

CURRICULUM VITAE

NAME: ALINA BARBULESCU

Transilvania University of Braşov, Romania
Department of Civil Engineering
5, Turnului Str.
900152, Braşov, Romania

EDUCATION

Nov. 2020 – Al. I Cuza University of Iasi -	Habilitation in Cybernetics and Economics Statistics
Jul. 2014 - Technical University of Civil Engineering, Bucharest	Habilitation in Civil Engineering
Oct. 2014 - Technical University of Civil Engineering, Bucharest	Ph.D. Civil Engineering (Magna cum Laude)
Jan 2003 - Academy of Economic Studies, Bucharest	Ph.D. Cybernetics and Economic Statistics
“Al. I. Cuza” University, Iasi	Ph.D. Mathematics
P. Andrei University, Iasi, Faculty of Law	Bachelor Law
Bucharest University, Faculty of Mathematics	M.Sc. Mathematics
Craiova University, Faculty of Nature Sciences	Bachelor Mathematics

SCIENTIFIC EMPLOYMENT AND ACADEMIC RESPONSIBILITY

Research Institution or University	From - to	Academic responsibilities
Transilvania University of Brasov	22 Feb 2021-present	Professor
Transilvania University of Brasov	Oct 2024- present	Ph.D. supervisor
Technical University of Civil Engineering, Bucharest, Romania	Feb 2015 – March 2024	Ph.D. supervisor
Ovidius University of Constanta, Romania	Feb 2003 - July 2015, July 2018 – Feb.2021	Associate Professor
Higher Colleges of Technology, Sharjah, UAE	Aug 2015 - July 2018	Associate Professor
Abu Dhabi University, UAE	Feb 2011 - June 2011	Visiting professor
Ovidius University of Constanta, Romania	Sept 2009 – July 2015	Director of the Master program of Mathematical Modeling in Finance and Economic Analysis
Ovidius University of Constanta, Romania	Feb. 2013 – May 2014	Head of Department Mathematics and Computer Science
Ovidius University of Constanta, Romania	1999 - 2003	Lecturer
Valahia University of Targoviste, Romania	1993 - 1999	Lecturer
Valahia University of Targoviste, Romania	1992 – 1993	Assistant Professor
National College Unirea Focsani	1991- 1992	Teacher
General schools 10 and 5, Focsani, Romania	1990 - 1991	Teacher
National College Samuil Vulcan, Beius, Romania	1988 - 1990	Teacher

INTEREST DOMAINS

- Hydro-meteorological modeling and forecasting
- Time series analysis and forecasting, particularly pollutants' dissipation and forecasting
- Probability and Applied Statistics

- Mathematical Modelling
- Mathematical Analysis – Hausdorff measures
- Complex Analysis - p-modules and p-capacity

RESEARCH GRANTS OBTAINED BY NATIONAL/INTERNATIONAL COMPETITION

1. Grant CNCSIS 902/2007, 2008 – *Studies on metallic materials on naval constructions – Modelling the mass loss in different media* – Principal Investigator
2. Grant ID_262/2007 – 2010 - *Mathematical modelling of the precipitations Dobrogea* – Principal Investigator
3. Research contract 2939/10.12.2001, Sub - theme at grant 33/1998, *The study and the modelling of the climatic processes that participate at the dimensioning of an irrigation system in the arid lands* – member
4. Grant CNCSIS 1071/2005 – *Computational algebra and applications in algebra and informatics* – member
5. Grant CNCSIS 1075/2005 – 2006, 2006 – 2007, 2007– 2008 – *Research on the optimization of the technical elements of the irrigation by aspersion – Studies on the water circulation and storage in the soil active layer* - member
6. Grant of Romanian Academy no.106/17.08.2007– 2008, *The comportment of moving ship on progressive regular waves* - member
7. Project No. R 17081 - *Environmental Impacts and Modelling of Dust Storms Pathway in UAE using Field and Remote sensing Techniques*, financed by the The Research Office of Zayed University, United Arab Emirates – member
8. Grant Postdoctoral PN-III-P1-1.1-PD-2019-0424, 2021 and 2022 – *Analiza integrată a susceptibilității la viituri rapide și inundații la nivelul României utilizând algoritmi de învățare automată și statistici bivariate (RO-FLOOD-SUSCEP)* – 246800 lei – Mentor
9. Project: 101123467 – MULTICARE – HORIZON-CL5-2022-D4-02 – member
10. *Integrating GIS, Remote Sensing, and field sample collection for atmospheric pollution and health risk assessment: Case Study for Abu Dhabi* – 2024 – 2026 – financed by the The Research Office of Zayed University, United Arab Emirates – member

RESEARCH GRANTS OBTAINED OUTSIDE ROMANIA

- Germany, Eisenach (financed by Jena University) - September 2005, Fractal Analysis
- Unesco International Center of Theoretical Physics, Trieste, Italy, March –April 2004, Modeling in Life and Material Sciences and in Technology
- Unesco International Center of Theoretical Physics, Trieste, Italy – November 2004, Practical applications of fractals
- Unesco International Center of Theoretical Physics, Trieste, Italia - September - October 2007 – Advanced school and conference on statistics and applied probability in life sciences
- Graz, Austria (Financed by Marie Curie grant) – July 2008
- Rethymno, Crete, Greece, 5th Advanced Summer School in Economics and Econometrics, August 2010

AWARDS

Executive Agency for Higher Education, Research, Development and Innovation Funding, Ministry of Higher Education, Romania, awards numbers for the members in HORIZON teams:

- PN-IV-P8-8.1-PRE-HE-ECH2023-0180 - Multi-hazard low-carbon resilient technologies and multiscale digital services for a future-proof, sustainable & usercentred built environment – member of research team MULTICARE Horizon

Executive Agency for Higher Education, Research, Development and Innovation Funding, Ministry of Higher Education, Romania, awards numbers for the articles:

- PN-IV-P2-2.3-PRECISI-2023-77445 - C. S. Dumitriu, **A. Bărbulescu**, Artificial intelligence models for the mass loss of copper-based alloys under the cavitation, *Materials*, **15(19)**, 2022, 6695.
- PN-IV-P2-2.3-PRECISI-2023-77625 - **A. Bărbulescu**, C. S. Dumitriu, Modeling the Voltage Produced by Ultrasound in Seawater by Stochastic and Artificial Intelligence Methods, *Sensors*, **22(3)**, 2022, 1089.

