

LISTA DE LUCRĂRI

1. Teza(-ele) de doctorat

1. Analiza Fetei Umane, (link: <http://hermes/etc.upt.ro/cercetare/teze.html>)

2. Publicații:

A) Cărți publicate, îndrumare/culegeri publicate,

B) capitoare publicate în volume colective,

2B1. I. Buciu, “*Application of forecasting and prediction approaches in economics*”, Marcel Ioan Bolos, Diana Claudia Sabau-Popa (Eds.), *Using Levy Distribution processes in modeling economic and financial indicators of companies*, to appear, 2013.

2B2. I. Buciu and I. Pitas, “*Subspace image representation for facial expression analysis and face recognition and its relation to the human visual system*”, **Organic Computing**, in the Series “*Understanding Complex Systems*”, (ISBN: 978-3-540-77656-7), Springer Verlag, pp. 303 – 320, March, 2008, (link: <http://www.springer.com/physics/book/978-3-540-77656-7>).

2B3. I. Buciu and I. Pitas, “*Image representations based on discriminant non-negative matrix factorization with application to facial expression recognition*”, **Advances in Intelligent Information Processing: Tools and Applications**, B. Chanda and C.A. Murthy Eds., ISBN 978-981-281-898-0, in ISI Platinum Jubilee Series on Statistical Science and Interdisciplinary Research, World Scientific Publishing, pp. 125 – 143, 2008, (link: <http://www.worldscibooks.com/compsci/6901.html>).

2B4. I. Buciu and I. Naftana, “*Non-negative Matrix Factorization Methods and their Applications*”, Zadeh L.A., Tufis D., Filip F.G., Dzitac I. (Eds.), **From Natural Language to Soft Computing: New Paradigms in Artificial Intelligence**, Editing House of Romanian Academy, Bucharest, ISBN 978-973-27-1678-6, pp. 32-50, 2008, (link: http://www.acad.ro/carti2008/carte08_06Zadeh.htm).

2B.5 I. Buciu, I. Naftana and C. Gordan, “**Facial Expression Synthesis and Animation**”, Didem Gokcay and Gulsen Yildirim (Eds.), *Affective Computing and Interaction: Psychological, Cognitive and Neuroscientific Perspectives*, IGI-Globa, ISBN 978-1-61692-892-6, pp. 184 - 206, 2010 (<http://www.igi-global.com/chapter/facial-expression-synthesis-animation/49535>).

C) capitoare teoretice redactate,

2C1. I. Buciu, *Curs de Informatică Medicală*, 2008 (link: <http://webhost.uoradea.ro/ibuciu/>).

2C2. I. Buciu, *Note de Curs - Compresia și Codarea Informației*, 2009 (link: <http://webhost.uoradea.ro/ibuciu/>).

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

2D1 I. Buciu, *Culegere de probleme – Informatică Medicală*, 2008 (link: <http://webhost.uoradea.ro/ibuciu/>)

2D2 I. Buciu, *Laboratoare – Compresia și Codarea Informației*, 2009 (link: <http://webhost.uoradea.ro/ibuciu/>)

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 ;

3A1. I. Buciu, C. Kotropoulos, and I. Pitas, “*Comparison of ICA approaches for facial expression recognition*”, **Signal, Video and Image Processing**, ISSN: 1863-1703, Volume 3, Issue 4, pp. 345 – 361, Dec. 2009 (link: <http://www.springerlink.com/content/c2618tl145m02030/>).

3A2. I. Buciu and I. Naftana, “*Feature extraction through phase congruency for facial expression analysis*”, **International Journal of Pattern Recognition and Artificial Intelligence**, Special Issue on Facial Image Processing and Analysis, ISSN: 0218-0014, Volume 23, Issue 3, pp. 617 – 635, May 2009 (link: <http://www.worldscinet.com/ijprai/23/2303/S02180014092303.html>).

3A3 I. Kotsia, I. Buciu, and I. Pitas, “*An analysis of facial expression recognition under partial facial image occlusion*”, **Journal of Image and Visual Computing**, ISSN: 0262-8856, Volume 26, Issue 7, pp. 1052-1067, July, 2008 (link: <http://dx.doi.org/10.1016/j.jimavis.2007.11.004>).

3A4. I. Buciu, N. Nikolaidis, and I. Pitas, “Non-negative matrix factorization in polynomial feature space”, **IEEE Transactions on Neural Networks**, ISSN: 1045-9227, Volume 19, Issue 6, pp. 1090 – 1100, June 2008 (link: http://ieeexplore.ieee.org/xpl/freeabs_all.jsp?isnumber=4531603&arnumber=4488103&count=18&index=12).

3A5. I. Buciu, “Non-negative Matrix Factorization, A New Tool for Feature Extraction: Theory and Applications”, **International Journal of Computers Communications and Control**, ISSN: 1841 - 9836, Volume 3, Suppl. S, pp. 67 – 74, May 2008, (link: http://www.journal.univagora.ro/?page=article_details&id=258).

3A6. I. Buciu and I. Pitas, “NMF, LNMF, and DNMF modeling of neural receptive fields involved in human facial expression perception”, **Journal of Visual Communication and Image Representation**, ISSN: 1047-3203, vol. 17, no. 5, pp. 958 - 969, Oct., 2006 (link: <http://dx.doi.org/10.1016/j.jvcir.2006.06.001>).

3A7. I. Buciu, C. Kotropoulos, and I. Pitas, “Demonstrating the stability of support vector machines for classification”, **Signal Processing**, ISSN: 0165-1684, Volume 86, Issue 9, pp. 2364 – 2380, Sept. 2006 (link: <http://dx.doi.org/10.1016/j.sigpro.2005.11.005>).

3A8. S. Zafeiriou, A. Tefas, **I. Buciu**, and I. Pitas, “Exploiting discriminant information in nonnegative matrix factorization with application to frontal face verification”, **IEEE Transactions on Neural Networks**, ISSN: 1045-9227, vol. 17, no. 3, pp. 683 – 695, May, 2006 (link: http://ieeexplore.ieee.org/xpl/freeabs_all.jsp?isnumber=34174&arnumber=1629091&count=31&index=11).

