

## Lecturer, PhD. Furdu Iulian Marius

### 1. PhD Thesis

Optimizing Ordered Binary Decision Diagrams, Promoter: Prof. dr. mat. Octav Brudaru (Optimizarea diagramelor de decizie binare ordonate), "Gh. Asachi" Technical University, Iași, 2010.

### 2. Books & book chapters

1. Nechita, E., Crișan, C., **Furdu, I.**, Îndrumar de laborator, (in RO) C, C++, Universitatea din Bacău, 2005 (in RO).
2. Crișan, C., Nechita, E., Pătruț, B., **Furdu, I.**, Tehnologia informației, Ed. EduSoft, Bacău, ISBN 973-87655-6-0, 2005 (in RO).
3. Todoroi, D., Micușă, D., Nechita E., Crișan G.C., **Furdu I.**, Birotica, Ed. EduSoft, Bacău, ISBN 973-87714-5-5, 2006, (in RO).
4. Pătruț, B., **Furdu, I.**, Grafică 3D, animație și jocuri, EduSoft, Bacău, ISBN 973-87496-2-X, 2005, (in RO).
5. Talmaciu, M., **Furdu, I.**, Algoritmi și structuri de date, Ed. Alma Mater, Bacău, ISBN 978-973-1833-71, 2008, (in RO).
6. „Ordered Binary Decision Diagrams”: in "Modern Paradigms in Computer Science and Applied Mathematics", A Handbook for PhD Students and Researchers, (Eds. B., Patrut, G.,C., Crișan), Akademische Verlagsgemeinschaft München-AVM Imprint der Martin Meidenbauer Verlagsbuchhandlung GmbH & Co. KG, München, Germany, ISBN 978-3-86306-757-1) p.217-269, 2011, <http://www.amazon.de/Paradigms-Computer-Science-Applied-Mathematics/dp/images/3863067576>
7. **Furdu I.**, Patrut B., ICT Applications and Solutions in Healthcare: Present and Perspectives, IGI Global Publishing, Hershey, Pennsylvania, ISBN 9781466639904, p. 559-576, 2013, <http://www.igi-global.com/chapter/ict-applications-solutions-healthcare/78043>.
8. **Furdu, I.**, Pătruț B., Towards ICT Revolution in Healthcare: Present and Perspectives for Electronic Healthcare Record Systems, Advanced Intelligent Computational Technologies and Decision Support Systems, Studies in Computational Intelligence, ISBN 978-3-319-00466-2, vol. 486, p. 65-70, Editors Barna Iantovics, Roumen Kountchev, 2014, [http://link.springer.com/chapter/10.1007%2F978-3-319-00467-9\\_6](http://link.springer.com/chapter/10.1007%2F978-3-319-00467-9_6).
9. Mehdi Jazayeri, Cesare Pautasso, Iulian-Marius **Furdu**, Venera-Mihaela Cojocariu (Eds.) Informatics. Innovative Teaching Approaches. Casa Cartii de Stiinta, Cluj, 2016, ISBN 978-606-17-0978-6, 149 p; capitol The influence of Computers and Informatics on Mathematics and its teaching, co-author Carmen-Violeta Popescu, p. 43-61.

### 3. Articles/studies in extenso, published in journals from the main international scientific flow

1. **Furdu**, Iulian; Tomozei, Cosmin; Kose, Utku, Pros and Cons Gamification and Gaming in Classroom, BRAIN-BROAD RESEARCH IN ARTIFICIAL INTELLIGENCE AND NEUROSCIENCE Volume: 8 Issue: 2 Pages: 56-62, 2017, (ISI Journal)
2. Cojocariu, Venera-Mihaela; **Furdu**, Iulian Marius; Tomozei, Cosmin-Ion, Reliable distributed software platform for optimizing the convergence between the university system and the labour market, 11th International technology, education and development conference, INTED Proceedings Pages: 843-852, 2017, (ISI Proc)