- PN-IV-P2-2.3-PRECISI-2023-77994 - **A. Bărbulescu**, L. Barbeș, C. S. Dumitriu, Impact of soil pollution on melliferous plants, *Toxics*, **10**, 2022, 239.
- PN-IV-P2-2.3-PRECISI-2023-78183 – **A. Bărbulescu**, L. Barbeș, C. S. Dumitriu, Assessing the water pollution of Brahmaputra River using water quality indexes, *Toxics*, **9(11)**, 2021, 297.
- PN-IV-P2-2.3- PRECISI-2023- 73335 - A. Crăciun, R. Costache, **A. Bărbulescu**, S. Chandra Pal, I. Costache, C.S. Dumitriu, Modern techniques for flood susceptibility estimation across the Deltaic Region (Danube Delta) from the Black Sea's Romanian Sector, *Journal of Marine Science and Engineering*, **10**, 2022, 1149.
- PN-III-P1-1.1- PRECISI-2021- 53310 - **A. Bărbulescu**, C. Ș. Dumitriu, On the Connection between the GEP Performances and the Time Series Properties, *Mathematics*, **9**, 2021, 1853.
- PN-III-P1-1.1- PRECISI-2021- 53562 - **A. Bărbulescu**, F. Postolache, New approaches for modeling the regional pollution in Europe, *Science of The Total Environment*, **753**, 2021, 141993.
- PN-III-P1-1.1- PRECISI-2021-54063 – **A. Bărbulescu**, L. Barbes, Statistical methods for assessing water quality after treatment on a sequencing batch reactor, *Science of The Total Environment*, **752**, 2021, 141991.
- PN-III-P1-1.1- PRECISI-2021- 54954 - A. Al-Taani, Y. Nazzal, F. Howari, J. Iqbal, N. Bou-Orm, C. M. Xavier, **A. Bărbulescu**, M. Sharma, C.S. Dumitriu, Contamination assessment of heavy metals in agricultural soil, in the Liwa area (UAE), *Toxics*, **9**, 2021, 53.
- PN-III-P1-1.1- PRECISI-2021- 55316 - Y. H. Nazzal, **A. Bărbulescu**, F. Howari, A.A. Al-Taani, J. Iqbal, C. M. Xavier, M. Sharma, C.S. Dumitriu, Assessment of metals concentrations in agricultural soils of Abu Dhabi Emirate using pollution indices and multivariate statistics, *Toxics*, **9**, 2021, 95.
- PN-III-P1-1.1- PRECISI-2021- 56436 - R. Costache, **A. Bărbulescu**, Q. B. Pham, Integrated framework for detecting the areas prone to flooding generated by flash-floods in small river catchments - a useful indicator for water quality, *Water*, **13**, 2021, 758.
- PN-III-P1-1.1- PRECISI-2021 - 56511 - A.-D. Moraru, C. Duhnea, **A. Bărbulescu**, M. Juganaru, D. Juganaru, Residents' attitude toward tourism - do the benefits outweigh the downsides? The case of Constanta, Romania, *Sustainability*, **13**, 2021, 882.
- PN-III-P1-1.1- PRECISI-2021- 56745 - **A. Bărbulescu**, C. Șerban, M.-L. Indrean, Improving spatial interpolation quality. IDW versus a genetic algorithm, *Water*, **13**, 2021, 863.
- PN-III-P1-1.1- PRECISI-2021- 54492 – 2020 - **A. Bărbulescu**, L. Barbeș, Statistical Assessment and Modeling of Benzene in Timiș County, România, *International Journal of Environmental Science and Technology*, **19**, 2022, 817-828.
- PN-III-P1-1.1- PRECISI-2021- 57840 - M. Mihăilescu, A. Negrea, M. Ciopec, P. Negrea, N. Duțeanu, I. Grozav, P. Svera, C. Vancea, **A. Bărbulescu**, C-S. Dumitriu, Full factorial design for gold recovery from industrial solutions, *Toxics*, **9**, 2021, 111.
- PN-III-P1-1.1- PRECISI-2021- 60058 – C. Maftai, **A. Bărbulescu**, S. Rugină, C. D. Nastac, I. M. Dumitru, Analysis of the arbovirosis potential occurrence in Dobrogea, Romania, *Water*, **13**, 2021, 374.
- PN – III – P1 – 1.1 – PRECISI –2020 – 42975 – **A. Bărbulescu**, A. Dani, Statistical analysis of the water quality of the major rivers in India, *Romanian Reports in Physics*, **71(4)**, 2019, 716.
- PN – III – P1 – 1.1 – PRECISI –2020 – 43136 – A. Bărbulescu, Y. Nazzal, Statistical analysis of the dust storms in the United Arab Emirates, *Atmospheric Research*, **231**, 2020, 104669.
- PN – III – P1 – 1.1 – PRECISI – 2020 – 43196 – A. Bărbulescu, J. Deguenon, Theoretical observers for infinite-dimensional skew-symmetric systems, *Analele Stiintifice ale Universitatii Ovidius din Constanta*, seria Matematica, **28(1)**, 2020, 135-180.
- PN – III – P1 – 1.1 – PRECISI – 2020 – 43700 – **A. Bărbulescu**, Assessing the groundwater vulnerability: DRASTIC method and its versions. A review, *Water*, **12(5)**, 2020, 1356.
- PN – III – P1 – 1.1 – PRECISI – 2020 – 43718 – D. Simian, F. Stoica, A. Bărbulescu, Automatic Optimized Support Vector Regression for Financial Data Prediction, *Neural Computing & Applications*, **32(7)**, 2020, 2383-2396.
- PN – III – P1 – 1.1 – PRECISI – 2020 – 44006 – **A. Bărbulescu**, L. Barbeș, Assessing the Danube River water quality by statistical methods, *Environmental Earth Sciences*, **79(6)**, 2020, 122.
- PN – III – P1 – 1.1 – PRECISI – 2020 – 44504 – L. Barbeș, **A. Bărbulescu**, G. Stanciu, Statistical analysis of mineral elements content in different melliferous plants from the Dobrogea region, România, *Romanian Reports in Physics*, **72(2)**, 2020, 705.

