



AGAPIE Alexandru



CURRENT POSITION: Professor

AFFILIATION/DEPARTMENT: Department of Applied Mathematics

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PROFILE

Dr. Alexandru Agapie has PhD in Probability Theory, has worked with the National Institute for Microtechnology, Bucharest, the Fraunhofer Institute for Autonomous Intelligent Systems, Sankt Augustin, Germany and he is currently Professor in Mathematics with the Bucharest University of Economic Studies. His fields of interest are stochastic processes applied to evolutionary algorithms and to socio-economic models. He is currently (2024, 2025) Associate Editor of IEEE Transactions on Evolutionary Computation, USA.



EDUCATION

Habilitation -

Post-Doc -

PhD (Doctorate) **2001**, PhD, Mathematics, Bucharest University, Romania

Master -

Bachelor **1995**, PhD, Mathematics, Bucharest University, Romania

ACADEMIC MANAGEMENT

2016-2020, Vice-dean, CSIE, Bucharest University of Economic Studies, Romania

2008-2012, Vice-dean, FABIZ, Bucharest University of Economic Studies, Romania

ACADEMIC EXPERIENCE

2014-present, Professor, Department of Applied Mathematics, Bucharest University of Economic Studies, Romania, Applied Mathematics, Probability and Statistics, Quantitative Methods, Stochastic Processes

RESEARCH PROFILE

Probability Theory, Stochastic Processes, Evolutionary Algorithms, Cellular Automata, Mathematical Modelling

LIST OF PUBLICATIONS

List of articles published in peer reviewed journals:

1. THEORY OF (1+1) ES ON SPHERE REVISITED, A. Agapie, O. Solomon, L. Badin, IEEE Transactions on Evolutionary Computation IF 16.497, 27(4), pp. 938-948, 2023.
2. EVOLUTION STRATEGIES UNDER THE 1/5 SUCCESS RULE, A. Agapie, Mathematics IF 2.25, 11(1), 201, doi.org/10.3390/math11010201, 2023.
3. THEORY OF (1+1) ES ON THE RIDGE, A. Agapie, O. Solomon, M. Giuclea, IEEE Transactions on Evolutionary Computation IF 16.497, 26(3), pp. 501-511, 2022.
4. SPHERICAL DISTRIBUTIONS USED IN EVOLUTIONARY ALGORITHMS, A. Agapie, Mathematics IF 2.25, 9(23), 3098, doi.org/10.3390/math9233098, 2021.
5. ANALYSIS OF CORPORATE ENTREPRENEURSHIP IN PUBLIC R&D INSTITUTIONS: A. Agapie, C. Vizitiu, S.E. Cristache, M. Nastase, L. Craciun, A.G. Molanescu, Sustainability IF 2.075, 10(7), 2297, 2018.



6. ADAPTING CORPORATE ENTREPRENEURSHIP ASSESSMENT INSTRUMENT FOR ROMANIA: C. Vizitiu, A. Agapie, R. Paiusan, S. Hadad, M. Nastase, *South African Journal of Business Management*, IF 0.28, 49(1), 2018.
7. PREDICTABILITY IN CELLULAR AUTOMATA: A. Agapie, A. Andreica, C. Chira, M. Giuclea, *PLOS ONE* IF 3.534, 9(10), e108177, 2014.
8. PROBABILISTIC CELLULAR AUTOMATA: A. Agapie, A. Andreica, M. Giuclea, *Journal of Computational Biology*, IF 1.670, *Mary Ann Liebert*, 21(9), pp. 699–708, 2014.
9. CONVERGENCE OF EVOLUTIONARY ALGORITHMS ON THE N-DIMENSIONAL CONTINUOUS SPACE, A. Agapie, M. Agapie, G. Rudolph, G. Zbaganu, *IEEE Transactions on Cybernetics*, IF 3.236, *IEEE Press*, 43(5), pp.1462-1472, 2013.
10. EVOLUTIONARY ALGORITHMS FOR CONTINUOUS SPACE OPTIMIZATION, A. Agapie, M. Agapie, G. Zbaganu, *International Journal of Systems Science*, IF 1.305, *Taylor & Francis* 44(3), pp. 502–512, 2013.
11. SIMPLE FORM OF THE STATIONARY DISTRIBUTION FOR 3D CELLULAR AUTOMATA IN A SPECIAL CASE, A. Agapie, *Physica A (Statistical Mechanics and its Applications)*, IF 1.676, *Elsevier* 389(13), pp. 2495–2499, 2010.
12. LIMIT BEHAVIOR OF THE EXPONENTIAL VOTER MODEL, A. Agapie, R. Hons, Ad. Agapie, *Mathematical Social Sciences*, IF 0.452, *Elsevier*, 59(3), pp. 271–281, 2010.
13. ESTIMATION OF DISTRIBUTION ALGORITHMS ON NON-SEPARABLE PROBLEMS, A. Agapie, *International Journal of Computer Mathematics*, IF 0.542, *Taylor & Francis* 87(3), pp. 491–508, 2010.
14. STATIONARY DISTRIBUTION FOR A MAJORITY VOTER MODEL, A. Agapie, Th. aus der Fuenten, *Stochastic Models*, IF 0.466, *Taylor & Francis* 24(4), pp. 503–512, 2008.
15. MARKOV CHAIN ANALYSIS FOR ONE-DIMENSIONAL ASYNCHRONOUS CELLULAR AUTOMATA, A. Agapie, R.. Höns, H. Mühlenbein, *Methodology and Computing in Applied Probability*, IF 0.647, *Springer*, 6(2), pp.181–201, 2004.
16. THEORETICAL ANALYSIS OF MUTATION-ADAPTIVE EVOLUTIONARY ALGORITHMS, A. Agapie, *Evolutionary Computation*, IF 2.109, *MIT Press*, 9(2), pp.127–146, 2001.
17. A GENETIC ALGORITHM FOR A FITTING PROBLEM, A. Agapie, F. Fagarasan, B. Stanciulescu, in *Nuclear Instruments & Methods in Physics Research A*, IF 1.142, *North-Holland*, 389, pp.288–292, 1997.

