process", International Conference on Computational Science and its Applications (ICCSA 2010) Fukuoka, Japonia, 23-26 martie 2010, vol. 6017, pp. 215-224.
 - [22] **D. Mitrea**, S. Nedevschi, M. Lupsor, M. Socaciu, R. Badea, "Advanced classification methods for improving the automatic diagnosis of the hepatocellular carcinoma, based on ultrasound images", The 2010 IEEE International Conference on Automation, Quality and Testing, Robotics, (AQTR 2010), 28-30 mai 2010, Cluj-Napoca, vol. 2, pp. 265-270.
 - [23] **D. Mitrea**, S. Nedevschi, M. Lupsor, M. Socaciu, R. Badea, "Classification of the Hepatocellular Carcinoma in Ultrasound Images Based on the Imagistic Textural Model of This Tumor", International Conference on Advancements of Medicine and Health Care Through Technology (MEDITECH 2009), 23-26 septembrie 2009, Cluj-Napoca, vol. 26, pp. 267-272.
 - [24] A. Mitrea, D. Ivan, **D. Mitrea**, D. Inoan, P. Mitrea "Deformable Variational Models Used in Medical Imaging", International Conference on Advancements of Medicine and Health Care Through Technology (MEDITECH 2009), 23-26 septembrie 2009, Cluj-Napoca, vol. 26, pp. 273-278.
 - [25] **D. Mitrea**, S. Nedevschi, M. Lupsor, M. Socaciu, R. Badea "Improving the textural model of the hepatocellular carcinoma using dimensionality reduction methods", The 2009 2nd International Congress on Image and Signal Processing (CISP 2009), 17-19 octombrie 2009, Tianjin , China, Proceedings, Vols. 1-9, pp. 1083-1087.
 - [26] P. Mitrea, **D. Mitrea**, O. Buza, "MLG - Multimedia On-Line Lesson Generator, 10th European Conference for the Advancement of Assistive Technology", Florența, Italia, august 2009, publicat în seria: Assistive Technology Research Series, Vol. 25, pp. 607-612, 2009.
 - [27] **D. Mitrea**, S. Nedevschi, B. Petrut, I. Coman, "The Imagistic Textural Model of the Prostatic Adenocarcinoma", The 2008 IEEE 4th International Conference on Intelligent Computer Communication and Processing (ICCP 2008), 28-30 august 2008, Cluj-Napoca, pp. 107-114.
 - [28] **D. Mitrea**, S. Nedevschi, M. Lupsor, R. Badea, "Exploring the textural parameters obtained from ultrasound images for modeling the liver pathological stages in the evolution towards hepatocellular carcinoma", The 2008 IEEE International Conference on Automation, Quality and Testing, Robotics (AQTR 2008), Theta 16th Edition, Vol. III, 22-25, mai 2008, pp. 128-133.
 - [29] S. Nedevschi, C. Vicas, **D. Mitrea**, M. Lupsor, M. Grigorescu, R. Badea, "Usefulness of Attenuation And Backscattering Coefficients in Investigating Complex Non-Alcoholic Steatohepatitis From Ultrasound Images, Preliminary Results", Conference on Analysis of Biomedical Signals and Images, 29 iunie-30 iulie 2008, Brno, Cehia, pp. 299-303.
 - [30] **D. Mitrea**, S. Nedevschi, M. Lupsor, R. Badea, "Building the imagistic textural model of the liver pathological stages for the early detection of hepatocellular carcinoma based on ultrasound images", The 7th WSEAS International Conference

- on applied Computer and Applied Computational Science (ACACOS 2008), Hangzhou, China, pp. 764-771, 2008.
- [31] **D. Mitrea**, S. Nedevschi, M. Lupsor, H. Stefanescu, R. Badea, “Comparing Various Feature Selection Methods for Building the Textural Model of Hepatocellular Carcinoma based on Ultrasound Images” Conference on Analysis of Biomedical Signals and Images, 29 iunie-30 iulie, 2008, Brno, Cehia, pp. 502-509.
 - [32] M. Lupsor, R. Badea, S. Nedevschi, **D. Mitrea**, M. Florea, “Ultrasonography contribution to hepatic steatosis quantification. Possibilities of improving this method through computerized analysis of ultrasonic image”, The 2006 IEEE-TTTC International Conference on Automation, Quality and Testing, Robotics (AQTR 2006), Vol 2, pp. 478-483.
 - [33] A. Manciu, M. Popa, **D. Mitrea**, D. Căpățina, “Parameters monitoring solutions for the quality control of water used in healthcare units”, The 2006 IEEE-TTTC International Conference on Automation, Quality and Testing, Robotics (AQTR 2006), Vol 2, pp. 457-462.