- PN – III – P1 – 1.1 – PRECISI – 2020 – 44534 – **A. Bărbulescu**, A. Băutu, E. Băutu, Particle Swarm Optimization for the Inverse Distance Weighting Distance method, *Applied Sciences-Basel*, **10(6)**, 2020, 2054.
- PN – III – P1 – 1.1 – PRECISI – 2020 – 52051 – **A. Bărbulescu**, Y. Nazzal, F. Howari, Assessing the groundwater quality in the Liwa area, the United Arab Emirates, *Water*, **12(10)**, 2020, 2816.
- PN – III – P1 – 1.1 – PRECISI – 2019 – 36622 – **A. Bărbulescu**, N. Popescu – Bodorin, History-based long-term predictability of regional monthly fuzzy data, *Stochastic Environmental Research and Risk Assessment*, **33(7)**, 2019, 1435-1451.
- PN – III – P1 – 1.1 – PRECISI – 2019 – 34968 – **A. Bărbulescu**, A. Moraru, C. Duhnea, Ecolabelling in the Romanian Seaside Hotel Industry – marketing considerations, financial constraints, perspectives, *Sustainability*, **1**, 2019, 265.
- PN – III – P1 – 1.1 – PRECISI – 2019 – 34971 – A.-D. Moraru, **A. Bărbulescu**, C. Duhnea, Consumption and hysteresis - the new, the old, and the challenge, *Economic Research - Ekonomska Istraživanja*, **31(1)**, 2019, 1965 – 1980.
- Research award PN – III – P1 – 1.1 – PRECISI – 2018 – 28303 – **A. Bărbulescu**, Do the time series statistical properties influence the goodness of fit of GRNN models? Study on financial series, *Applied Stochastic Models in Business and Industry*, **34(5)**, 2018, 586 – 596.
- Research award PN – III – P1 – 1.1 – PRECISI – 2018 – 25593 – **A. Bărbulescu**, Y. Nazzal, F. Howari, Statistical analysis and estimation of the regional trend of aerosol size over the Arabian Gulf Region during 2002 -2016, *Scientific Reports*, **8**:9571, 2018,
- Research award PN – III – P1 – 1.1 – PRECISI – 2018 – 22202 – **A. Bărbulescu**, L. Barbes, Mathematical modeling of sulfur dioxide concentration in the Western part of Romania, *Journal of Environmental Management*, **204** part 3, 2017, 825 – 830.
- PN – III – P1 – 1.1 – PRECISI – 2018 – 22200 – **A. Bărbulescu**, L. Barbes, Modeling the carbon monoxide dissipation in Timisoara, Romania, *Journal of Environmental Management*, **204** part 3, 2017, 831 – 838.
- PN – III – P1 – 1.1 – PRECISI – 2018 – 24516 – A. Negrea, A. Gabor, C.-M. Davidescu, M. Ciopec, P. Negrea, N. Duteanu, **A. Bărbulescu**, Rare Earth Elements Removal from Water Using Natural Polymer, *Scientific Reports*, **8**:316, 2018
- Research award PN – III – P1 – 1.1 – PRECISI – 2017 – 17867 – **A. Bărbulescu**, A. E. Sterpu, L. Barbes, C.- I. Koncsag, New correlation for the mixing of waste water sludge, *Romanian Journal of Physics*, **62(1-2)**, 2017, art. 801.
- Research award PN – III – P1 – 1.1 – PRECISI – 2016 – 12355 – M. Gilca, **A. Bărbulescu**, Taste of medicinal plants: a potential tool in predicting ethnopharmacological activities?, *Journal of Ethnopharmacology*, **174**, 2015, 464 – 473.
- Research award PN – III – P1 – 1.1 – PRECISI – 2016 – 13218 – **A. Bărbulescu**, J. Deguenon, About the variations of precipitation and temperature evolution in the Romanian Black Sea Littoral, *Romanian Reports in Physics*, **67(2)**, 2015, 625 - 637,
- Research award PN – III – P1 – 1.1 – PRECISI – 2016 – 12772 – C. Maftai, **A. Bărbulescu**, A.A. Cârsteanu, Long-range dependence in the time series of Taița River, *Hydrological Sciences Journal*, **61(9)**, 2016, 1740 - 1747,
- Research award PN – III – P1 – 1.1 – PRECISI – 2016 – 12680 – **A. Bărbulescu**, A new method for estimation the regional precipitation, *Water Resources Management*, **30(1)**, 2016, 33-42, 2016.
- Research award of 2007 – articol cod 60 – Lista Noiembrie 2007 –**A. Bărbulescu**, C. Koncsag, A new model for estimating mass transfer coefficients for the extraction of ethanethiol with alkaline solutions in packed column, *Applied Mathematical Modelling*, **31(11)**, 2007, 2515 - 2523

Higher Colleges of Technology United Arab Emirates, Sharjah Women Campus:

- Excellence in commitment to research & scholarly activities, 31.05.2016
- Recognition of Contribution – Dedication to teaching & contribution to Genral Studies Department, 16.05.2016

Ovidius University of Constanta, Romania

- Prize for Excellence in Research, 2017

MEMBER IN EDITORIAL BOARDS

1. *Atmosphere* (WOS) – member of Topical Advisory Panel
2. *Hydrology* (WOS) - member of Topical Advisory Panel
3. *International Journal of Applied Mathematics and Statistics* (ESCI) <http://www.ceser.in/ceserp/index.php/ijamas> - member of Editorial Board
4. *International Journal of Mathematics and Computation*: <http://www.ceser.in/ceserp/index.php/ijmc> - member of Editorial Board
5. *Analele Universitatii "Ovidius" Constanta - Seria Constructii*: <http://www.univ-ovidius.ro/revista-constructii/> (EBSCO) - member of Editorial Board.