3A.9. I. Buciu and A. Gacsadi, “Directional Features for Automatic Tumor Classification of Mammogram Images”, **Biomedical Signal Processing & Control**, 6(4), pp. 370 – 378, October 2011 (link: <http://www.sciencedirect.com/science/article/pii/S1746809410000820>).

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

3B1. I. Buciu and I. Naftonita, “Linear and nonlinear dimensionality reduction techniques”, **Journal of Studies in Informatics and Control**, ISSN1220-1766, vol. 16, no. 4, pp. 431 – 444, Dec. 2007 (link: http://www.ici.ro/ici/revista/sic2007_4/art10.html).

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

Lucrarea: S. Zafeiriou, A. Tefas, I. Buciu, and I. Pitas, “Exploiting discriminant information in non-negative matrix factorization with application to frontal face verification”, IEEE Trans. on Neural Networks, ISSN: 1045-9227, vol. 17, no. 3, pp. 683 – 695, 2006, este citată de:

+++++

1. M. Doumpos, C. Zopounidis, and V. Golfinopoulou, Additive Support Vector Machines for Pattern Classification, **IEEE Transactions on Systems, Man, and Cybernetics, Part B: Cybernetics**, vol. 37, no. 3, pp. 540-550, 2007.
2. S. Zafeiriou, A. Tefas and I. Pitas, Learning discriminant person-specific facial models using expandable graphs , **IEEE Transactions on Information Forensics and Security**, vol. 2, no. 1, pp. 55-67, 2007.
3. A. A. Frolov, D. Husek, I. P. Muraviev, P. Yu Polyakov, Boolean factor analysis by attractor neural network, **IEEE Transactions on Neural Networks**, vol. 18, no. 3, pp. 698-707, 2007.
4. G. Goudelis, S. Zafeiriou, A. Tefas and I. Pitas, Class-specific kernel-discriminant analysis for face verification , **IEEE Transactions on Information Forensics and Security**, vol. 2, no. 3, pp. 570-587, 2007.
5. I. Kotsia, S. Zafeiriou and I. Pitas, Novel discriminant non-negative matrix factorization algorithm with applications to facial image characterization problems , **IEEE Transactions on Information Forensics and Security**, vol. 2, no. 3, pp. 588-595, 2007.
6. S. Zafeiriou, A. Tefas and I. Pitas, The discriminant elastic graph matching algorithm applied to frontal face verification , **Pattern Recognition**, vol. 40, no. 10, pp. 2798-2810, 2007.
7. F. Alsaadea, A.M. Ariyaeeniaa, A.S. Malegaonkara, M. Pawlewskib, and S.G. Pillaya, Enhancement of multimodal biometric segregation using unconstrained cohort normalisation, **Pattern Recognition**, vol. 41, no. 3, pp. 814-820 , 2007.
8. Yen-Lun Chen, Zheng, Yuan F, Face recognition for target detection on PCA features with outlier information,50th Midwest Symposium on Circuits and Systems (MWSCAS), pp. 823-826, 2008 .
9. T.-P. Zhang, B. Fang, G.-H. He, J. Wen, and Y.-Y. Tang, Laplacianfaces incorporated inside nonnegative matrix factorization for face recognition, **International Conference on Wavelet Analysis and Pattern Recognition**, 2007, vol. 3, pp. 1267-1270, 2007.
10. I. Kotsia, S. Zafeiriou and I. Pitas, Texture and shape information fusion for facial expression and facial action unit recognition , **Pattern Recognition**, vol. 41, no. 3, pp. 833-851, 2008.
11. E. Kokopoulou and P. Frossard, Semantic coding by supervised dimensionality reduction, **IEEE Transactions on Multimedia**, 2008.

