

## LIST OF PAPERS

### I. PHD THESIS

1. Decomposition Problems in Graph Theory, with Applications in Combinatorial Optimization, Faculty of Informatics, University „Alexandru Ioan Cuza” Iași, 2002

### II. BOOKS (chapters of books) AND DIDACTIC MATERIAL (selected)

0. Mihai Talmaciu, CERCETĂRI OPERAȚIONALE, ALMA MATER, Bacău, 2021, ISBN: 978-606-527-667-3.

0c. Mihai Talmaciu, Algoritmi în grafuri, clase particulare de grafuri, optimizare combinatorie, ALMA MATER, Bacău, 2021, ISBN: 978-606-527-666-6.

1. Mihai Talmaciu, Probleme de optimizare combinatorială în clase particulare de grafuri și aplicații, ALMA MATER, Bacău, 2018, ISBN: 978-606-527-592-8.

2. Talmaciu, M. - A recognition algorithm and some optimization problems on weakly quasi-threshold graphs, Advanced Intelligent Computational Technologies and Decision Support, Systems Studies in Computational Intelligence, Publisher: Springer International Publishing, Editors: Roumen Kountchev, Barna Iantovics Volume 486, Series ISSN: 1860-949X, 2014, pp 211-217.

3. Mihai Talmaciu, Elena Nechita, and Barna Iantovics, On Confidentially Connected-Free Graphs, Book Title: Advances in Intelligent Analysis of Medical Data and Decision Support Systems, DOI: 10.1007/978-3-319-00029-9\_16, Print ISBN: 978-3-319-00028-2, Online ISBN: 978-3-319-00029-9, Series Title: Studies in Computational Intelligence, Series Volume: 473, Series ISSN: 1860-949X, Publisher: Springer International Publishing, Editors: Roumen Kountchev, Barna Iantovics, 473, 2013, pp 179-187.

4. Mihai Talmaciu and Elena Nechita, Optimization problems in diamond-free graphs, Advanced Computational Technologies, Editors: Călin Enăchescu, Florin Gheorghe Filip, Barna Iantovics, Romanian Academy Publishing House, 185-192, 2012, Bucharest, ISBN 978-973-27-2256-5.

5. Mihai Talmaciu, Alina-Mihaela Patriciu – Numerical Calculus, Publishing House PIM, Iași, 2008, ISBN: 978-606-520-013-5.

6. Mihai Talmaciu – Graphs' Algorithmic, Publishing House ALMA MATER, Bacău, 2008, ISBN: 978-973-1833-76-7.

7. Elena Nechita, Gloria Cerasela Crișan, Mihai Talmaciu – Parallel and Distributed Algorithms, Publishing House ALMA MATER, Bacău, 2007, ISBN: 978-973-8392-81-6.

8. Mihai Talmaciu, Iulian Marius Furdu – Algorithms and Data Structures, Publishing House ALMA MATER, Bacău, 2008, ISBN: 978-973-1833-71-2.

9. Mihai Talmaciu –Numerical Methods, Publishing House Tehnica-Info, Chişinău, 2005, ISBN: 9975-63-270-X.
10. Mihai Talmaciu, Alina-Mihaela Patriciu, Recipiente numerice in Pascal si C, EduSoft, 2005, 973-87655-2-8.
11. Mihai Talmaciu, Metode numerice, Colecţia Ştiinţe Inginereşti, Alma Mater, 2007, ISBN 978-973-8392-98-4.
12. Mihai Talmaciu, Alina-Mihaela Patriciu, Analiză numerică cu exemple în limbajele C şi Pascal, EduSoft, 2005, 973-87655-2-8.

### Electronic support

1. Mihai Talmaciu, Introduction in particular classes of graphs – Combinatorial optimization, Lecture notes, Vasile Alecsandri University of Bacău, 2013
2. Mihai Talmaciu, Anamaria Agapin –Operational Research, University of Bacău, 2008
3. Mihai Talmaciu – Special Chapters on Graphs, University of Bacău, 2008
4. Mihai Talmaciu – The Architecture of Calculus Systems-I.F.R, University of Bacău, 2006
5. Mihai Talmaciu – Informathics for Accounting and Audit - Master, University of Bacău, 2006
6. Mihai Talmaciu – New Information and Communication Technologies - Master, University of Bacău, 2006

