

## Publications – Oliviu Matei

### PhD Thesis

Theoretical and Practical Applications of Evolutionary Computation in Solving Combinatorial Optimization Problems, Technical University of Cluj-Napoca, 2012

### Manuals (2000 - 2015)

1. Oliviu Matei, *Managementul proiectelor software. Indrumar de laborator*, UTPress, 2013
2. Oliviu Matei, *Evolutionary Computation: Principles and Practices*, Risoprint, 2008

### Books and chapters in books (2000 - 2015)

1. Oliviu Matei, Claudia Matei, *Theoretical and Practical Applications of Evolutionary Computation in Solving Combinatorial Optimization Problems*, UTPress, 2015
2. Oliviu Matei, *Design and Development of the Manura Robot*, Editura UTPress, 2014
3. Claudia Matei, Oliviu Matei, *Tehnici de data mining și ontologii aplicate în analiza radiografiilor toracice*, Editura UTPress, 2014
4. Liviu Gavrilăscu, Oliviu Matei, *Totul despre comerțul electronic*, Risoprint, 2009

### ISI Articles

1. O. Matei, P.C. Pop, I. Sas and C. Chira, An improved immigration memetic algorithm for solving the heterogeneous fixed fleet vehicle routing problem, *Neurocomputing*, Elsevier, Vol. 150, Part A, pp. 58-66, 2015
2. P.C. Pop, O. Matei and C.-A. Comes, Reducing the bandwidth of sparse matrix with a genetic algorithm, *Optimization*, Taylor & Francis, Vol. 63(4), pp. 1851-1876, 2014.
3. O. Matei, P.C. Pop and H. Valean, Optical Character Recognition in Real Environments using Neural Networks and k-Nearest Neighbor, *Applied Intelligence*, Springer, Vol. 39(4), pp. 739-748, 2013.
4. P.C. Pop and O. Matei, A memetic algorithm for solving the multidimensional multi-way number partitioning problem, *Applied Mathematical Modelling*, Elsevier, Vol. 37, Issue 22, pp. 9191-9202, 2013
5. P.C. Pop, O. Matei and C. Pop Sitar, An improved hybrid algorithm for solving the generalized vehicle routing problem, *Neurocomputing*, Elsevier, Vol. 109, pp. 76-83, 2013.
6. P.C. Pop and O. Matei, A Genetic Programming Approach for Solving the Linear Ordering Problem, in Proc. of HAIS 2012, Part II, Editors E. Corchado et al., *Lecture Notes in Computer Science*, Springer, Vol. 7209, pp. 331-338, 2012
7. P.C. Pop and O. Matei, An Improved Heuristic for the Bandwidth Minimization Based on Genetic Programming, in Proc. of HAIS 2011, Part II, Editors E.S. Corchado Rodriguez et al., *Lecture Notes in Artificial Intelligence*, Springer, Vol. 6079, pp. 67-74, 2011
8. P.C. Pop, O. Matei and C. Sabo, A Memetic Algorithm for Solving the Generalized Minimum Spanning Tree Problem, *Advances in Intelligent and Soft Computing*, Springer, Vol. 96, pp. 187-194, 2011
9. Petrica Pop, Oliviu Matei, Honoriu Valean, An Efficient Hybrid Soft Computing Approach to the Generalized Vehicle Routing Problem, in SOFT COMPUTING MODELS IN INDUSTRIAL AND ENVIRONMENTAL APPLICATIONS, 6TH INTERNATIONAL CONFERENCE SOCO 2011, vol. 87, pp. 281-289, 2011.
10. P.C. Pop, O. Matei and C. Sabo, A New Approach for Solving the Generalized Traveling Salesman Problem, in Proc. of HM 2010, Editors M.J. Blesa et al., *Lecture Notes in Computer Science*, Springer, Vol. 6373, pp. 62-72, 2010
11. P.C. Pop, O. Matei, C. Pop Sitar and C. Chira, A genetic algorithm for solving the generalized vehicle routing problem, in Proc. of HAIS 2010, Part II, Editors E.S. Corchado Rodriguez et al., *Lecture Notes in Artificial Intelligence*, Springer, Vol. 6077, pp. 119-126, 2010
12. Oliviu Matei, *Ontology-Based Knowledge Organization for the Radiograph Images Segmentation*, *Advances in Electrical and Computer Engineering*, 8(15), 2008