3. **Furdu**, Iulian; Tomozei, Cosmin; Amancei, Cristian, Failover clusters engineering and reengineering within the research projects development process, Proceedings of the 16th international conference on informatics in economy (IE 2017): education, research & business technologies Pages: 364-369, 2017, (ISI Proc)
4. Tomozei, Cosmin; **Furdu**, Iulian; Sociu, Liviu, Research and development activities enhancement in higher education institutions through collaborative applications, Proceedings of the 16th international conference on informatics in economy (IE 2017): education, research & business technologies Pages: 58-63, 2017, (ISI Proc)
5. Topliceanu, L.; Puiu, G; **Furdu, I.**, Functional Problems and Maintenance Operations of Hydraulic Turbines, TEM JOURNAL-TECHNOLOGY EDUCATION MANAGEMENT INFORMATICS Volume: 5 Issue: 1 Pages: 32-37, 2016, [http://www.temjournal.com/content/51/05/TemJournalFebruary2016\\_32\\_37.pdf](http://www.temjournal.com/content/51/05/TemJournalFebruary2016_32_37.pdf) (ISI Journal)
6. Vercruyssen N., Tomozei C., **Furdu I.**, Varlan S., Amancei C., Collaborative Recommender System Development with Ubiquitous Computing Capability for Risk Awareness, Studies in Informatics and Control, Vol.24(1), p.91-100, 2015, ISSN 1220-1776 (ISI Journal 2013 Impact factor 0,605), [http://sic.ici.ro/?page\\_id=618](http://sic.ici.ro/?page_id=618))
7. Topliceanu, Liliana; Puiu, Petru Gabrie; **Furdu**, Iulian Marius, Renewable Energies and Rural Development in Bacau County, Romania, 26th International-Business-Information-Management-Association Conference IBIMA, Innovation management and sustainable economic competitive advantage: from regional development to global growth, Vols I - VI, 2015, p. 3250-3261, 2015, (ISI Proc)
8. Puiu, Petra Gabrie; Topliceanu, Liliana; **Furdu**, Iulian Marius, Assessing the Development Stage of Renewable Energies in Bacau County and the North Eastern Romania Region and Identification of Training Needs, 26th International-Business-Information-Management-Association Conference IBIMA, Innovation management and sustainable economic competitive advantage: from regional development to global growth, Vols I - VI, 2015, p.3262-3272, 2015, (ISI Proc)
9. Varlan, S.; **Furdu, I**; Patrut, B., Social Internet of Things within Virtual Organizations - the Key to Success? International Conference on Social Media in Academia - Research and Teaching (SMART), p. 333-336, 2015, (ISI Proc)
10. **Furdu, I**; Patrut, B.; Varlan, S., Mobile notifier tool to enhance communication within learning communities, International Conference on Social Media in Academia - Research and Teaching (SMART) p. 173-177, 2015 (ISI Proc)
11. Ardeleanu, R.; **Furdu, I**, On the role of mathematical game in obtaining school performance, International Conference on Social Media in Academia - Research and Teaching (SMART), p. 429-434 2015 (ISI Proc)
12. Vârlan S., **Furdu I.**, Ontology in knowledge management, International Business Information Management Association Conference, Viena, 27-28 June, ISBN 978-0-9860419-0-7, Proceedings of the 21st IBIMA, p. 1518-1524, 2013, (ISI Proc), <http://www.ibima.org/AT2013/papers/simn.html>
13. **Furdu I.**, Vârlan S., Is It Science Going Social Media? A Case Study of the Eastern Romanian Universities, International Conference SMART 2013 Social Media in Academia: Research and Teaching, Vol. 1, Nr.1, p.137-143, 2014, ISSN 978-88-7587-686-9 (ISI Proc), [http://www.medimond.com/proceedings/moreinfo/20130607\\_index.pdf](http://www.medimond.com/proceedings/moreinfo/20130607_index.pdf)
14. Vârlan S., **Furdu I.**, International Conference SMART 2013 Social Media in Academia: Research and Teaching, Semantic Web in Social Media, Vol. 1, Nr.1, p. 85-93, 2014, ISSN 978-88-7587-686-9 (ISI Proc), [http://www.medimond.com/proceedings/moreinfo/20130607\\_index.pdf](http://www.medimond.com/proceedings/moreinfo/20130607_index.pdf)