12. T. Zhang, B. Fang, Y. Y., Tang, G. He, J. Wen, Topology preserving non-negative matrix factorization for face recognition, IEEE Transactions on Image Processing vol. 17, issue 4, pp. 574-584, 2008 .
13. G. Goudelis, A. Tefas and I. Pitas, Automated facial pose extraction from video sequences based on mutual information, IEEE Transactions on Circuits and Systems for Video Technology, vol. 18, issue 3, art. no. 4449466, pp. 418-424, 2008 .
14. D. Masip and J. Vitria, Shared Feature Extraction for Nearest Neighbor Face Recognition, IEEE Transactions on Neural Networks, vol. 19, no. 4, pp. 586-595, 2008.
15. He Zhaozhui; Xie Shengli; Zdunek Rafal; et al., Symmetric Nonnegative Matrix Factorization: Algorithms and Applications to Probabilistic Clustering, IEEE TRANSACTIONS ON NEURAL NETWORKS Volume: 22 Issue: 12 Pages: 2117-2131 DOI: 10.1109/TNN.2011.2172457 Part: Part 1 Published: DEC 2011,
16. Pan Ji-Yuan; Zhang Jiang-She, Large margin based nonnegative matrix factorization and partial least squares regression for face recognition, PATTERN RECOGNITION LETTERS Volume: 32 Issue: 14 Pages: 1822-1835 DOI: 10.1016/j.patrec.2011.07.015 Published: OCT 15 2011
17. Zhou Guoxu; Xie Shengli; Yang Zuyuan; et al, Minimum-Volume-Constrained Nonnegative Matrix Factorization: Enhanced Ability of Learning Parts, IEEE TRANSACTIONS ON NEURAL NETWORKS Volume: 22 Issue: 10 Pages: 1626-1637 DOI: 10.1109/TNN.2011.2164621, 2011
18. Maronidis Anastasios; Bolis Dimitris; Tefas Anastasios; et al., Improving subspace learning for facial expression recognition using person dependent and geometrically enriched training, NEURAL NETWORKS Volume: 24 Issue: 8 Special Issue: SI Pages: 814-823 DOI: 10.1016/j.neunet.2011.05.015, 2011
19. Guan Naiyang; Tao Dacheng; Luo Zhigang; et al., Non-negative Patch Alignment Framework, IEEE TRANSACTIONS ON NEURAL NETWORKS Volume: 22 Issue: 8 Pages: 1218-1230 DOI: 10.1109/TNN.2011.2157359 Published: AUG 2011, 2011.
20. Guan Naiyang; Tao Dacheng; Luo Zhigang, Manifold Regularized Discriminative Nonnegative Matrix Factorization With Fast Gradient, IEEE 21. TRANSACTIONS ON IMAGE PROCESSING Volume: 20 Issue: 7 Pages: 2030-2048 DOI: 10.1109/TIP.2011.2105496, 2011
- An Shounan; Yoo Jihoh; Choi Seungjin, Manifold-respecting discriminant nonnegative matrix factorization, PATTERN RECOGNITION LETTERS Volume: 32 Issue: 6 Pages: 832-837 DOI: 10.1016/j.patrec.2011.01.012, 2011.
- Zafeiriou Stefanos; Petrou Maria, 2.5D Elastic graph matching, COMPUTER VISION AND IMAGE UNDERSTANDING Volume: 115 Issue: 7 Special Issue: SI Pages: 1062-1072 DOI: 10.1016/j.cviu.2010.12.008, 2011
23. Zhi Ruicong; Flierl Markus; Ruan Qiuqi; et al., Graph-Preserving Sparse Nonnegative Matrix Factorization With Application to Facial Expression Recognition, IEEE TRANSACTIONS ON SYSTEMS MAN AND CYBERNETICS PART B-CYBERNETICS Volume: 41 Issue: 1 Pages: 38-52 DOI: 10.1109/TSMCB.2010.2044788, 2011.
24. Lee, Soo-Young; Song, Hyun-Ah; Amari, Shun-ichi, A new discriminant NMF algorithm and its application to the extraction of subtle emotional differences in speech, COGNITIVE NEURODYNAMICS Volume: 6 Issue: 6 Pages: 525-535 DOI: **10.1007/s11571-012-9213-1, 2012.**
25. Nikitidis, Symeon; Tefas, Anastasios; Nikolaidis, Nikos; et al., Subclass discriminant Nonnegative Matrix Factorization for facial image analysis, PATTERN RECOGNITION Volume: 45 Issue: 12 Pages: 4080-4091 DOI: **10.1016/j.patcog.2012.04.030, 2012**
26. Zheng, Wei-Shi; Lai, JianHuang; Liao, Shengcai; et al., Extracting non-negative basis images using pixel dispersion penalty, PATTERN RECOGNITION Volume: 45 Issue: 8 Pages: 2912-2926 DOI: **10.1016/j.patcog.2012.01.022, 2012**
27. Ma, Peng; Yang, Dan; Ge, Yongxin; et al., Face recognition using two-dimensional nonnegative principal component analysis, JOURNAL OF ELECTRONIC IMAGING Volume: 21 Issue: 3 Article Number: **033011** DOI: **10.1117/1.JEI.21.3.033011, 2012**
28. Guan, Naiyang; Tao, Dacheng; Luo, Zhigang; et al., Online Nonnegative Matrix Factorization With Robust Stochastic Approximation, IEEE TRANSACTIONS ON NEURAL NETWORKS AND LEARNING SYSTEMS Volume: 23 Issue: 7 Pages: **1087-1099** DOI: **10.1109/TNNLS.2012.2197827, 2012.**
29. Kumar, B. G. Vijay; Kotsia, Irene; Patras, Ioannis, Max-margin Non-negative Matrix Factorization, IMAGE AND VISION COMPUTING Volume: 30 Issue: 4-5 Pages: 279-291 DOI: **10.1016/j.imavis.2012.02.010, 2012.**
30. Moon, Sangwoo; Qi, Hairong, Hybrid Dimensionality Reduction Method Based on Support Vector Machine and Independent Component Analysis, IEEE TRANSACTIONS ON NEURAL NETWORKS AND LEARNING SYSTEMS Volume: 23 Issue: 5 Pages: 749-761 DOI: **10.1109/TNNLS.2012.2189581, 2012**
31. Yan, Weidong; Tian, Zheng; Wen, Jinhuan; et al, Feature matching using modified projective nonnegative matrix factorization, JOURNAL OF ELECTRONIC IMAGING Volume: 21 Issue: 1 Article Number: **013005** DOI: **10.1117/1.JEI.21.1.013005, 2012.**

Nr. Citari: **31 (31/4 = 7.75)**

Lucrarea: I. Buciu and I. Pitas, “NMF, LNMF, and DNMF modeling of neural receptive fields involved in human facial expression perception”, Journal of Visual Communication and Image Representation, ISSN: 1047-3203, vol. 17, no. 5, pp. 958 - 969, October, 2006, este citata de:

1. I. Kotsia, I. Buciu, and I. Pitas, "An analysis of facial expression recognition under partial facial image occlusion", *Image and Vision Computing* vol. 26, issue 7, pp. 1052-1067, 2008 .
2. I. Kotsia, I. Zafeiriou, and I. Pitas, Texture and shape information fusion for facial expression and facial action unit recognition , *Pattern Recognition*, vol. 41, issue 3, pp. 833-851 , 2008 .
3. Nikitidis, Symeon; Tefas, Anastasios; Nikolaidis, Nikos; et al., Subclass discriminant Nonnegative Matrix Factorization for facial image analysis, *PATTERN RECOGNITION* Volume: 45 Issue: 12 Pages: 4080-4091 DOI: 10.1016/j.patcog.2012.04.030, 2012
4. Tang, N.; Gao, X. -Z.; Li, X., Target classification of ISAR images based on feature space optimisation of local non-negative matrix factorization, *IET SIGNAL PROCESSING* Volume: 6 Issue: 5 Pages: 494-502 DOI: 10.1049/iet-spr.2011.0286, 2012.