Previously:

1. *Water* (WOS) – member of Topical Advisory Panel
2. *Safety of Tehnogenic Environment*, Riga Technical University
https://content.sciendo.com/view/journals/ste/ste-overview.xml?tab_body=editorial (SCOPUS) - member of Editorial Board
3. *Population Dynamics: Analysis, modeling and forecast*, University of Nova Gorica, Slovenia, <http://popdynamf.ung.si/EB.htm>

MEMBER IN SCIENTIFIC SOCIETIES

- SSMR (2006 - 2021)
- SPSR (2007 - 2020)
- IAENG (since 2007)
- IAHS (since 2008)
- EGU – 2008

EDITOR

1. *Water*, special issue: *Climate Change and Hydrological Processes II*, 2025
https://www.mdpi.com/journal/water/special_issues/0H31T1E7FV
2. *Water*, special issue: *Climate Change and Hydrological Processes II*, 2025
https://www.mdpi.com/journal/water/special_issues/170L79L494#info
3. *Toxics*, special issue: *Advances in Water, Air and Soil Pollution, Monitoring, Modeling and Restoration*,
https://www.mdpi.com/journal/toxics/special_issues/0I5O0Y56F0
Book: *Advances in Water, Air and Soil Pollution, Monitoring, Modeling and Restoration*, MDPI, Basel, Switzerland, 2024, ISBN 978-3-7258-0908-0
4. *Water*, special issue: *Assessing Hydrological Drought in a Climate Change: Methods and Measures*,
https://www.mdpi.com/journal/water/special_issues/Hydrological_Drought
Book: *Assessing Hydrological Drought in a Climate Change: Methods and Measures*, MDPI, Basel, Switzerland, 2024, ISBN 978-3-7258-0906-6
5. *Atmosphere*, special issue: *Assessing Atmospheric Pollution and Its Impacts on the Human Health*,
https://www.mdpi.com/journal/atmosphere/special_issues/Assessing_Atmospheric_Pollution
Book: *Assessing Atmospheric Pollution and its Impact on the Human Health*, MDPI, Basel, Switzerland, 2023, ISBN 978-3-0365-6321-3
6. *Journal of Chemistry*, special issue *Challenges and Opportunities in the Application of Chemometrics in the Pharmaceutical and Food Science Industries*, 2020, <https://www.hindawi.com/journals/jchem/osi/> (WOS)
7. *Remote sensing*, special issue *Remote Sensing of Geo-Hydrological Hazard Assessment*, 2020, https://www.mdpi.com/journal/remotesensing/special_issues/Geo-Hydrological_Process (WOS)\
8. *Water*, special issue *Assessing water quality by statistical methods*, 2019, https://www.mdpi.com/journal/water/special_issues/Water_Quality_Statitcal_Analysis (WOS)
Book: *Assessing Water Quality by Statistical Methods*, MDPI, Basel, Switzerland, 2023, ISBN 978-3-0365-6359-6, 252 p.
9. *Journal of Chemistry*, special issue: *New trends in Monitoring and Removing the Pollutants from Water*
<https://www.hindawi.com/journals/jchem/si/457973/cfp/>

10. *Journal of Environmental Management*, special issue: *Modeling the impact of human activity, behavior and decisions on the environment. Marketing and green consumer* vol. 204, part 3, 2017, <https://www.sciencedirect.com/science/journal/03014797/204/part/P3>
11. Recent Researches in System Sciences, WSEAS Press, 2011, ISBN 978-1-61804-023-7, ISSN 1792- 4235
12. Recent Researches in Educational Technology, WSEAS Press, 2011, ISBN 978-1-61804-021-3
13. Recent Advances in Mechanics, WSEAS Press, 2011, ISBN 978-1-61804-020-6
14. Recent Researches in Computer Science, WSEAS Press, 2011, ISBN 978-1-61804-019-0, ISSN 1792-4251
15. Recent Researches in Communication and IT, WSEAS Press, 2011, ISBN 978-1-61804-018-3
16. Recent Researches in Circuits, Systems, and Signal Processing, WSEAS Press, 2011, ISBN 978-1-61804-017-6
17. Recent Researches in Applied Mathematics, Simulation and Modelling, WSEAS Press, 2011, ISBN 978-1-61804-019-9, ISSN 1792- 4332
18. Computational Engineering in Systems Applications, Vol.II, WSEAS Press, 2011, ISBN: 978-1- 61804-014-5
19. Mathematical Methods, Computational Techniques, Intelligent Systems, WSEAS Press, 2010, ISBN: 978-960-474-188-5, ISSN: 1790-2769
20. Analele Științifice ale Universității Ovidius Constanța, seria Matematică, vol.XVII (3), 2009
21. Annals of "Ovidius" Univ. of Constanta, Civil Engineering Series, Special issue dedicated to the 5-th International Conference "Dynamical Systems and Applications", 2009
22. Seminar Series in Mathematics, Miscellanea 1: Second Part of the Proceedings of Conference of Romanian Math. Soc., „Ovidius” University Press, Constanța, 2000