15. **Furdu I.**, Tomozei C., Pandele I., Improving Management of Risks and Natural Disasters by Regional GIS Distributed Application, Environmental Engineering and Management Journal, ISSN: 1582-9596, vol.12, nr.1, p.11-16, 2013, (ISI Journal 2017 Impact factor 1,334), <http://omicron.ch.tuiasi.ro/EEMJ/issues/vol12/vol12no1.htm>
16. Brudaru, Octav; Rotaru, Cristian; Furdu, Iulian, Static segregative genetic algorithm for optimizing variable ordering of ROBDDs, 13th International symposium on symbolic and numeric algorithms for scientific computing (Synasc 2011) Book Series: International Symposium on Symbolic and Numeric Algorithms for Scientific Computing, Pages: 222-229, 2012, (ISI Proc)
17. Brudaru, O., Ebendt, R., **Furdu, I.**, Optimizing Variable Ordering of BDDs with Double Hybridized Embryonic Genetic Algorithm, 2010 12th International Symposium on Symbolic and Numeric Algorithms for Scientific Computing, Timișoara, September 23-26, pag.167-173, ISBN 978-0-7695-4324-6, (ISI Proc) <http://www.computer.org/portal/web/csdl/doi/10.1109/SYNASC.2010.33>
18. Pătruț, B., **Furdu, I.**, Pătruț, M., Bivalent Verbs and Their Pragmatic Particularities, 13th International Conference on Applications of Natural Language to Information Systems, London, UK, 24-27.05.2008, Lecture Notes in Computer Science, Springer Berlin, ISSN 0302-9743 (Print) 1611-3349 (Online), Vol. 5039/2008, p.327-328, 2008 (ISI Proc.), [http://link.springer.com/chapter/10.1007/978-3-540-69858-6\\_33](http://link.springer.com/chapter/10.1007/978-3-540-69858-6_33)

#### **4. Publications in extenso in proceedings of major international specialized conferences**

19. Cosmin Tomozei, Iulian Furdu, Simona-Elena Vârlan, GIS SDKs Dynamics Echoed by Social Requirements Transformations, Proceedings of the 16th edition of the BELgian-Netherlands software eVOLution symposium (BENEVOL 2017), p.22-25, 2017, <http://ceur-ws.org/Vol-2047/>
20. **Furdu I.**, Vârlan S., L'internet des objets et son impact dans le Cloud Computing: présent et perspectives, Proceedings of Francophone Multidisciplinary Colloquium on Materials, Environment and Electronics, ISSN L 2343-9092, 2015.
21. Vârlan S., **Furdu I.**, Using Internet of Things to Improve Patient Awareness in Drug Administration, Proceedings of Francophone Multidisciplinary Colloquium on Materials, Environment and Electronics, ISSN L 2343-9092, 2015.
22. **Furdu, I.**, Reduced OBDDs Optimization Techniques Using Embryonic Genetic Algorithms, Proceedings of the 9th Intl Conf. on Industrial Power Engineering, Vol. I Nr.1, p.93-99, ISSN 2069-9905, 2014, <http://ciei.ub.ro/2014/2014-2/proceedings-2014/reduced-obdds-optimization-techniques-using-embryonic-genetic-algorithms>
23. **Furdu I.**, Using Lower Bounds in BDD Optimization, Proceedings of Francophone Multidisciplinary Colloquium on Materials, Environment and Electronics, ISSN L 2343-9092, 2013, <http://plumee2013.ub.ro/using-lower-bounds-in-bdd-optimization/>
24. Puiu G., Popa S., **Furdu I.**, The Study of the Experimental Adjustment Criteria for the Regulators Functioning, Proceedings of francophone multidisciplinary colloquium on materials, environment and electronics, ISSN L 2343-9092, 2013, <http://plumee2013.ub.ro/2013-2/scientific-studies-5/>
25. Brudaru O., Rotaru C., **Furdu I.**, Static Segregative Genetic Algorithm for Optimizing Variable Ordering of ROBDDs, 2011 13th International Symposium on Symbolic and Numeric Algorithms for Scientific Computing, Timisoara, September 26-29, ISBN: 978-0-7695-4630-8, p.222-229, 2011, <http://www.computer.org/csdl/proceedings/synasc/2011/4630/00/4630a222-abs.html>,

26. **Furdu, I.**, Brudaru, O., New hybrid genetic algorithm with adaptive operators and variability target for optimizing variable order in OBDD, Scientific Studies and Research. Series Mathematics and Informatics. Proceedings of "Gheorghe Vranceanu" International Conference on Mathematics and Informatics ICMI 2, vol. 19/2009 nr. 2, 2009, ISSN 2067 – 3566.
27. **Furdu, I.**, Pătruț, B., Genetic Algorithm in Ordered Binary Decision Optimization, Proceedings of the International Conference on Mathematics and Informatics ICMI45, Studii și Cercetări Științifice. Seria Matematică, Supplement, nr. 16, p.437-444, 2006, ISSN 1224-2519, <http://citeseerx.ist.psu.edu/viewdoc/summary?doi=10.1.1.127.3944>