Nr. Citari: **4 (4/2 = 2)**

Lucrarea: **I. Buciu**, C. Kotropoulos, and I. Pitas, "Demonstrating the stability of support vector machines for classification", *Signal Processing*, ISSN: 0165-1684, vol. 86, no. 9, pp. 2364 - 2380, 2006, este citata de:

1. Q. Cui, Z. He, and N. Cui, A machine learning based approach of robust parameter design , IET Conference Publications, vol. 524, pp. 443-448, 2006.
2. M. Doumpas, C. Zopounidis, and V. Golfinopoulou, Additive Support Vector Machines for Pattern Classification, *IEEE Transactions on Systems, Man, and Cybernetics, Part B: Cybernetics*, vol. 37, no. 3, pp. 540-550, 2007.
3. V. V. Saradhi and H. Karnick, On the stability and bias-variance analysis of kernel matrix learning , *Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)* , vol. 4509, pp. 441-451, 2007.
4. Y. Wang, C. De Lin, Learning by bagging and adaboost based on support vector machine, 5th IEEE International Conference on Industrial Informatics, vol. 2, pp. 663-668, 2007.

Nr. Citari: **4 (4/3 = 1.33)**

Lucrarea: **I. Buciu**, "Learning sparse non-negative features for object recognition", IEEE Third International Conference on Intelligent Computer Communications and Processing (ICCP), pp. 73 – 79, 2007 este citata de:

1. D. Soukup and I. Bajla, *Robust Object Recognition Under Partial Occlusions Using NMF*,Computational Intelligence and Neuroscience, 2008.

Nr. Citari: **1 (1/1 = 1)**

Lucrarea: **I. Buciu and I. Pitas**, "A new sparse image representation algorithm applied to facial expression recognition", *Proc. IEEE Workshop on Machine Learning for Signal Processing, pp.539 – 548, Sao Luis, Brazil, 2004*, este citata de:

-
1. E. Benetos, M. Kotti, C. Kotropoulos, J.J. Burred, G. Eisenberg, M. Haller and T. Sikora, *Comparison of subspace analysis-based and statistical-based model algorithms for musical instrument classification*,Proceedings of 2nd Workshop on Immersive Communication and Broadcast Systems (ICOB '05), 2005.
 2. I. Bajla, D. Soukup, A modular non-negative matrix factorization for parts-based object recognition using subspace representation ,*Proceedings of SPIE - The International Society for Optical Engineering* 6813, art. no. 68130C, 2008.
 3. Zhi Ruicong; Flierl Markus; Ruan Qiuqi; et al., Graph-Preserving Sparse Nonnegative Matrix Factorization With Application to Facial Expression Recognition, *IEEE TRANSACTIONS ON SYSTEMS MAN AND CYBERNETICS PART B-CYBERNETICS* Volume: 41 Issue: 1 Pages: 38-52 DOI: 10.1109/TSMCB.2010.2044788, 2011

Nr. Citari: **3 (3/2 = 1.5)**

Lucrarea: **I. Buciu** and I. Pitas, "Application of non-negative and local non negative matrix factorization to facial expression recognition" Proc. 2004 International Conference on Pattern Recognition, pp. 288-291, Cambridge, UK, 2004, este citata de:

-
1. D. Zhang, S. Chen, and Z-H. Zhou, *Two-dimensional non-negative matrix factorization for face representation and recognition*, IEEE International Workshop on Analysis and Modeling of Faces and Gestures, pp. 350 - 363, 2005.
 2. L. He, J. Zhou, D. Hu, C. Zou, and L. Zhaou, *Boosted independent features for face expression recognition*, Second International Symposium on Neural Networks, pp. 137-146, 2005.
 3. O. Okun and H. Priisalu, *Nonnegative matrix factorization for pattern recognition*,Proc. the 5th IASTED International Conference on Visualization, Imaging and Image Processing, pp. 546-551, 2005
 4. O. Okun, H. Priisalu and A. Alves, *Fast non-negative dimensionality reduction for protein fold recognition*, 16th European Conference on Machine Learning , pp. 665- 672, 2005.

5. M. Heiler and C. Schnorr, *Learning sparse representations by non-negative matrix factorization and sequential cone programming*, Journal of Machine Learning Research, vol. 7, pp. 1385-1407, 2006.
6. O. Okun and H. Priisalu, *Fast nonnegative matrix factorization and its application for protein fold recognition*, Eurasip Journal on Applied Signal Processing 2006, art. no. 71817, 2006.
7. D - T. Lin, *Human facial expression recognition using hybrid network of PCA and RBFN*, Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics) 4132 LNCS - II, 15. pp. 624-633, 2006..
8. S. Zafeiriou, A. Tefas, I. Buciu and I. Pitas, *Exploiting discriminant information in nonnegative matrix factorization with application to frontal face verification*, IEEE Transactions on Neural Networks, vol. 17, no. 3, pp. 683-695, 2006.
9. Z. Zheng, J. Yang and Y. Zhu, *Initialization enhancer for non-negative matrix factorization*, Engineering Applications of Artificial Intelligence , vol. 20, no. 1, pp. 101- 110, 2007.
10. E. Kotsia, S. Zafeiriou and I. Pitas, *Novel discriminant non-negative matrix factorization algorithm with applications to facial image characterization problems*, IEEE Transactions on Information Forensics and Security, vol. 2, no. 3, pp. 588-595, 2007.
11. O. Samko and P. L. Rosin and A. D. Marshall, *Robust automatic data decomposition using a modified sparse NMF*, Mirage 2007 - Computer Vision/Computer Graphics Collaboration Techniques and Applications, LNCS, vol. 4418, no. 3, pp. 225-234, 2007.
12. Y.-L. Zhu, *Sub-pattern non-negative matrix factorization based on random subspace for face recognition*, International Conference on Wavelet Analysis and Pattern Recognition, 2007, vol. 3, pp. 1356-1360, 2007.
13. T. Xiang, M. K. H. Leung, and S. Y. Cho *Expression recognition using fuzzy spatio-temporal modeling* , Pattern Recognition, vol. 41, issue 1, pp. 204-216, January, 2008.