MEMBER IN ORGANIZING COMMITTEES OF INTERNATIONAL CONFERENCES

- ITISE 2023, Gran Canaria, 14-16 July 2023
- ECOSUMMIT2023, 17-19.06.2023
- CiBv2022, Brasov, Romania, 4-5.12.2022
- CiBv2021, Brasov, Romania, 5-6.12.2021
- ITISE 2021, Gran Canaria, Spain, 17-19.07.2021
- The 6th International Conference on Water Resource and Environment (WRE 2020), Special Session: Modern Techniques for Hydro-meteorological Series Analysis and Forecast, online, 23-26.08.2020
- 12th International Conference on Sustainable Energy & Environmental Protection, SEEP 2019, Special Session: New trends in assessment and modelling the water, air and soil hazards, Sharjah, United Arab Emirates, 19-21.11.2019.
- The 5th International Conference on Water Resource and Environment (WRE 2019), Special Session: Modern Techniques for Hydro-meteorological Series Analysis and Forecast, Macao, 16-19.07.2019
- International Conference: The 11th Dynamical Systems, Mathematical, Physical Sciences and It's Engineering Applications, Philippines, 9-12.05.2018 <http://haydarakca.wixsite.com/akca/organising-committee>
- CEST2017, 31.08-2.09.2017, Rhodes, Greece, Special Session [Environmental data analysis and modelling](#)
- The 9th Dynamical Systems and Applications Conference, ICDSA 2017, 20 -23.07.2017, Antalya, Turkey
- EcoSummit 2016, 29.08 - 02.09.2016, Montpellier, France.
- 14th International Conference on Environmental Science and Technology, CEST2015, 3-5.09.2015, Rhodes, Greece, session
- 6th International Workshop on Soft Computing and Applications, 24 -26.07.2014, Timișoara, Soft Computing Techniques for Time-Series Analysis (SCTTSA – SOFA – 2014) http://sofa2014.org/documents/Special_Session_SCTTSA-SOFA-2014-SSProposal.pdf
- WSEAS Conference MAMECTIS'10, 3-6.05.2010, Sousse, Tunisia
- ICDSA 2009, 15 -19.07.2009, Constanta, Romania
- The 12nd Conference of Romanian Society of Probability and Statistics, 10-11.04.2009, Constanța, Romania
- 7-th Balkan Conference on Operational Research, 25 -28.05. 2005, Constanța, Romania

- International Conference on Analysis and Optimization of Differential Systems, 10 - 14. 09. 2002, Constanța, Romania
- Euroconference 2000, 1 –18.08.2000, Constanța, Romania
- The Conference of Romanian Society of Mathematical Sciences, June 2000, Constanța, Romania
- The XXII-nd Congres of Romanian – American Academy of Sciences and Arts, June 1997, Târgoviște, Romania

MEMBER IN SCIENTIFIC COMMITTEES OF INTERNATIONAL CONFERENCES

- ICASF 2024, Abu Dhabi, UAE
- MDIS 2024, Sibiu, 17-19.10.2024
- ITISE2024, Gran Canaria, Spain, 12-14.07.2024
- KES-IDT 2024, 20-22.06.2024, Santa Cruz. Madeira, Portugal, <http://idt-24.kesinternational.org/cmsIPCDisplay.php>
- ICDD 2024, Sibiu, Romania, 23-25.05.2024
- ITISE2023, Gran Canaria, 12-14.07.2023
- ICDD 2023, Sibiu, Romania, 11-13.05.05.2023
- KES-IDT 2022, 20-22.06.2024, <http://idt-22.kesinternational.org/cmsIPCDisplay.php>
- CiBv2022, Brasov, Romania, 4-5.11.2022
- MDIS 2022, Sibiu, Romania, 28-30.10.2022
- CiBv2021, Brasov, Romania, 5-6.11.2021
- MDIS 2021, Sibiu, Romania, 28-30.10.2021
- ITISE2021, Gran Canaria, 19-21.07.2021.
- KES2020, Verona, 16-18.09.2012, <http://kes2020.kesinternational.org/cmsIPCDisplay.php>
- WATER2020, Constanta
- KES-IDT 2019, Saint Julians, Malta, 17-19.07.2019, <http://idt-19.kesinternational.org/>
- MDIS 2019, Sibiu, Romania, 3-5.10.2018
- ICDD 2019, Sibiu, Romania, 16-18.05.2018
- KES-IDT 2018, Gold Coast, Australia, 20 -22.06.2018 <http://idt-18.kesinternational.org/cmsIPCDisplay.php>
- WATER2018, Constanta, Romania, 21-23.06.2018, <http://revista-constructii.univ-ovidius.ro/conferinte/index.php/water-2018>
- ICDD 2018, Sibiu, Romania, 17-19.05.2018
- International Conference: The 11 Dynamical Systems, Mathematical, Physical Sciences and It's Engineering Applications, Philippines, 9-12.05.2018 <http://haydarakca.wixsite.com/akca/organising-committee>
- CEST2017, Rhodes, Greece, 31.08-2.09.2017
- The 9th Dynamical Systems and Applications Conference, ICDSA 2017, 20 -23.07.2017, Antalya, Turkey
- MDIS 2017, Sibiu, Romania, 23-25.06.2017
- ICDD 2017, Sibiu, Romania, 19 -21.05.2017
- The 4th Abu Dhabi University Annual International Conference: Mathematical Science and Its Applications, Abu Dhabi, UAE, 20 - 22.04.2017
- KES - IDT-16, Smart Digital Futures 2016, Puerto de la Cruz, Tenerife, Spain, 15 – 17.06.2016 <http://idt-16.kesinternational.org/cmsIPCDisplay.php>
- WATER 2016, 23-25.06.2016, Constanța, Romania
- The 4th Abu Dhabi University Annual International Conference: Mathematical Science & its Applications, 23 25.12.2015, <http://www.adu.ac.ae/en-us/icmsa2015.aspx>
- KES - IDT-15, Smart Digital Futures 2015, Sorento, Italy, 15 – 17.06.2015 <http://idt-15.kesinternational.org/cmsIPCDisplay.php>
- MDIS 28.10 - 1.11.2015, Sibiu, Romania
- ICDD 2015 - 21-23.05.2015, Sibiu, Romania
- CSCS20: The 20th International Conference on Control Systems and Computer Science, Bucharest, Romania, 27-29.05.2015
- The 3rd Abu Dhabi University Annual International Conference: Mathematical Science & its Applications, Abu Dhabi, UAE, 29.11- 02.12.2014