## BDI Articles

1. O. Matei, D. Contrás and P.C. Pop, Applying evolutionary computation for evolutionary ontologies, in Proc. of IEEE Congress on Evolutionary Computation (CEC-2014), pp. 1520-1527, Beijing, China, 6-11 July, 2014
2. P.C. Pop and O. Matei, Increasing the antibandwidth of sparse matrices by a genetic algorithm, in Proc. of IEA/AIE 2013, M. Ali et al. (Eds.), *Lecture Notes in Artificial Intelligence*, Springer, Vol. 7906, pp. 242-251, 2013.
3. P.C. Pop and O. Matei, A Genetic Programming Approach for Solving the Linear Ordering Problem, in Proc. of HAIS 2012, Part II, Editors E. Corchado et al., *Lecture Notes in Computer Science*, Springer, Vol. 7209, pp. 331-338, 2012
4. O. Matei, P. C. Pop, H. Vălean, A Robust Approach to Digit Recognition in Noisy Environments, *Lecture Notes in Computer Science*, Volume 7345, 2012, pp 606-615
5. P.C. Pop, O. Matei and H. Vălean, An Efficient Soft Computing Approach to the Generalized Vehicle Routing Problem, *Advances in Intelligent and Soft Computing*, Springer, Vol. 87, pp. 281-289, 2011
6. P.C. Pop, O. Matei and C. Sabo, A Memetic Algorithm for Solving the Generalized Minimum Spanning Tree Problem, *Advances in Intelligent and Soft Computing*, Springer, Vol. 96, pp. 187-194, 2011
7. O. Matei and P.C. Pop, An efficient genetic algorithm for solving the generalized traveling salesman problem, in Proc. of 6-th IEEE International Conference on Intelligent Computer Communication and Processing, pp. 87-92, 2010
8. Oliviu Matei, *Defining an Ontology for the Radiograph Images Segmentation*, 9th International Conference on Development and Application Systems, 2008
9. Oliviu Matei, *Applying Rough Sets Algorithm for Radiography Diagnosis*, 9th International Conference on Development and Application Systems, 2008
10. Oliviu Matei *Effect of noise reduction using rough set theory on the accuracy of k-NN classification of radiological reports*, *Carpathian Journal of Electrical Engineering*, 5(10), 2008
11. Oliviu Matei *Defining an Ontology for Diagnosis Based on Radiographic Images*, *Carpathian Journal of Electrical Engineering*, 5(10), 2008
12. Oliviu Matei, *O arhitectura software ierarhizata pentru robotii autonomi mobili*, *Revista Romana de Informatica si Automatica*, 17(1), 2007
13. Oliviu Matei, *Applying Evolution Strategies for Chest Radiographs Segmentation*, *Computer Science Journal of Moldova*, 14(3), 2006
14. Oliviu Matei *Evolutionary Methods Applied for Lung Fields Segmentation*, *Proceedings of ICCP 2006*
15. Oliviu Matei, *A Humanized Approach in Robot Software Architecture*, *Advances in Electrical and Computer Engineering*, 6(13), 2006
16. Ioan Alfred Letia, Oliviu Matei, *Hybrid Neural Approach in Manura Robot Localization*, *Advances in Electrical and Computer Engineering*, 5(12), 2005

## Patents

1. Oliviu Matei, SYSTEM FOR MONITORING AND REMOTELY SIGNALLING CERTAIN PARAMETERS OF THE HUMAN BODY, RO127258-A0; WO2013085406-A1
2. Oliviu Matei, System for recognizing and providing information about touristic units, comprises mobile device and server, mobile device containing data bases and consisting of GPS , video or photo camera, digital compass and display, RO128426-A0
3. Oliviu Matei, System for remotely monitoring weather conditions, weather warning and forecasting, RO128325-A0
4. Oliviu Matei, System for remote teaching and recording school situation, has server of county school inspectorate, multiple servers of school institution, e-mail server and SMS server, RO128877-A0