Nr. Citari: **13 (13/2 = 6.5)**

Lucrarea: I. Buciu, C. Kotropoulos and I. Pitas, “ICA and Gabor representations for facial expression recognition” Proc. 2003 IEEE International Conference on Image Processing. pp. 1054 – 1057, 2003, este citata de:

1. X. Feng, A. Hadid, and M. Pietikainen, *A coarse-to-fine classification scheme for facial expression classification*,Image Analysis and Recognition, ICIAR 2004 Proceedings, Lecture Notes in Computer Science, vol. 3212, pp. 668-675, 2004.
2. X. Feng, M. Pietikainen and A. Hadid, *Facial expression recognition with local binary patterns and linear programming*, Pattern Recognition and Image Analysis, vol. 15, no. 2, pp. 546-548, 2005.
3. D.Xu, S. Yan, L. Zhang, ZK Liu and H. Zhang, *Coupled subspace analysis*,Technical Report, MSR-TR-2004-106, 2004
4. C. Shan, S. Gong, and P. W. McOwan, *Recognizing facial expressions at low resolution*, Proc. IEEE International Conference on Advanced Video and Signal-Based Surveillance (AVSS'05), pp. 330- 335, 2005.
5. H. Tan and Y. Zhang, *Automatic facial expression analysis*, Encyclopedia of Human Computer Interaction, Idea Group Reference publishing, Claude Ghaoui, eds., 2006.
6. S. Brahnam, C.-F. Chuang, F. Y. Shih, and M. R. Slack, *Machine recognition and representation of neonatal facial displays of acute pain*, Artificial Intelligence in Medicine, vol. 36, no. 3, pp.211-222, 2006.
7. M.-J Han, J.-H. Hsu, K-T. Song and F.-Y Chang, *Embedded emotion recognition system using key feature sets*, Proceedings of 2006 CACS Automatic Control Conference, 2006.
8. F - L. Li, X.- H Cao, K - L. Zuo, K- X. Xu, *Optimal Gabor features selection for face recognition using an improved margin- based algorithm*, OPTOELECTRONIC ENGINEERING, vol. 33, no. 9, pp. 85 - 90, 2006.
9. J. Cui and X -Y. Feng, *New method of facial expression recognition*, COMPUTER ENGINEERING AND APPLICATIONS, vol. 42, no. 29, pp. 68 - 80, 2006.
10. N. Rose, *A comparison of single and multi-class classifiers for facial expression classification*, International Conference on Computational Inteligence for Modelling Control and Automation and International Conference on Intelligent Agents Web Technologies and International Commerce (CIMCA'06), p. 175, 2006.
11. M. H. Bindu, P. Gupta and U. S. Tiwary *Cognitive model - Based emotion recognition from facial expressions for live human computer interaction* , Proceedings of the 2007 IEEE Symposium on Computational Intelligence in Image and Signal Processing, CIISP 2007, art. no. 4221444, pp. 351-356, 2007.
12. T. Xiang, M. K. H. Leung, and S. Y. Cho *Expression recognition using fuzzy spatio-temporal modeling* , Pattern Recognition, vol. 41, issue 1, pp. 204-216, January, 2008.

Nr. Citari: **12 (12/3 = 4)**

Lucrarea: I. Buciu, C. Kotropoulos, I. Pitas, “On the stability of support vector machines for face detection”, 2002 IEEE International Conference on Image Processing, vol. III, Rochester, N. Y., USA, pp. 121 – 124, 2002, este citata de:

1. A. Natsev, M. R. Naphade and J. R. Smith, *Exploring semantic dependencies for scalable concept detection*,Proc. IEEE Intl. Conf. on Image Processing (ICIP), vol. III, pp. 625-628, 2003.

- 2.A. Natsev, M. R. Naphade and J. R. Smith, Semantic representation, search and mining of multimedia content, Knowledge Discovery and Data mining (KDD 2004), pp. 641 - 646, 2004.
- 3.A. Natsev, M. Naphade and J. R. Smith, Over-complete Representation and Fusion for Semantic Concept Detection, Proc. IEEE Intl. Conf. on Image Processing (ICIP), vol. 4, pp. 2375 - 2378, 2004
4. S. Tripathi and R. S. Govindaraju, On selection of kernel parameters in relevance vector machines for hydrologic applications , Stochastic Environmental Research and Risk Assessment, vol. 21, no. 6, pp. 747-764, 2007

Nr. Citari: **4 (4/3 = 1.33)**

Lucrarea: I. Buciu, C. Kotropoulos, I. Pitas, "Combining support vector machine for accurate face detector", Proc. 2001 IEEE International Conference on Image Processing. pp. 1054 – 1057, 2001, este citata de:

1. M. Gordan, C. Kotropoulos and I. Pitas, *A support vector machine-based dynamic network for visual speech recognition applications* , Eurasip Journal on Applied Signal Processing 2002 (11), pp. 1248-1259, 2002.
2. G. Valentini and T. G. Dietterich, *Low bias bagged support vector machines*, International Conference on Machine Learning, ICML-2003, Washington, DC, pp. 752-759, 2003.
3. J. Kui and L C. De Silva, *Combined face detection/recognition for smart rooms*, Audio- and Video-Based Biometric Person Authentication (AVBPA) 2003, pp. 787-795, 2003.
4. P. Wang and Q. Ji, *Multi-view face detection under complex scene based on combined SVMs*, International Conference on Pattern Recognition, pp. 179-182, 2005
5. L. Xiaohua and S. Lansun, *Detecting faces in the wavelet compressed domain*, Visual Communications and Image Processing, vol. 5960, pp. 1-7, 2005.
6. M. Vatsa, R. Singh and P. Gupta, *Face detection using gradient vector flow*, Proc. of the Second IEEE Int. Conf. on Machine Learning and Cybernetics (IEEE ICMLC '03), vol. 5, pp. 3259- 3263, 2003.
7. T. Wu, L. Zhang and Y. - P Zhang, *Kernel covering algorithm for machine learning*, Jisuanji Xuebao/Chinese Journal of Computers, vol. 28, no. 8, pp. 1295-1301, 2005.
8. H. Byun and S.-W Lee, *A survey on pattern recognition applications of support vector machines*, International Journal of Pattern Recognition and Artificial Intelligence, vol. 17, no.3, pp. 459-486, 2003.
9. Y - H. Liu, Y - T. Chen and S - S. Lu, *Face detection using kernel PCA and imbalanced SVM*, Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics) 4221 LNCS - I, pp. 351-360, 2006.
10. Y. Peng, Q. Huang, P. Jiang and J. Jiang, *Cost-sensitive ensemble of support vector machines for effective detection of microcalcification in breast cancer diagnosis*, Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics) 3614 LNAI, pp. 483-493, 2006.
11. Q. Li and H. Ji, *Face detection in complex background based on gaussian models and neural networks* ,International Conference on Signal Processing Proceedings, ICSP 2, art. no. 4128969, 2007.
12. C.-A Wu and H. - B Liu, *An improved support vector regression based on classification* ,Proceedings - 2007 International Conference on Multimedia and Ubiquitous Engineering, MUE 2007, art. no. 4197407, pp. 999-1003, 2007.
13. S. Choi, B. Lee, and J. Yang, *Ensembles of region based classifiers*, Proceedings - 7th International Conference on Computer and Information Technology, pp. 41-46, 2007