- ICDD 2014, Sibiu, Romania, 15-17.05.2014,
- MDIS 2013, Sibiu, Romania, 10-12.10.2013
- The 2nd Abu Dhabi University Annual International Conference: Mathematical Science & its Applications - 27-30.12.2013
- ICDD 2013, 16 -18.05.2013, Sibiu, Romania
- WATER 2011, Constanța, Romania, 16 – 19.06.2010
- The 6th International conference: Dynamical Systems and Applications - 2010, Antalya, Turkey, 10-14.07.2010

•

CHAIRPERSON

- | | |
|--|------|
| 1. CiBv2022, Braşov, Romania, 2-3.11. | 2023 |
| 2. ITISE 2023, Gran Canaria, 12-14.07. | 2023 |
| 3. CiBv2022, online, 4-5.11. | 2022 |
| 4. CiBv2020, online, 5-6.11. | 2020 |
| 5. The 5th International Conference on Water Resource and Environment (WRE 2019) Macao, China, 16-19.07. | 2019 |
| 6. CEST2017, Rhodes, Greece, 31.08-2.09. | 2017 |
| 7. EcoSummit 2016, EcoSummit 2016, Montpellier, France, 29.08 -02.09. | 2016 |
| 8. SOFA 2014, Timisoara, Romania 24-26.07. | 2014 |
| 9. ACACOS'12 Rovaniemi, Finland, 7 – 12.04. | 2012 |
| 10. MCBC'12, Iasi, Romania, 13-15.06. | 2012 |
| 11. MCBE'12, Iasi, Romania, 2012, 13-15.06. | 2012 |
| 12. MAMECTIS'11, Iasi, Romania, 1-3.07 | 2011 |
| 13. MAMECTIS'10, Sousse, Tunisia, 3-6.05. | 2010 |
| 14. The 5th ICDSA, Constanta, Romania, 15 - 18.06. | 2009 |
| 15. 7-th World Congress in Probability and statistics, Singapore, 14-19.07. | 2008 |
| 16. Conference 2007: Dynamical systems and applications, Izmir, Turkey, 1-6.07 | 2007 |
| 17. 22 nd European conference on operational research, Prague, 8-11.07. | 2007 |
| 18. Conference 2004: Dynamical systems and applications, Antalya, Turkey, 5-10.07 | 2004 |
| 19. International Conference on Applied Mathematics, Baia Mare, Romania, 23-26.09 | 2004 |

INVITED CONFERENCES

- WRE2020, online, 23-26.08.2020
- WRE2019, Macao, 16-19.07.2019
- SMSA 2017, Berlin, 20 – 24.02.2017
- IC-ANMBES 2014, Braşov, Romania, 13-15.06.2014
- MCBC'12, Iasi, Romania, 13-15.06. 2012
- MCBE'12, Iasi, Romania, 13 -15.06. 2012
- ACACOS'12, Rovaniemi, Finland, 18 – 20.04.2012
- University of Reading, Department of Meteorology, 13.11.2012
- Instituto Politecnico Nacional, Mexico City, 5.08.2010

REVIEWER (SELECTION OF JOURNALS INDEXED IN WOS and SCOPUS)

- Administrative Sciences
- Atmosphere
- Neurocomputing Letters
- Applied Mathematics and Information Science
- An. Sci. Ovidius Univ. of Constanta, Civil Engineering
- An. St. Univ Ovidius din Constanta, Matematică
- An. Sci. Ovidius Univ. of Constanta, Civil Engineering
- Atmospheric Pollution Research
- CATENA
- Chemical Engineering Communications

- Chaos, Solitons and Fractals
- Environmental Monitoring and Assessment
- Geophysical Research Letters
- Hydrological Sciences Journal
- Hydrology
- IEEE transactions on Fuzzy Systems
- Information Technology Research Journal
- International Journal of Mathematics and Mathematical Sciences
- Mathematics
- Neural Computing & Applications
- Risks
- Remote Sensing
- Science Journal of Business Management
- Scientific Reports
- Scientific Research and Essays
- Stochastic Environmental and Risk Assessment
- Sustainability
- Tellus A
- Water SA