### III. PAPERS

#### Papers Published in Thomson ISI: Web of Science; ISI Proceedings

- 0b. Mihai Talmaciu, On hyper-chordal graphs, CARPATHIAN J. MATH. 37 (2021), No. 1, 119 – 126, DOI: [10.37193/CJM.2021.01.12](https://doi.org/10.37193/CJM.2021.01.12), Online version at <https://www.carpathian.cunbm.utcluj.ro/project/vol-37-2021-no-1-published-on-05-02-2021/>, ISSN 1584-2851, **Impact Factor:** 1.438, (zona 1 (rosie), top 55, 2020, see: <https://uefiscdi.gov.ro/resource-821873-clasament2020.if.pdf?&wtok=&wtkps=XU5JDsIwDPxLzlDibgT3wgsQEi+IsqBAaUNTaFXUv+PmwnLy2LN4Jb4CpghC06zKmCRIptg53tVF6Hs5GT9fcov/trzrBm99UooPVqZr+F59a1p1rb09zosXkDmlklpALAgCtv3rJJEvSJ/+15I7FAA31XzTIctMq19czxtsi1PRSp4IWIIST+XFeQgMp5ywePPIroOfx7g1OFHSFUGE9sRurX6UZuk7c7Jw1gXIHbJ05khkV3vVFuzan4D&wchk=6422b3e0c4155f2ee61c5c9da344b19eb1c82b42> ).
- 0c. Mihai Talmaciu, Lumini,ta Dumitriu, Ioan S,us,nea, Victor Lepin and László Barna Iantovics, Recognition and Optimization Algorithms for P<sub>5</sub>-Free Graphs, *Symmetry* **2020**, 12(2), 304; <https://doi.org/10.3390/sym12020304>, (ISSN 2073-8994, **Impact Factor:** 2.143 (2018), (2018, banda galbena, see:<https://uefiscdi.gov.ro/resource-822843?&wtok=&wtkps=XY5RDoMgEETvwnelLGggeIemSU9gBM2mKioFU5vevchP037tZnbezDa60i+vhSYeDam9LkGTLVju0bt+VWOUz/0+Q+9CDF0BS7PY3RUQJxRRHkDy4zFTBABkRWpizDxdb2chGVdcsUodB568X+UEJSjBOFMsU1WmLn8MsJT7Y+TpQZsb0zY6EwZL3drTYDv0rUEa0W60WR/YuoHU7w8=&wchk=e97e02da2ac029e23ea9695345cd93df019b102c>).
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2. Mihai Talmaciu, Elena Nechita, Barna Iantovics, Recognition and Combinatorial Optimization Algorithms for Bipartite Chain Graphs, Computing and Informatics, ISSN 1335-9150, Vol 32, No 2 , pp. 313-329, 2013.

3. Mihai Talmaciu, Determination of the Optimally Efficient Sets in Special Classes of Graphs, Studies in Informatics and Control, ISSN 1220-1766, vol. 21 (4), pp. 447-452, 2012, (2020, banda galbena,

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6. Mihai Talmaciu, *Investigations on the bisection problem*, presented at "Gheorghe Vrănceanu" National Conference on Mathematics and Informatics, Bacău, România, 31th of May, 2013.

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- 13) スマート棒を用いた棒体操支援システムの検討 Proposal of a Support System for Short Stick Exercise Using Smart Stick 大井一輝 † Kazuki Oi 中村優吾 † Yugo Nakamura 松田裕貴 † Yuki Matsuda 藤本まなと † Manato Fujimoto 安本慶一 † Keiichi Yasumoto.
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- 15) Inga Hunter, Phoebe Elers, Caroline Lockhart, Hans Guesgen, Dick Whiddett, Amardeep Singh, Telehealth at Home: Co-Designing a Smart Home Telehealth System, Series: Studies in Health Technology and Informatics, Ebook: Volume 277: Telehealth Innovations in Remote Healthcare Services Delivery, IOS Press, DOI 10.3233/SHTI210027, Pages: 47 – 56, 2021.
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#### IV. SCIENTIFIC RESEARCH CONTRACTS