### 5. Other works and scientific contributions

28. Puiu P.G., **Furdu I.**, Asynchronous Motor Speed Control by Pro View Open Source Software within a SCADA Interface, Scientific Studies and Research. Series Mathematics and Informatics, ISSN 2067-3566, vol. 24, nr.1, p. 105-112, 2014, <http://pubs.ub.ro/?pg=revues&rev=ssrsmi&num=20140124&vol=24&aid=4067>
29. **Furdu I.**, Puiu G., New Aspects in Optimization of BDDs: Mixed Techniques Based on Populations of Solutions and Lower Bound, Scientific Studies and Research. Series Mathematics and Informatics, ISSN 2067-3566, vol. 23, nr.1, p. 29-38, 2013, <http://pubs.ub.ro/?pg=revues&rev=ssrsmi&num=201323&vol=23&aid=3821>,
30. Tomozei C., Vârlan S., **Furdu I.**, A Semantic Service Composition Model for Health GIS Applications Development, Scientific Studies and Research. Series Mathematics and Informatics, ISSN 2067-3566, vol. 23, nr.1, p. 195-202, 2013, <http://pubs.ub.ro/?pg=revues&rev=ssrsmi&num=201323&vol=23&aid=3839>,
31. Puiu G., **Furdu I.**, Reliable Open Source System for Automatic Release of Reserves Using SCADA Interface, Scientific Studies and Research. Series Mathematics and Informatics, ISSN 2067-3566, vol. 23, nr.1, p.161-168, 2013, <http://pubs.ub.ro/?pg=revues&rev=ssrsmi&num=201323&vol=23&aid=3835>,
32. **Furdu I.**, Ardeleanu R., Rolul jocului didactic matematic in obtinerea performantei scolare, Conferinta nationala de didactica Alba Iulia 2013, 5-7 august 2013, Atelierul 4- Matematica.
33. Brudaru, O., **Furdu, I.**, Monogrid Cellular Genetic Algorithm for OBDD's Optimization, Bulletin of the Polytechnic Institute of Iași. Automatic Control and Computer Science, p. 29-43, Bulletin of the Polytechnic Institute of Iassy, Tom. LVII (LXI), Fasc. 2, 2011, <http://www.cm.tuiasi.ro/docs/mate%202011%20%20eng.pdf>
34. Brudaru, O., **Furdu, I.**, Ebendt, R., Embryonic Genetic Algorithm with Random Generational Growing Strategy for Optimizing Variable Ordering of BDDs, Scientific Studies and Research. Series Mathematics and Informatics, 2010, vol. 20, nr. 1, ISSN 2067-3566, <http://pubs.ub.ro/?pg=revues&rev=ssrsmi&num=201001&vol=20>
35. Pătruț, B., **Furdu, I.**, A System for Learning Financial Accounting Bases, BRAIN. Broad Research in Artificial Intelligence and Neuroscience, Vol. 1, p.61- 64, 2010, Issue 1, ISSN 2067-3957, <http://www.edusoft.ro/brain11/20-73-1-PB.pdf>
36. **Furdu, I.**, An Analisis of Hyperheuristics for OBDD's Optimization, Proc. of the UK Computational Intelligence Workshop, London, UK, 2007.
37. **Furdu, I.**, An Analysis of Heuristics for OBDD's Optimization, VIII ETAI Conference, Ohrid, Macedonia, 11-5, 2007, 978-998-9217-53-X.
38. **Furdu, I.**, Ordered Binary Decision Diagrams: emerging heuristics, The 9th International Symposium on Automatic Control and Computer Science, Iași, 2007, ISSN 1843- 665- X.
39. **Furdu, I.**, VLSI implementation of binary decision diagrams: optimization techniques, Workshop on Scientific and Educational Grid Application, Iași, 2007, ISSN 1843- 665- X.