Nr. Citari: **13 (13/3 = 4.33)**

Lucrarea: Kotsia, Irene ; Buciu, Ioan ; Pitas, Ioannis, " An analysis of facial expression recognition under partial facial image occlusion ", IMAGE AND VISION COMPUTING Volume: 26 Issue: 7 Pages: 1052-1067 DOI: 10.1016/j.imavis.2007.11.004, 2008, este citata de:

1. Huang, Xiaohua; Zhao, Guoying; Zheng, Wenming; et al, Towards a dynamic expression recognition system under facial occlusion, PATTERN RECOGNITION LETTERS Volume: 33 Issue: 16 Pages: 2181-2191 DOI: 10.1016/j.patrec.2012.07.015, 2012.
2. Miyakoshi, Yoshihiro; Kato, Shohei, A missing value imputation method using a Bayesian network with weighted learning, ELECTRONICS AND COMMUNICATIONS IN JAPAN Volume: 95 Issue: 12 Pages: 1-9 DOI: 10.1002/ecj.11449, 2012
3. Kazmi, Sidra Batool; Qurat-ul-Ain; Jaffar, M. Arfan, Wavelets-based facial expression recognition using a bank of support vector machines, SOFT COMPUTING Volume: 16 Issue: 3 Special Issue: SI Pages: 369-379 DOI: 10.1007/s00500-011-0721-4, 2012.

Nr. Citari: **4 (4/3 = 1.33)**

Lucrarea: Buciu, Ioan ; Nikolaidis, Nikos ; Pitas, Ioannis, "Nonnegative matrix factorization in polynomial feature space", IEEE Trans. on Neural Networks, ISSN: 1045-9227, vol. 19, no. 6, Pages: 1090-1100 DOI: 10.1109/TNN.2008.2000162 Published: JUN 2008, este citata de:

1. Zheng, Wei-Shi; Lai, JianHuang; Liao, Shengcai; et al, Extracting non-negative basis images using pixel dispersion penalty, PATTERN RECOGNITION Volume: 45 Issue: 8 Pages: 2912-2926 DOI: 10.1016/j.patcog.2012.01.022, 2012.
2. Zafeiriou, Stefanos; Tzimiropoulos, Georgios; Petrou, Maria; et al, Regularized Kernel Discriminant Analysis With a Robust Kernel for Face Recognition and Verification, IEEE TRANSACTIONS ON NEURAL NETWORKS AND LEARNING SYSTEMS Volume: 23 Issue: 3 Pages: 526-534 DOI: 10.1109/TNNLS.2011.218205, 2012

Nr. Citari: 2 (2/3 = 0.66)

Lucrarea: Buciu, Ioan ; Gacsadi, Alexandru, "Directional features for automatic tumor classification of mammogram images", BIOMEDICAL SIGNAL PROCESSING AND CONTROL Volume: 6 Issue: 4 Pages: 370-378 DOI: 10.1016/j.bspc.2010.10.003 Published: OCT 2011, este citata de:

1. Deepak, K. Sai; Medathati, N. V. Kartheek; Sivaswamy, Jayanthi, Detection and discrimination of disease-related abnormalities based on learning normal cases, PATTERN RECOGNITION Volume: 45 Issue: 10 Pages: 3707-3716 DOI: 10.1016/j.patcog.2012.03.020, 2012.

Nr. Citari: 1 (1/2 = 0.5)

TOTAL CITARI: 90

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).

4A.1. A. Fazekas, C. Kotropoulos, **I. Buciu** and I. Pitas, " Support vector machines on the space of Walsh functions and their properties", in 2nd International Symposium on Image and Signal Processing and Analysis, ISPA, Pula, Croatia, pp. 43 – 48, 2001 (link: http://ieeexplore.ieee.org/xpl/freeabs_all.jsp?tp=&arnumber=938601&isnumber=20289).

4A.2. A. Fazekas, C. Kotropoulos, **I. Buciu** and I. Pitas, "Face detection by support vector machines with Walsh transform domain", 8th Panhellenic Conference on Informatics, (PCI 2001), Cyprus, 8-10 November, Vol. 2, pp. 156 – 164, 2001.

4A.3. **I. Buciu**, C. Kotropoulos, I. Pitas, "Combining support vector machine for accurate face detector", Proc. 2001 IEEE International Conference on Image Processing. pp. 1054 – 1057, 2001 (link: http://ieeexplore.ieee.org/xpl/freeabs_all.jsp?arnumber=959230).

4A.4. **I. Buciu**, C. Kotropoulos, I. Pitas, "On the stability of support vector machines for face detection", 2002 IEEE International Conference on Image Processing, vol. III, Rochester, N. Y., USA, pp. 121 – 124, 2002 (link: http://ieeexplore.ieee.org/xpl/freeabs_all.jsp?isnumber=22267&arnumber=1038919&count=254&index=31).