##### Member or leader in scientific research contracts

1. Discrete structures, models and algorithms for solving applied problems - Bilateral Cooperation between the Romanian Academy ("Vasile Alecsandri" University of Bacau is partner) and the National Academy of Sciences of Belarus and Belarusian Republican Foundation for Fundamental Research, ("AR-FRBCF", 2018-2019) - leader of the Romanian.
2. Structural properties and algorithmic complexity of graph theory problems - Bilateral Cooperation between the Romanian Academy ("Vasile Alecsandri" University of Bacau is partner) and the National Academy of Sciences of Belarus and Belarusian Republican Foundation for Fundamental Research, ("AR-FRBCF", 2016-2017) - leader of the Romanian.
3. Decomposition of graphs and solving discrete optimization problems - Bilateral Cooperation between the Romanian Academy ("Vasile Alecsandri" University of Bacau is partner) and the National Academy of Sciences of Belarus and Belarusian Republican Foundation for Fundamental Research, ("AR-FRBCF", 2014-2015) - leader of the Romanian.
4. Classes of graphs, complexity of problems and algorithms - Bilateral Cooperation between the Romanian Academy ("Vasile Alecsandri" University of Bacau is partner) and the National Academy



of Sciences of Belarus and Belarusian Republican Foundation for Fundamental Research, ("AR-FRBCF", 2012-2013) - leader of the Romanian.

5. Hybrid Complex Medical Systems, ComplexMediSys - Program: Capacities /Type III – Bilateral Cooperation Romania – Slovakia, Partner Institution: The Slovak Academy of Science and University Petru Maior, Financement Contract no 476/07.03.2011, – member

6. POSDRU /86/1.2/5/63545 of 22.09.2010, TEORO – Occupational Therapy and Applied Inginery in Equipment for Rehabilitation and Assistive Technology – European University specializations, newly introduced in Romania, for a society based on knowledge and equality of chances. Project Coordinator – University “Vasile Alecsandti” of Bacau, 5 partners, one from Holland (European Project), Financement 14530252,9 lei – member.

7. Project Type: Electronic Health Records for the Next Generation Medical Decision Support in Romanian and Bulgarian National Healthcare Systems, The Acronim of the Proposal: NextGenElectroMedSupport, Program: Capacities /Type III, Bilateral Collaboration in Romanian and Bulgarian National Healthcare Systems, Project Manager: Prof. Roumen Kountchev PhD Technical University from Sofia , Bulgaria, Romania – Manager: Barna Iantovics, Coordinating Institution: University Petru Maior, Partner Institution 1: National Institute of Chemistry and Petrochemistry, ICECHIM, Bucharest, Partner Institution 2: University of Medicine and Pharmacy of Targu Mures, Partner Institution 3: University Lucian Blaga of Sibiu, Co: Technical University of Sofia, Financement Contract no 461CB/ 23.10.2010, – member.

8. CEEEX 76-2 / 2006 Iași, The Institute of Theoretical Informatics, the Subsidiary of The Romanian Academy –Computational Methods of High Performance in the Shaping and Optimization of Nanomagnetic Materials, 2006 -2009– member.

9. CEEEX 109/2006 University of Bacău –Bioenergetic Valorification of the Production Potential of Hyppophae rhamnoides ssp. Carpathica through Complex Characterization of Species, the Source of Ecological Harvest for a Durable Agriculture, 2006-2009– member.

10. “The Implementation of Statistical Checking of the Parts of the Civilian Aviation. The Comparative Analysis of Results Obtained with the Specifications of the Customers”, University of Bacău, beneficiary: SC AEROSTAR SA Bacău, 2008– member.

11. “The Testing of Informatical Libraries”, Research Contract no. 2826 /2008, University of Bacău beneficiary: S.C. DEDEMAN S.R.L. Bacău – manager.

12. Technology of High Performance to Increase the Durability of Parts. The Program 4-Partnership in Proritary Areas, 71-94/2007, University of Bacău.

13. Modernization and Consolidation of the Group of Laboratories Research Infrastructure on Cold Plastic Deformation of Metallically Tables (Boards). The Program Capacities. 115 /1/2007, University of Bacău.

14. Grant type A, no. 1231, A Study on the Increase of the Functional Level of the Autistic Child through physical exercise to stimulate sensorial-motricity, 2007-2008, Financement 1930000 RON – member.

15. "Thechico-Economical Study on the Opportunity of Diversification of the Production of PVC", University of Bacău, beneficiary: S.C. SUNCONFORT SRL Bacău.

16. CEEEX M1-C2 3289/2006 –Complex Research-Development Project.Integrated Technology of Fabrication of the Parts Resulted from the Thin Methalical Tables (TIF / PTMS), University of Bacău.