Conferințe BDI (13)

- [1] A. G. Tornea, **D. Mitrea**, “Comparative Analysis of Convolutional Neural Networks for Facial Expression Recognition”, 2025 18th International Congress on Image and Signal Processing, BioMedical Engineering and Informatics (CISP-BMEI), China, October, 2025 [IEEE, Scopus]
- [2] **D. Mitrea**, V. Timu, C. Mocan, S. Nedevschi, A. Florian, M. Socaciu, R. Badea, “Liver tumor segmentation from Computed Tomography images through Convolutional Neural Networks”, *the 2023 9th International Conference on Systems and Informatics (ICSAI 2023)*, December 16-18, 2023, Changsha, China [IEEE, Scopus]
- [3] R. Brehar, **D. Mitrea**, S. Nedevschi, T. Moisoiu, F. Elec, M. Socaciu, “Kidney Tumor Segmentation and Grade Identification in CT Images”, IEEE International Conference on Intelligent Computer Communication and Processing (ICCP 2023), Cluj-Napoca, October 26-28, 2023 [IEEE, Scopus]
- [4] **D. Mitrea**, R. Brehar, S. Nedevschi, M. Socaciu, R. Badea, "Hepatocellular Carcinoma recognition from ultrasound images through Convolutional Neural Networks and their combinations", International Conference on Advancements of Medicine and Health care through Technology, MediTech 2022, Cluj-Napoca, 20-22 Oct 2022, IFMBE Proceedings (IFMBE, volume 102), pp. 3-11, Springer [Scopus], https://link.springer.com/chapter/10.1007/978-3-031-51120-2_1
- [5] **D. Mitrea**, C. Mendoiu, P. Mitrea, S. Nedevschi, M. Lupsor-Platon, M. Rotaru, R. Badea, “HCC recognition within B-mode and CEUS images using traditional and deep learning techniques”, International Conference on Advancements of Medicine and Health Care through Technology (MediTech 2020), IFBME Proceedings (Springer), pp. 113-120 [Scopus], https://link.springer.com/chapter/10.1007/978-3-030-93564-1_13
- [6] **D. Mitrea**, S. Nedevschi, P. Mitrea, M. Platon Lupsor., R. Badea, “HCC Recognition Within Ultrasound Images Employing Advanced Textural Features with Deep Learning Techniques”, Proceedings - 2019 12th International Congress

- on Image and Signal Processing, BioMedical Engineering and Informatics, CISP-BMEI, 2019 [IEEE, Scopus]
- [7] **D. Mitrea**, S. Nedevschi, R. Badea, "The Role of the Complex Extended Textural Microstructure Co-occurrence Matrix in the Unsupervised Detection of the HCC Evolution Phases, based on Ultrasound Images", The 5th International Conference on Pattern Recognition Applications and Methods (ICPRAM 2016), 24-26 februarie 2016, Roma, Italia, pp. 698-705 [Scopus]
 - [8] **D. Mitrea**, S. Nedevschi, R. Badea, "Classification of the liver tumors using multiresolution, superior order EOCM textural features", The 3rd International Conference on Pattern Recognition Applications and Methods (ICPRAM 2014), 6-8 martie 2014, Angers, Franta, pp. 799-804. [Scopus]
 - [9] **D. Mitrea**, M. Socaciu, R. Badea, A. Golea, "Texture based characterization and automatic diagnosis of the abdominal tumors from ultrasound images using third order GLCM features", The 4th International Congress on Image and Signal Processing (CISP 2011), 17-19 octombrie 2011, Shanghai, China, vol. 3, pp. 1558-1562. [IEEE, Scopus]
 - [10] **D. Mitrea**, S. Nedevschi, R. Badea, "The role of the superior order GLCM and of the generalized cooccurrence matrices in the characterization and automatic diagnosis of the hepatocellular carcinoma, based on ultrasound images", The 7th IEEE International Conference on Intelligent Computer Communication and Processing, (ICCP 2011), 25-27 august 2011, Cluj-Napoca, pp. 197-204. [IEEE, Scopus]
 - [11] **D. Mitrea**, P. Mitrea, R. Badea, M. Socaciu, L. Ciobanu, A. Golea, C. Hagi, A. Seicean, "Computerized methods for the assessment and characterization of the inflammatory bowel diseases and colon cancer from ultrasound and endoscopic images", 10th WSEAS International Conference on EHAC'11 and ISPR'11, 3rd WSEAS Int. Conf. on Nanotechnology, Nanotechnology'11, 6th WSEAS Int. Conf. on ICOAA'11, 2nd WSEAS Int.Conf. on IPLAFUN'11, 20-22 februarie 2011, Cambridge, pp. 336-343. [ACM Digital Library, Scopus]
 - [12] **D. Mitrea**, S. Nedevschi, M. Lupsor, M. Socaciu, R. Badea, "Experimenting various classification techniques for improving the automatic diagnosis of the malignant liver tumors, based on ultrasound images", 3rd International Congress on Image and Signal Processing (CISP 2010), 16-18 octombrie 2010, Yantai, China, vol. 4, pp. 1853-1858. [IEEE, Scopus]
 - [13] **D. Mitrea**, S. Nedevschi, C. Cenan, M. Lupsor, R. Badea, "Exploring texture-based parameters for noninvasive detection of diffuse liver diseases and liver cancer from ultrasound Images", The 8th WSEAS International Conference on Mathematical Methods and Computational Techniques in Electrical Engineering (MMCTEE 2006), București, pp. 259-265 [ACM Digital Library]