4A.5. **I. Buciu**, C. Kotropoulos, I. Pitas, "Face detection by using independent component decomposition", Proc. of Workshop Dynamic Perception, Bochum, Germany, pp. 257 – 252, 2002.

4A.6. A. Fazekas, I. Buciu, C. Kotropoulos, and I. Pitas, "Support vector machines for face detection, KEPAF'02, Szeged-Domaszik, 2002.

4A.7. **I. Buciu**, C. Kotropoulos and I. Pitas, "ICA and Gabor representations for facial expression recognition" Proc. 2003 IEEE International Conference on Image Processing. pp. 1054 – 1057, 2003 (link: http://ieeexplore.ieee.org/xpl/freeabs_all.jsp?isnumber=27931&arnumber=1246815&count=280&index=215).

4A.8. **I. Buciu**, I. Kotsia and I. Pitas, "Recognition of facial expressions in presence of partial occlusion", 9th Panhellenic Conference on Informatics, 2003, (link: <http://delab.csd.auth.gr/bci1/Panhellenic/IndexByPaper.html>.)

4A.9. S. Krinidis, **I. Buciu** and I. Pitas, "Facial expression analysis and synthesis: A survey (Invited paper)", HCI International 2003, 10th Int. Conference on Human-Computer Interaction, June 22-27, Crete, Greece, pp. 1432-1443, 2003 (link: <http://hcibib.org/bibtoc.cgi?file=bibdata/HCI03-4.bib>).

4A.10. **I. Buciu** and I. Pitas, "Application of non-negative and local non negative matrix factorization to facial expression recognition" Proc. 2004 International Conference on Pattern Recognition, pp. 288-291, Cambridge, UK, 2004 (link: <http://dx.doi.org/10.1109/ICPR.2004.177>).

4A.11. I. Buciu and I. Pitas, “A new sparse image representation algorithm applied to facial expression recognition”, Proc. IEEE Workshop on Machine Learning for Signal Processing, pp.539 – 548, Sao Luis, Brazil, 2004 (link:

4A.12. I. Buciu, I Kotsia and I. Pitas, “Facial expression recognition under partial occlusion”, Proc. 2005 IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP), vol. 5, pp.453 – 456, Philadelphia, Pennsylvania, USA, 2005 (link:

4.A.13. S. Zaferious, A. Tefas, **I. Buciu**, and I. Pitas, “Class-specific discriminant non-negative matrix factorization for frontal face verification”, Proc. 2005 International Conference on Advance in Pattern Recognition (ICAPR 2005), Bath, United Kingdom, 22-25 August, 2005, (link:

4A.14. I. Buciu, N. Nikolaidis, and I. Pitas, “On the initialization of the DNMF algorithm”, 2006 IEEE International Symposium on Circuits and Systems (ISCAS), pp 4671 – 4674, 2006 (link:

4A.15. I. Buciu, N. Nikolaidis, and I. Pitas, “A comparative study of NMF, DNMF, and LNMF algorithms applied for face recognition”, 2006 Second IEEE-EURASIP International Symposium on Control, Communications, and Signal Processing (ISCCSP), Marrakech, Morocco, 2006 (link:

4A.16. I. Buciu, A. Caplier, Z. Hammal, N. Nikolaidis, I. Pitas, “Enhancing the facial expression classification by information fusion”, 14th European Signal Processing Conference (EUSIPCO), 2006 (link:

4A.17. I. Buciu, “Learning sparse non-negative features for object recognition”, IEEE Third International Conference on Intelligent Computer Communications and Processing (ICCP), pp. 73 – 79, 2007 (link:

4A.18. I. Buciu, “Non-negative matrix factorization, a new tool for feature extraction: Theory and Applications”, IEEE 2nd International Conference on Computers, Communications and Control, pp. 45 – 52, 2008.

4A.19 I. Buciu, I. Pitas, I. Naftonita, “Holistic and local image representations for human face analysis – part I”, IEEE International Conference on Communications, pp. 137 – 140, 2008 (link:

4A.20. I. Buciu, I. Pitas, I. Naftonita, “Holistic and local image representations for human face analysis – part II”, IEEE International Conference on Communications, pp. 141 – 144, 2008 (link:

4A.21. I. Buciu, I. Naftonita, I. Pitas, “Global Gabor features for rotation invariant object classification”, IEEE Fourth International Conference on Intelligent Computer Communications and Processing (ICCP), pp. 41 – 46, 2008 (link:

4A.22. 4.A.1. I. Buciu, I. Naftonita, I. Pitas, “Facial expression recognition under noisy environment using Gabor filters”, IEEE International Symposium on Electronics and Telecommunications (ETC), 2008 (link:

4A.23. I. Buciu and I. Naftonita, “Non-negative Matrix Factorization Methods for Face Recognition under Extreme Lighting Variations”, 2009 IEEE International Symposium in Signals, Circuits & Systems (ISSCS), pp. 125 – 128, 2009 (link:

4A.24. I. Buciu and A. Gascadi, “Gabor Wavelet Based Features for Medical Image Analysis and Classification” 2nd International Symposium on Applied Sciences in Biomedical and Communication Technologies (ISABEL), 2009 (link:

4.A.25. C. Grava, A. Gacsadi and **I. Buciu**, “A Homogeneous Algorithm for Motion Estimation and Compensation by Using Cellular Neural Networks, International Conference on Computers, Communications and Control”, 2010 (link:

4A. 26. I. Buciu, A. Gacsadi and C. Grava, "Vision Based Approaches for Driver Assistance Systems", 11th WSEAS international conference on Automation & information, pp. 92 - 97, 2010 (link: <http://dl.acm.org/citation.cfm?id=1863298>).

4A. 27. I. Buciu, "Efficiency Analysis of Illumination Correction Methods For Face Recognition Performance", IEEE International Conference on Intelligent Computer Communications and Processing (ICCP), pp. 211 - 216, 2010. (link: http://ieeexplore.ieee.org/xpl/freeabs_all.jsp?arnumber=5606436).