17. Grant 6407/2013, Thematic Fund Partnership and Expert Fund Partnership Block Grant: BLISS-Bacau and Lugano- “Teaching Informatics for a Sustainable Society”, ID :PF10, 37800 CHF – member.

### Scientific Research Proposals

1. Discrete structures, models and algorithms for solving applied problems - Bilateral Cooperation between the Romanian Academy ("Vasile Alecsandri" University of Bacau is partner) and the National Academy of Sciences of Belarus and Belarusian Republican Foundation for Fundamental Research - leader of the Romanian.

2. PNCDI III, Cooperarebilaterală Romania - Moldova - The discrete mathematical structures in elaboration of methods and algorithms for solving socio-economic applied problems – director de proiect.

3. Structural properties and algorithmic complexity of graph theory problems - Bilateral Cooperation between the Romanian Academy ("Vasile Alecsandri" University of Bacau is partner) and the National Academy of Sciences of Belarus and Belarusian Republican Foundation for Fundamental Research - leader of the Romanian.

4. Decomposition of graphs and solving discrete optimization problems- Bilateral Cooperation between the Romanian Academy ("Vasile Alecsandri" University of Bacau is partner) and the National Academy of Sciences of Belarus and Belarusian Republican Foundation for Fundamental Research - leader of the Romanian.

5. Classes of graphs, complexity of problems and algorithms - Bilateral Cooperation between the Romanian Academy ("Vasile Alecsandri" University of Bacau is partner) and the National Academy of Sciences of Belarus and Belarusian Republican Foundation for Fundamental Research - leader of the Romanian.

6. Geometric Graphs: Analysis, Algorithms and Applications (EuroG2A3) EuroGIGA (Graphs in Geometry and Algorithms) EUROCORES Programme Project number: 10-EuroGIGA-OP-010 Project Leader: Mihai TALMACIU (RO).

7.A 'User' Use Case called SMART SOCIETY, to enable the societal dimension of the European Future Internet Initiative, PROPOSAL Number 284656 (SMART SOCIETY), Coordinator (Project): Prof. Yair Sharon, Director ICTAF, Tel Aviv University, Participants: Public Computing BV PCOMP Hilversum, Netherlands; Interdisciplinary Centre for Technology Analysis & Forecasting ICTAF Tel Aviv Israel; Reading University IMSS Reading, United Kingdom; Piedmont Economic & Social Research Institute IRES Piemonte Turin, Italy; New University of Lisbon (UNINOVA) UNINOVA Lisbon, Portugal; Vienna University of Technology TU WIEN Vienna; Austria, Muenster University WWU Muenster, Germany; National Technical University of Athens NTUA Athens, Greece; Istituto di Analisi dei Sistemi ed Informatica (IASI) CNR Rome, Italy; Sheffield University USFD Sheffield, United Kingdom; Department of Sociology and Social Research TRNT Trento, Italy; Leicester University ULEIC Leicester, United Kingdom; Petru Maior University UPM Tg.Mures, Romania; Lavinia Interactive LVN Madrid Spain - member

8. Bio-Inspired Evolution of the Complex Systems. Bio-Inspired Evolution of the Complex Systems – Grant - James S. McDonnell Foundation, USA, Marty 2009 – member.

9. Combinatorial and Heuristic Methods in Biology – IDEI – Exploratorial Research Project 2008 – manager.

10. Simulation of the behavior of social animals and using the identified methods for solving some NP-complete optimization problems – IDEI – Exploratorial Research project 2008 – member.

11. Algorithms and software products in combinatorial optimization. Applications – CEEX 2006 – responsible partner.

12. Research on the implementation of an informatical system in the management of risks specific to Romania, on an administrative-territorial level – CEEX 2006 – member.

#### Grants gained before 2005

1. Perfect Graphs and Connected Problems. Structure Problems in the Theory of Perfect, Partitionable, Non-Decomposable Graphs' Theory and Classes of Associated Hipergraphs. Applications of the theory of graphs in algebraic problems, language theory and informatics. Algorithmical problems in the theory of perfect graphs. Structure problems in the Theory of Perfect, Partitionable, Non-Decomposable Graphs' Theory and Classes of Associated Hipergraphs. Scientific Research Contract no. 7007/1997, between the Ministry of Education – DGISCSU and the University "Dunărea de Jos" from Galați. Theme no. 29/280- unique step.