ATTENDED SEMINARS, SUMMER SCHOOLS, CONFERENCES

1. ECAI 2024, Iași, Romania, 28-29.06	2024
2. CoDIT 2024, Malta, 1-4.07	2024
3. ICCECME 2024, 4-6.11, Maldives	2024
4. CiBv 2024, Brasov, Romania, 7-8.11	2024
5. ConsGeoCad 2024, Chișinău, 15-17.11.	2024
6. CiBv 2023, Brasov, Romania, 2-3.11.	2023
7. ITISE 2023, 14-17.06 (online)	2023
8. ICCECME 2023, 19-21.07, Gran Canaria, Spain, 14-17.06	2023
9. CiBv 2022, Brasov, Romania, 4-5.11.	2022
10. MDIS 2022, Sibiu, Romania, 28-30.10.	2022
11. CiBv 2021, Brasov, Romania, 4-5.11.	2021
12. ICSTCC 2021, Iasi, Romania, 22-23.10.	2021
13. ICECCME 2021, Mauritius, 7-8.10.	2021
14. ITISE 2021, Gran Canaria, 17-19.07	2021
15. ECAI 2021, online, 1-2.07	2021
16. PIGE 2021, online, 1-2.07	2021
17. CiBv2020, online, 5-6.11.	2020
18. WRE2020, online, 23-26.08.	2020
19. MDIS 2020, online, 22-24.10.	2020
20. SEEP2019, Sharjah, UAE, 18-21.11.	2019
21. WRE2019, Macao, 16-19.07.	2019
22. The 4th International Scientific Conference Sea-CONF2019, Constanța, 17-18.05.	2019
23. WaterEnergyNexus, Salerno, Italy, 14-17.11.	2018
24. IC-ANMBES, Brașov, 23-25.05.	2018
25. 1st ASET Multiconference, Innovations in Engineering Education, Abu Dhabi, 4.04.	2018
26. 1st ASET Conference, Sustainable Environment and Urban Infrastructure, Dubai, 6-7.02.	2018
27. ICCF 2017, Lisbon, 4-8.09.	2017
28. CEST 2017, Rhodes, Greece, 31.08 – 2.09	2017
29. 5th Abu Dhabi University Annual International Conference: Mathematics and Its Applications, Abu Dhabi, UAE, 20 – 22.04	2017
30. UAE Math Day, Sharjah University, UAE, 11.03.	2017
31. SMSA 2017, Berlin, Germany, 20 - 24.02.	2017

32. 28 th IBIMA 2016, Sevilla, Spain, 9-10.11.	2016
33. EcoSummit 2016, Montpellier, France, 29.08 - 02.09.	2016
34. Theodor Angheluta Conference 2016 – The 15 th Conference on Applied Mathematics and Computer Science, Cluj - Napoca, Romania, 5 - 7.07.	2016
35. International Conference on Sciences and Applications, Abu Dhabi University, 23-26.12	2015
36. MDIS 2015, Sibiu, Romania, 29.10 - 2.11.	2015
37. 14 th International Conference on Environmental Science and Technology, CEST2015, Rhodes, Greece, 3 - 5.09.	2015
38. SOFA 2014, Timisoara, Romania, 24 - 26.07.	2014
39. IC-ANMBES Brasov, Romania, 13 - 15.06	2014
40. EcoImpuls 2013, Timișoara, Romania, 7 - 8.11.	2013
41. MDIS 2013, Sibiu, Romania, 12 - 14.10.	2013
42. ICAM 8, Baia Mare, Romania, 25-28.09.	2013
43. Theodor Angheluta Seminar, Cluj – Napoca, Romania, 29 - 31.08.	2013
44. ICNAAM – A XII-a ediție a Conferinței Internaționale „Matematici Aplicate și Analiză Neliniară”, Târgoviște, Romania, 22 - 24.06.	2013
45. Workshop on Algebraic and Analytic Number Theory and Their Applications, Constanta, Romania, 23 – 24.05	2013
46. EGU Viena, Austria, 15 - 18.04.	2013
47. Conferința internațională de Chimie Analitică, <i>Analytical Chemistry for a Better Life</i> , RO-ICAC' 2012, Târgoviște, Romania, 18 - 21.09.	2012
48. ACACOS'12 Rovaniemi, Finland, 18 - 20.04.	2012
49. MCBC'12, Iasi, Romania, 13 - 15.06.	2012
50. MCBE'12, Iasi, Romania, 2012, 13 - 15.06.	2012
51. ACACOS'12 Rovaniemi, Finland, Romania, 18 - 20.04.	2012
52. MAMECTIS, Iasi, Romania, 1 - 3.07	2011
53. Modern stochastic with Applications II, Kyev, Ukraine, 7 - 11.09.	2010
54. 5 th Advanced Summer School in Economics and Econometrics, Rethymno, Creete, 1 - 8.07. 2010	
55. CSCC'10, Corfu, Greece	2010
56. MAMECTIS'10, Sousse, Tunisia, 0.3-0.6.05	2010
57. 9 th Balkan Conference on Operational Research, Constanța, Romania, 2-6.09.	2009
58. 13 th WSEAS International Conference on computers, Rhodos Island, Greece, 23-25.07.	2009
59. 5 th International Conference Dynamical Systems and Applications, Constanța, Romania, 15-18.06.	2009
60. EGU Viena, 13-18.04.	2009
61. The 12-th Conference of SPSR, Constanța, Romania, 10-11.04.	2009
62. 10 th WSEAS Conference on Evolutionary Computing, Prague, Czech Republic, 23-25.03.	2009
63. MACMESE'08, MATERIALS'08, Bucharest, Romania, 7-9.11.	2008
64. 7 th Workshop on Mathematical Modelling of Environmental and Life Sciences Problems, Constanța, Romania, 22-25.10.	2008
65. The role of hydrology in water resources management, Capri, Italy, 13-16.10.	2008
66. Fall Colloquium on the Physics of Weather and Climate: Regional Weather Predictability and Modelling, Trieste, Italy, 29.09 - 12.10.	2008
67. 7-th World Congress in Probability and Statistics, Singapore, 14-19.07.	2008
68. World Congress on Engineering 2008, London, UK, 2-4.07.	2008
69. 1-st Regional Symposium on Electrochemistry, Istria, Croatia, 4-8.05.	2008
70. EGU Viena, Austria, 13-18.04.	2008
71. The third international Conference on mathematical Sciences, ICM 2008, Al Ain, UAE, 3-6.03,	2008
72. 9-th International Conference on Precipitations, Paris, 12-14.11.	2007
73. Advanced school and conference on statistics and applied probability in life sciences, Trieste, Italy, 24.09-12.10	2007
74. Biomedical modeling and cardiovascular – respiratory control: Theory and Practice, Graz, Austria, 22.07-4.08	2007

