

## Lista lucrărilor științifice

### a) Lucrări depuse la dosar:

1. RA Rosu, ME Breaban, H Luchian. *Exploring the potential of prototype-based soft-labels data distillation for imbalanced data classification*. SYNASC 2022
2. RM Ungureanu, ME Breaban. *An Evolutionary Distributed Framework for Projection Pursuit*. Procedia Computer Science 176, 1023-1032, 2020
3. C Padurariu, ME Breaban. *Dealing with Data Imbalance in Text Classification*, Procedia Computer Science 159, 736-745, 2019.
4. M Breaban, D Simovici, H Luchian. *Nonlinear Feature Extraction in a Logarithmic Space with Evolutionary Algorithms*. Annals of West University of Timisoara-Mathematics 51 (1), 25-36
5. M. Breaban. *Multiobjective Projection Pursuit for Semisupervised Feature Extraction*. EVOApplications conference within EvoStar, LNCS 7835 Springer, pages 324-333, 2013.
6. VI Lupoai, IA Chili, M Raschip, ME Breaban. *An Evolutionary Approach for Solving Multi-Objective WCSPs Using Mini-Bucket Elimination Heuristics*. 2021 IEEE Congress on Evolutionary Computation (CEC), 408-415. 2021
7. V.I. Lupoai, I.A. Chili, M.E. Breaban, M. Raschip. *SOM-Guided Evolutionary Search for Solving MinMax Multiple-TSP*. In 2019 IEEE Congress on Evolutionary Computation (CEC) 2019 (pp. 73-80). IEEE.
8. R Necula, M Raschip, M Breaban. *Balancing the Subtours for Multiple TSP Approached with ACS: Clustering-based Approaches vs. MinMax Formulation*. EVOLVE-A Bridge between Probability, Set Oriented Numerics, and Evolutionary Computation VI. Pages 210-223. 2018
9. R Necula, M Breaban, M Raschip. *Tackling Dynamic Vehicle Routing Problem with Time Windows by means of ant colony system*. Evolutionary Computation (CEC), 2017 IEEE Congress on, 2480-2487
10. M. Breaban, H. Luchian. *A unifying criterion for unsupervised clustering and feature selection*. Pattern Recognition, 44(4), pages 854-865 (2011) ISSN 0031-3203.

### b) Teza de doctorat

„Clustering: Evolutionary Approaches”, Universitatea “Alexandru Ioan Cuza” din Iași, 2011

### Teza de abilitare:

„Contributions in Intelligent Data Analysis and Optimization”, Universitatea “Alexandru Ioan Cuza” din Iași, 2023

### c) Cărți si capitole în cărți

- C Cranganu, H Luchian, ME Breaban (editors). *Artificial Intelligent Approaches in Petroleum Geosciences*. Springer, 2015
- H Luchian, ME Breaban, A Bautu. *On Meta-heuristics in Optimization and Data Analysis. Application to Geosciences*. Chapter in Artificial Intelligent Approaches in Petroleum Geosciences, 53-100, 2015
- M. Ionita, M. Breaban, C. Croitoru. *Evolutionary Computation in Constraint Satisfaction*, book chapter in New Achievements in Evolutionary Computation", edt. Peter Korosec, INTECH Vienna, ISBN 978-953-307-053-7, 2010.

### d) Lucrări în reviste

- M. Breaban, H. Luchian. *A unifying criterion for unsupervised clustering and feature selection*. Pattern Recognition, 44(4), pages 854-865 (2011) ISSN 0031-3203.
- C. Cranganu, M. Breaban. *Using support vector regression to estimate sonic log distributions: A case study from the Anadarko Basin, Oklahoma*, Journal of Petroleum Science and Engineering, volume 103, pages 1-13, 2013
- S Timofeiov, M Marinca, C Bar, ME Breaban, V Drug, V Scripcariu. *Conversion Rate to Resectability in Colorectal Cancer Liver Metastases: Need for Criteria Adapted to Current Therapy*. Journal of Surgery [Jurnalul de chirurgie] 2015
- S Timofeiov, ME Breabă, V Drug, A Gervescu, I Huțanu. *Extended Low Hartmann Operation with Total Mesorectal Excision-Optimal Surgical Treatment in Stage IV Mid and Upper Rectal Cancer*. Journal of Surgery [Jurnalul de chirurgie] 10 (3), 117-120. 2014