40. **Furdu, I.**, Socaciu, T., Genetic Algorithm for Variable Ordering of OBDD's, National Conference on Mathematics and Informatics, CNMI45, Bacău, Studii și Cercetări Științifice. Seria Matematică, nr. 17 Supplement, 67-78, 2007, ISSN 1224-2519.
41. Todoroi, D., Todoroi, Z., Nechita, E., Crișan, G. C., Chicu, O., **Furdu, I.**, Computer Aided Education System SuperTest. Present and Prospective, Informatica Economică, București, Vol. 11, nr. 4, 2007, p. 22-25, ISSN 1582-7941, <http://revistaie.ase.ro/content/42/todoroi.pdf>
42. Pătruț, B., **Furdu, I.**, The transfer of articles references emergencies between the nodes of a hyper-enciclopedia, Studii și Cercetări Științifice, seria Matematica, nr.17, Supplement, p.163-172, 2007, ISSN 1224-2519,
43. **Furdu, I.**, A supra optimizarii diagramelor de decizie ordonate, Proc. of Int'l Symposium of young researchers, vol. X, p. 72-76, Chișinău, 2005.
44. Pătruț, B., **Furdu, I.**, The Bivalent Verbs and Cognitive Pragmatics Problems, Studii și cercetări științifice, seria: Matematica, Studii și Cercetări Științifice, seria Matematica, nr. 14, p.107-116, 2004, Bacău, ISSN 1224-2519.
45. Masa rotundă cu tema "Fluxul informațional într-un spital de urgență" comunicarea cu tema „TIC și activitatea medicală”, Spitalul Municipal Moinești, Infomed Moinești, anul V, nr.19, p.4, august 2013, <http://www.spitalmoinesti.ro/files/infomed/19-infomed-august2013.pdf>

## 6. Research & development projects

1. Academic grid for complex applications – 74 CEEEX-II 03/31.07.2006, Competition-based 3-years contract with Ministry of Education, Romania, budget: 430000 EUR (1500000 ron), Executive Unit for Financing Higher Education, Research and Development and Innovation, Ministry of National Education, Romania, 2006-2008 (member).
2. Research contract nr. 1317/2006, between University of Bacău and S.C. AEROSTAR S.A., Testing mathematical libraries used by S.C. Aerostar, (member) - Testarea bibliotecilor matematice utilizate in S.C. Aerostar.
3. POSDRU Nr. 55585 – Developing academic quality management at the system level, based on the design and implementation of a system for managing the experience and of accessing the information in the context of promoting innovative university, (project assistant). Dezvoltarea managementului calității academice la nivel de sistem, bazat pe proiectarea și implementarea unui sistem informatic pentru gestionarea experienței și accesarea informației în contextul promovării universității inovative, <http://im.upg-ploiesti.ro/moodle/login/index.php>.
4. Bacău and Lugano – Teaching Informatics for a Sustainable Society BLISS, Project co-financed by a grant from Switzerland through the Swiss Contribution to the enlarged European Union, 2013 – 2016, (member), [bliss.ub.ro](http://bliss.ub.ro).
5. UNESCO – UniTwin Complex Systems Digital Campus.
6. IN2RURAL, Innovative practices in renewable energies to improve rural employability (Practici inovative în domeniul energiilor regenerabile pentru creșterea angajării în mediul rural), program Erasmus+, Key Action 2, coordinated by University Jaume I, Spain, (member), [in2rural.ub.ro](http://in2rural.ub.ro).
7. Dezvoltare profesională și angajabilitate - convergența universității cu piața muncii (DeProfAn), proiect CNFIS-FDI-2016-0101, obținut prin competiție națională (expert IT), <http://www.portal-dcp.ub.ro>.
8. Cross-platform computer-aided speech and language therapy with interactive applications in romanian (Tehnologii informatice multiplatformă cu aplicații interactive in limba română pentru terapie logopedică), PNII-P2-2.1-PTE-2016-0068, TIMLOGORO, (IT expert).

9. Bilateral cooperation project with Wallone – Belgium, Studiu asupra domeniului Evoluția Software, cu studii de caz în dezvoltarea de sisteme de recomandare bazate pe semantică și GIS, EVALSYS, PNCDI III- P3, 115 BM/2017, (member).

10. Efficient communication and educational counseling for integration in the labour market  
Comunicare eficientă și consiliere educațională în vederea integrării pe piața muncii, CNFIS-FDI-2018-0223, CECIM, (IT expert).

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