Conferințe internaționale neindexate (3)

- [1] **D. Mitrea**, S. Nedevschi, D. Gorgan, „Hand Segmentation in cluttered scenes and trajectory prediction considerations for gesture recognition”, 2nd Balkan Conference in Informatics (BCI 2005), Ohrid, Macedonia, 17-19 noiembrie 2005, pp. 275- 283
- [2] **D. Mitrea**, S. Nedevschi, B. Fratila, M. Lupsor, „Texture-based methods in biomedical image recognition of diffuse liver diseases”, International Conference

on System Theory (SINTES 2005), Craiova, 2005, vol. 12, pp. 20-22(Google Scholar)

- [3] **D. Mitrea**, S. Nedevschi, „Road Quality Evaluation and Road Material Recognition using 3D textons”, 8-th International Conference of Intelligent Engineering Systems (INES 2004), Cluj-Napoca, România, septembrie 2004, Editura U.T.Press Cuj-Napoca, pp.236-241

Alte publicații (7)

- [1] **D. Mitrea**, S. Nedevschi, “Sistem Software pentru Diagnosticarea Automată și Asistată de Calculator a Afecțiunilor Tumorale, pe Baza Imaginilor Ultrasonografice”, Conferința Națională de Interacțiune Om-Calculator (RoCHI 2013), septembrie 2013, Cluj -Napoca, pp. 133-138 (index Copernicus)
- [2] **D. Mitrea**, S. Nedevschi, D. Gorgan, “Recunoasterea expresiei faciale prin metode ale viziunii computerizate”, Conferința Națională de Interacțiune Om-Calculator (RoCHI 2010); Număr special în Revista Română de Interacțiune Om-Calculator (RRIOC), Vol. 3, 2010, pp. 29-32 (index Copernicus)
- [3] **D. Mitrea**, S. Nedevschi, D. Gorgan, “Evaluarea stării emoționale pe baza poziției corpului uman, prin metode ale viziunii computerizate”, Conferința Națională de Interacțiune Om-Calculator, RoCHI 2009; Număr special în Revista Română de Interacțiune Om-Calculator (RRIOC), Vol. 2, 2009, pp. 73-76 (index Copernicus).
- [4] **D. Mitrea**, S. Nedevschi, D. Gorgan, “Recunoașterea gesturilor dinamice: modalități de recunoaștere a mișcării mâinii”, Conferința Națională de Interacțiune Om-Calculator (RoCHI 2007), 20-21 septembrie 2007, Constanța, pp. 23-26 index Copernicus)
- [5] **D. Mitrea**, S. Nedevschi, D. Gorgan, „Metode de recunoaștere a formei și orientării mâinii în contextul recunoașterii gesturilor”, A Treia Conferință Națională de Interacțiune Om-Calculator, Academia de Studii Economice, București, 21-22 Septembrie 2006, Volumul de Lucrări al Celei de-a Treia Conferințe Naționale de Interacțiune Om-Calculator (RoCHI 2006), pp. 25-29 index Copernicus)
- [6] **D. Mitrea**, S. Nedevschi, D. Gorgan, „Detecția mâinii într-o scenă încărcată de obiecte, în scopul recunoașterii gesturilor”, A doua Conferință Națională de Interacțiune Om-Calculator, Cluj-Napoca, 15-16 septembrie 2005, Volumul de lucrări al celei de-a doua Conferințe Naționale de Interacțiune Om-Calculator (RoCHI 2005), pp. 147-150 (index Copernicus)
- [7] **D. Mitrea**, D. Gorgan, „Comportament Adaptiv pentru Interfețe Utilizator Avansate. Comunicarea prin Intermediul Gesturilor”, Volumul de lucrări al Primei Conferințe Naționale de Interacțiune Om-Calculator (RoCHI 2004), Universitatea Politehnică din București 23-24 Septembrie 2004, Editura Printech, București, 2004, pp. 33-42 (index Copernicus)