#### e) **Lucrări în volumele conferințelor**

- Breaban, Mihaela, Raluca Necula, Dorel Lucanu, and Daniel Stamate. "Joint Decision Making in Ant Colony Systems for Solving the Multiple Traveling Salesman Problem." *Procedia Computer Science* 225 (2023): 3498-3507.
- RA Rosu, ME Breaban, H Luchian. *Exploring the potential of prototype-based soft-labels data distillation for imbalanced data classification*. SYNASC 2022
- R. Miron, ME Breaban. Revitalizing Regression Tasks Through Modern Training Procedures: Applications in Medical Image Analysis for Covid-19 Infection Percentage Estimation. ICIAP 2022
- VI Lupoai, IA Chili, M Raschip, ME Breaban. An Evolutionary Approach for Solving Multi-Objective WCSPs Using Mini-Bucket Elimination Heuristics. 2021 IEEE Congress on Evolutionary Computation (CEC), 408-415. 2021
- R Miron, C Moisii, S Dinu, ME Breaban. Evaluating Volumetric and Slice-Based Approaches for COVID-19 Detection in Chest CTs. Proceedings of the IEEE/CVF International Conference on Computer Vision. 2021
- C Moisii, R Miron, ME Breaban. Identifying tuberculosis type in CTs. CLEF2021 Working Notes. CEUR Workshop Proceedings. 2021
- R Miron, R Albert, M Breaban. A Two-Stage Atrous Convolution Neural Network for Brain Tumor Segmentation and Survival Prediction. International MICCAI Brainlesion Workshop, 2021
- RM Ungureanu, ME Breaban. An Evolutionary Distributed Framework for Projection Pursuit. *Procedia Computer Science* 176, 1023-1032, 2020
- R Miron, C Moisii, M Breaban. Revealing Lung Affections from CTs. A Comparative Analysis of Various Deep Learning Approaches for Dealing with Volumetric Data. Working Notes of CLEF 2020 - Conference and Labs of the Evaluation Forum, 2020.
- C Padurariu, ME Breaban. Dealing with Data Imbalance in Text Classification, *Procedia Computer Science* 159, 736-745, 2019.
- V.I. Lupoai, I.A. Chili, M.E. Breaban, M. Raschip. SOM-Guided Evolutionary Search for Solving MinMax Multiple-TSP. In 2019 IEEE Congress on Evolutionary Computation (CEC) 2019 (pp. 73-80). IEEE.
- D. Minzat, M. Breaban, H. Luchian. Modeling Real Estate Dynamics Using Survival Analysis. SYNASC 2018
- R Necula, M Raschip, M Breaban. Balancing the Subtours for Multiple TSP Approached with ACS: Clustering-based Approaches vs. MinMax Formulation. EVOLVE-A Bridge between Probability, Set Oriented Numerics, and Evolutionary Computation VI. Pages 210-223. 2018
- R Necula, M Breaban, M Raschip. Tackling Dynamic Vehicle Routing Problem with Time Windows by means of ant colony system. Evolutionary Computation (CEC), 2017 IEEE Congress on, 2480-2487

- M. Breaban, A. Iftene. Dynamic Objective Sampling in Many-objective Optimization, Knowledge-Based and Intelligent Information & Engineering Systems 19th Annual Conference (KES 2015), Procedia Computer Science, Volume 60, Pages 178-187, 2015.
- R Necula, M Breaban, M Raschip. Tackling the bi-criteria facet of multiple traveling salesman problem with ant colony systems. 2015 IEEE 27th International Conference on Tools with Artificial Intelligence (ICTAI).
- R. Necula, M. Breaban, M. Raschip. Performance Evaluation of Ant Colony Systems for the Single-Depot Multiple Traveling Salesman Problem, Hybrid Artificial Intelligent Systems (HAIS 2015), Springer International Publishing, pages 257-268, 2015.
- C Serban, A Siriteanu, C Gheorghiu, A Iftene, L Alboaie, M Breaban. Combining Image Retrieval, Metadata Processing and Naive Bayes Classification at Plant Identification 2013. CLEF (Working Notes), 2013
- M Breaban, D Simovici, H Luchian. Nonlinear Feature Extraction in a Logarithmic Space with Evolutionary Algorithms. Annals of West University of Timisoara-Mathematics 51 (1), 25-36
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- M. Breaban, H. Luchian Outlier Detection with Nonlinear Projection Pursuit. International Journal of Computers, Communications & Control Volume: 8 Issue: 1 Pages: 30-36 Published: FEB 2013
- M. Breaban, H. Luchian, D. Simovici. A Genetic Clustering Algorithm by Monomial Projection Pursuit, International Symposium on Symbolic and Numeric Algorithms for Scientific Computing, 2012
- ME. Breaban, H. Luchian: PSO aided k-means clustering: introducing connectivity in k-means. GECCO 2011, pages 1227-1234, ACM 2011.
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- M. Breaban. Evolving Ensembles of Feature Subsets towards Optimal Feature Selection for Unsupervised and Semi-supervised Clustering. IEA/AIE 2010, Part II, LNAI 6097, pages 67-76, Springer-Verlag, 2010
- M. Breaban. Optimized Ensembles for Clustering Noisy Data. Learning and Intelligent Optimization Workshop, in LNCS 6073, pages 220-223, Springer-Verlag, 2010
- M. Breaban, H. Luchian. Unsupervised Feature Weighting with Multi Niche Crowding Genetic Algorithms. Genetic and Evolutionary Computation Conference, pages 1163-1170, ACM 2009
- M. Breaban, L. Alboaie, H. Luchian. Guiding Users within Trust Networks Using Swarm Algorithms. IEEE Congress on Evolutionary Computation, pages 1770-1777, IEEE Press, 2009
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- Mihaela Breaban, Silvia Luchian. Shaping up Clusters with PSO. In Proc. of 10th International Symposium on Symbolic and Numeric Algorithms for Scientific Computing, Natural Computing and Applications Workshop, pages 532-537, IEEE press, 2008.
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- Mihaela Breaban, Henri Luchian. PSO under an Adaptive Scheme. In Proc. of IEEE Congress on Evolutionary Computation, pages 1212- 1217 Vol. 2, IEEE Press, 2005.

**Conf. dr. Mihaela-Elena Breabăn**