4A. 28. I. Buciu and A. Gacsadi, "Spatiotemporal facial features encoding for facial expression analysis in image sequences", 2011 IEEE International Symposium in Signals, Circuits & Systems (ISSCS), 2011 (link: http://ieeexplore.ieee.org/xpl/mostRecentIssue.jsp?sf_arn=null&sf_iid=null&sf_pun=5962067&sf_in=null&sf_rpp=null&sf_iv=null&sf_sp=null&sf_pn=5).

4A. 29. I. Buciu and A. Gacsadi, "Noise suppression methods for low quality images with application to face recognition", In Proc. ELMAR, 2011 (link: http://ieeexplore.ieee.org/xpl/freeabs_all.jsp?arnumber=6044338).

B) internaționale recunoscute (cu ISSN sau ISBN) țară și din străinătate

4B.1 I. Buciu, C. Gordan, "The chose of LMS algorithm step size in echo canceller problem", in Nove Smery V Spracovany Signalov V., pag 209 – 215, Liplovsy Mikulas, Slovakia, 2000.

4B.2 C. Gordan, I. Buciu, "The estimation of the instantaneous frequency of the parabolic frequency modulated signals with a zero mean Gaussian noise using the wavelet transform", part II, pag. 190 – 195, in Nove Smery V Spracovany Signalov V., pag 209 – 215, Liplovsy Mikulas, Slovakia, 2000.

C) naționale,

4C.1 I. Buciu, C. Gordan, "Image compression between wavelet transforms and Fourier transforms" International; Conference on Renewable Sources and Environmental Electro-technologies, May, 2000, Felix, Romania.

4C.2 I. Buciu, C. Gordan, "Analysis and design of an elliptic IIR band-pass filter", Second International; Conference on Renewable Sources and Environmental Electro-technologies, pag. 37 – 42, May, 1998, Felix, Romania.

4C.3 I. Buciu, I. Popescu, "Spectrum analysis program of various signals", Second International; Conference on Renewable Sources and Environmental Electro-technologies, pag. 43 – 49, May, 1998, Felix, Romania

4C.4 C. Gordan, I. Buciu, "Estimating the Instantaneous Frequency of FM – signals Altered by Parasitic Amplitude Modulation", International Symposium on Systems Theory, Robotics, Computers and Process Informatics – Sintes '9, pag. 34 – 40, June, 1998, Craiova, Romania.

4C.5 I. Buciu, C. Gordan, "The reconstruction of the musical sounds using Kalman algorithm", Analele Universitatii din Oradea, pag. 19 – 25, 1997, Baile Felix, Romania.

4C.6 I. Buciu, C. Gordan, "Selectarea frecvențelor necesare în procesul de sintetizare a unor note muzicale folosind un filtru de tip FIR", Lucrarile sesiunii de comunicari științifice ale Universitatii "Aurel Vlaicu", din Arad, Ed. a – IV – a , 25 de ani de invatamant tehnic superior aradean., pag. 301—309, octombrie, 1997, Arad, Romania.

5 Brevete de invenție

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

Membru:

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

6A.1. MULTIMODAL Human Computer Interaction (RTN - MUHCI) - FP6, 8 parteneri, responsabil: AUTH, buget: 1.5 Mil Euros, 2000 – 2004.

6A.2. SIMILAR – Network of Excellence – FP6, 16 parteneri, buget: 6.050.000, 2004 – 2008.

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

Membru:

6B.1 Dezvoltarea unor metode de prelucrare și analiza a imaginilor computer tomografice utilizând rețele neuronale celulare și integrarea acestora într-un sistem de asistare a diagnozei medicale - PN II - IDEI - Proiect de Cercetare Exploratorie, ID-668/2008, Contract Nr. 645/19.01.2009

6B.2 Tehnici de Analiza, Modelare si Simulare pentru Imagistica, Bioinformatica si Sisteme Complexe – POSDRU/86/1.2/S/61756

6B.3 Levy distributions for the study of predictability indicators with impact on regional development (LEDIRE), HURO/1001/293/2.2.3

6B.4 Joint development and implementation of an advanced training program in neurosciences, HURO/1001/295/2.3.1

Director:

6B.5. Grant CONNECT - Studiu privind precizia (toleranta minima) de masurare si testare a componentelor si ansamblelor electronice cu ajutorul testerului ITA Scorpio, 269121.02.2013

- 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/expozitii și nepublicate, etc.

8.. Recunoasterea prestigiuui stiintific

- A) Conducere de doctorat
- B) Referent in comisii de doctorat internationale in ultimii 5 ani
- C) Membru in colective de redactie ale unor reviste stiintifice recunoscute

8.C1. Editor executiv asociat pentru International Journal of Computers, Communications & Control (IJCCC)

8.C2. Editor pentru International Journal of Imaging Science and Engineering

8.C2. Editor asociat pentru International ISRN Artificial Intelligence (<http://www.isrn.com/journals/ai/editors/>);

8.C3. Editor asociat pentru Image and Vision Computing (<http://www.journals.elsevier.com/image-and-vision-computing/editorial-board/>);

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

Referent la urmatoarele reviste: EURASIP Journal on Applied Signal Processing, Journal of the Image and Vision Computing, IEEE Transactions on Systems, Man and Cybernetics – Part A ,B and C; IEEE Transactions on Knowledge and Data Engineering; Engineering Applications of Artificial Intelligence (The International Journal of Intelligent Real-Time Automation), IEEE Transactions on Pattern Analysis and Machine Learning, Machine Vision and Applications, Information Sciences (INS – Elsevier), IEEE Transactions on Multimedia, Journal of Visual Communication and Image Representation, Image and Vision Computing, Journal of Signal Processing Systems, Journal of Systems and Software.

- E) Expert științific atestat național / internațional

Expert Evaluator proiecte FP 7 ICT Call 8 Objective 8.1 – Technology Enhanced Learning, ICT Call 9 Cultural Heritage, and ICT Call 10 – “Technologies and scientific foundations in the field of creativity”

- F) Premii .
- G) membru în asociații științifice și profesionale

G1. Membru in „Soft Computing in Image Processing”.