List of papers published in conference proceedings:

List of books & book chapters:

1. EVOLUTIONARY ALGORITHMS – MODELING AND CONVERGENCE (in lb. engleza), A. Agapie, *Editura Academiei*, Bucureşti, 2007.
2. MATHEMATIK FÜR ÖKONOMEN (in lb. germana), A. Agapie, *Editura ASE*, Bucureşti, 2006.

Case Studies:



SCIENTIFIC COMMITTEES OF ACADEMIC JOURNALS / CONFERENCES, REVIEW

Associate Editor of IEEE Transactions on Evolutionary Computation, USA, 2024-2025.

PROJECTS

National: „*Stochastic Analysis and Parameter Estimation in systems with memory*”, CNCSIS PN-II-ID-PCCE-2011-2-0015, 2012, director Ciprian Tudor, UEFISCU-CNCSIS – member of the research team.

“*Multi-criterial modelling of decision process under uncertainty, with application to portfolio management*”, CNCSIS PNII Program IDEI, 2009-2011, director Cristinca Fulga, UEFISCU-CNCSIS – member of the research team.

“*Bounded Rational Expectations and Intelligent Techniques in Relational Marketing: Estimating Financial Markets' Efficiency as Function of Customer Lifetime Value*” – CNCSIS A Grant no. 1202, 2007-2008, director Nicolae Al. Pop – member of the research team.

“*Stochastic Modelling and Convergence Conditions for Continuous Evolutionary Algorithms*” – CNCSIS AT Grant no. 1, 2002 – director.

“*Bio-mimetic Computational Techniques for analysing nano-structured porous media and molecular magnetism*” – MCT contract 2000-2001 – director.

“*Intelligent Techniques (Genetic Algorithms, Fuzzy Logic, Neural Networks) with application to Intelligent Systems*” – MCT contract 1998-1999 – director.

“*Enhanced Genetic Algorithms. Application to information analysis in economics*” – Grant of the Romanian Academy 3041GR, 1997-1998 – director.

International: German Academic Exchange Service (DAAD) research grant at TU Dortmund, Germany, *Stochastic Analysis and Convergence Times for Continuous Evolutionary Algorithms*, Dec 2010-Jan 2011.

Post-doc contract with Fraunhofer Institute for Autonomous Intelligent Systems, project “*City Traffic*”, Sankt Augustin, Germany, Sep. 2002-Jul. 2004.

National Science Foundation NATO-COBASE Grant at Computer Science, University of Montana, Missoula, USA, *Markovian Analysis of Different Types of Genetic Algorithms*, Jun.-Aug. 2000.

Invited researcher at the Collaborative Research Center “*Computational Intelligence*” (SFB 531), Computer Science XI, Dortmund University: Sep-Dec 1999, res. Jan-Jul 2002.

OTHER RELEVANT PROFESSIONAL EXPERIENCE

2002-2004, Post-doc Researcher, Fraunhofer Institute AIS, Sankt Augustin, Germany

2006, Visiting ERASMUS-SOCRATES professor at TU Gelsenkirchen, Germany

PROFESSIONAL ASSOCIATIONS AND MEMBERSHIPS



Scientific Secretary of the Romanian Society for Probability and Statistics – 2012-2016.
Member of the European Cooperation in Science and Technology (COST) – since 2009.
Expert for the National Research Council, Romania (www.cncs-uefiscdi.ro) – since 2011.
Expert for the Natural Sciences and Engineering Research Council of Canada (NSERC) – 2015.

GRANTS AND HONORS

“The Best Article Published in an Economic Journal” – distinction conferred by The Association of Economics Faculties in Romania (AFER), 2023, 2022.
The Excellence Award “Researcher of the Year 2023” – distinction conferred by The Bucharest University of Economic Studies, Romania.

LANGUAGES

English – Advanced

German – Intermediate

SKILLS

Matlab, Latex