2. The Theory of Graphs and of Other Combinatorial Structures: Structure Problems in the Perfect, Partitionable, Non-Decomposable Graphs' Theory and Classes of Associated Hipergraphs. Scientific Research Contract with the Ministry of Education. Programme Code 12, Domain Code 12,99 (graphs and combinatorial structures). Steps- 4 :1993, 1994, 1995, 1996.

3. Perfect Graphs and Connected Problems. Study of the Structure of a Class of Perfect Graphs: Graphs Critically Imperfect. Algebraical study of some graph operations. Problems of decomposition. Algorithmical problems in the theory of perfect graphs. Research Contract no.4007/1995, between the Ministry of Education – DGISCSU and the University “Dunărea de Jos” from Galați.
4. The Theory of Graphs and Other Combinatorial Structures. Results on Perfect Graphs’ Structure and some operations with graphs. Research Contract no. 3007/1994, between the Ministry of Education – DGISCSU and the University “Dunărea de Jos” from Galați, theme B 24, faze 2/1994.
5. The Theory of Graphs and Other Combinatorial Structures. Research Contract no. 5007/1993 between the Ministry of Education – DGISCSU and the University “Dunărea de Jos” from Galați, position 25, Documentation.

<b>Member of the editorial staff of the journals:</b>
Studii și cercetări științifice, seria Matematică
Scientific Studies and Research. Series Mathematics and Informatics
<b>Member of the scientific committees of the journals:</b>
Studii și cercetări științifice, seria Matematică, a Catedrei de Matematică-Informatică
Scientific Studies and Research. Series Mathematics and Informatics
International Journal of Computers, Communications & Control
<b>Member in the scientific committees of some events (congresses, conferences, colloquiums, symposiums)</b>
International Conference on Mathematics and Informatics ICMI45, Bacău, September 18-20 2006
Conferința Națională de Matematică și Informatică, Bacău, noiembrie 2007
Al XII-lea Congres al S.S.M.R. 2008
International Conference on Bio-Inspired Computational Methods Used for Difficult Problems Solving - Development of Intelligent and Complex Systems, Date: NOV 05-07, 2008 Petru Maior University, Targu Mures Romania & Romanian Acad Bucharest ROMANIA, BICS 2008
International Conference on Mathematics and Informatics ICMI 2 2009, second edition, Bacău, September 8-10 2009
Gheorghe Vrânceanu National Conference on Mathematics and Informatics with international participation NCMi 2011 Bacău, 2011
Gheorghe Vrânceanu National Conference on Mathematics and Informatics with international participation, May 30-31 2013, Bacău
The Romanian Society of Applied and Industrial Mathematics (ROMAI), Vasile Alecsandri University of Bacău (Faculty of Science), "Gh. Mihoc - C. Iacob" Institute of Mathematical Statistics and Applied Mathematics of the Romanian Academy (Bucharest), and the Academy of Romanian Scientists (Bucharest) au organizat of the 22nd Conference on Applied and Industrial Mathematics (CAIM) în 2014).
"Gheorghe Vrânceanu" Conference on Mathematics and Informatics, ediția a IX-a, 6 decembrie 2016
"Gheorghe Vrânceanu" National Conference on Mathematics and Informatics, 10 <sup>th</sup> edition, December 8 <sup>th</sup> 2017, Bacău, Romania, Dedicated to Professor Valeriu Popa at his 80 <sup>th</sup> anniversary
<b>National awards in the field</b> (granted by CNCSIS / CNCS / UEFISCDI for publishing ISI articles):
PN-III-P1-1.1-PRECSI-2020-47667 Recognition and Optimization Algorithms for $P_5$ -Free Graphs, <i>Symmetry</i> <b>2020</b> , 12(2), 2020 (a se vedea: <a href="https://uefiscdi.gov.ro/resource-824264-precisi-lista-1-partial-3-rezultate-eligibilitate-articole-">https://uefiscdi.gov.ro/resource-824264-precisi-lista-1-partial-3-rezultate-eligibilitate-articole-</a>

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PN-III-P1-1.1-PRECISI-201935469 Unobtrusive Monitoring the Daily Activity Routine of Elderly People Living Alone, with Low-Cost Binary Sensors, *Sensors* 2019, 19(10), 2019

463 466 A Recognition Algorithm for a Class of Partitionable Graphs that Satisfies the Normal Graph Conjecture Science Citation Index Expanded Studies In Informatics And Control, Vol. 18, Issue 4, PG. 349-354, 2009 Automation And Control Systems 1220-1766 3 3

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