75. 8 - th Balkan Workshop on Applied Physics, Constanta, Romania	2007
76. 22 nd European conference on operational research, Prague, 8-11.07.	2007
77. Conference 2007: Dynamical systems and applications, 1-7.07.2007, Izmir, Turkey	2007
78. Academics days of Timisoara, Romania, 24-25.05	2007
79. The 10 –th Conference of the Romanian Society of Probability and Statistics, Bucharest, Romania, 13-14.04	2007
80. 5 – th International Conference on Applied Mathematics, Baia Mare, Romania, 21-24.09.	2006
81. Fifth workshop on Mathematical Modelling of Environmental and Life Sciences Problems, Constanta, Romania, 10-13.09	2006
82. 7- th Balkan Workshop on Applied Physics, Constanta, Romania, 4-7.07	2006
83. 7-th International conference on Applied Analysis and Differential Equations, Iasi, 4-9.09	2006
84. Modern stochastic: theory and applications, Kyev, Ukraine, 19 –23.06	2006
85. The 10-th International Conference on applied mathematics and Computer Sciences, Baisoara, Romania, 30.05-2.06	2006
86. Forth workshop on Mathematical Modelling of Environmental and Life Sciences Problems, Constanta, Romania, 7-10.09	2005
87. 7-th Balkan Conference on Operational Research, Constanta, Romania, 25-28.05.	2005
88. Second Conference on self Similarity and Applications, Toulouse, France, 20-24.06.	2005
89. Workshop on Fractal Analysis, Eisenach, Germany, 11-17.09	2005
90. Conference on „Practical applications of fractals", Abdus Salam ICTP – Trieste, Italy, 7-9.11.	2004
91. 6 th International Conference on Hydraulic Machinery, Timisoara, Romania	2004
92. Conference 2004: Dynamical systems and applications, Antalya, Turkey, 1-7.07.	2004
93. The 9 th International Conference on Applied Mathematics, Computer Science and Mechanics, Baisoara, Romania. 11-14.05.	2004
94. Third workshop on Mathematical Modelling of Environmental and Life Sciences Problems, Constanta, Romania	2004
95. Workshop on "Modeling in Life and Material Sciences and in Technology", Abdus Salam ICTP – Trieste, Italy, March	2004
96. International Symposium of Mathematics and Applications, Timisoara, Romania	2003
97. ICTAMI 2003, Alba – Iulia, Romania	2003
98. Pannonian Applied Mathematics Meeting, Budapest, Hungary	2003
99. Pannonian Applied Mathematics Meeting, Constanta, Romania	2002
100. Analysis and optimization of differential systems International Conference, Constanta, Romania	2002
101. The 6 th Balkan Conference on Operational Research, Thessaloniki, Greece	2002
102. Third International Conference on Applied Mathematics, ICAM3, Borsa, Romania	2002
103. The eighth International Conference on Applied Mathematics, Computer Science and Mechanics, Baisoara, Romania	2002
104. Pannonian Applied Mathematics Meeting, Baia Mare, Romania	2001
105. International Conference on Naval and marine Education, Constanta, Romania	2001
106. Annual Meeting of the Romanian Mathematics Society, Constanta, Romania	2001
107. International Conference on Nonlinear operators, Differential Equations and Applications, ICNODEA 2001, Cluj - Napoca, Romania	2001
108. “Hidrotehnica XXI”, Iasi, Romania	2001
109. The 3 rd International Conference of PHd. Students, Miskolc, Hungary	2001
110. The Symposium “The engineering of the water resources”, Bucharest, Romania	2001
111. International Conference on Complex Analyzes and related topics. The IX th Romanian – Finnish Seminar, Brasov, Romania	2001
112. Pannonian Applied Mathematics Meeting, God, Hungary	2001
113. International Symposium “The land reclamation between the present and the future” Timisoara, Romania	2000
114. The Symposium of “P. Maior” University, Targu – Mures, Romania	2000
115. International Symposium “10 years of economic education at Oradea”, Baile Felix, Romania	1999

- | | |
|---|------|
| 116. SECOMAR'99, Constantza, Romania | 1999 |
| 117. The Symposium "The role of the Statistics in the market economy", Bucharest, Romania | 1999 |
| 118. Conference on Applied and Industrial Mathematics, Oradea, Romania | 1998 |
| 119. The second National Conference of the Romanian Society of Mathematics,
Cluj - Napoca, Romania | 1998 |
| 120. SIMPEC' 98, Braşov, Romania | 1998 |

Teaching experience in academic positions

- *Transilvania University*

Numerical Advanced Analysis

Finite Element Method

Sustainability

Environmental Engineering

Project Mangement

- *Ovidius University*

Statistics (2000 - 2015)

Capital market and portofolio management (2011-2013)

Econometrics (2009 – 2015)

Economic forecasting (2009 – 2015)

Calculus I, II, III (2003 - present)

Complex functions (2000 - present)

Linear algebra and analytical geometry (2000 - 2013)

Probability and statistics (2002 – 2005, 2009 - 2015)

Discrete mathematics (2003-2004)

Complements of mathematics (2006 - 2008, 2009 - 2010)

Applied statisrics

- *Higher Colleges of Technology*

Calculus I, II, III

Applied Mathematics

Quantitative Reasoning

Statistics

- *Abu Dhabi University*

Calculus I, II, III (2011)

Statistics

- *Valahia University*

Algebra (1992-1993)

Analysis (1992 – 1998)

Mathematical models of economical phenomena (2005-2006)

Mathematics for economists, Operational Research (1992 -1999)

PUBLICATIONS

I. ARTICLES IN WOS JOURNALS

1. Bărbulescu, V. Mârza, Electrical effect induced at the boundary of an acoustic cavitation zone, *Acta Physica Polonica B*, vol. **37**(2), 2006, 507 - 518 (ISSN 0587 – 4254),
<http://www.actaphys.uj.edu.pl/fulltext?series=Reg&vol=37&page=507>
2. A. Bărbulescu, Models of the voltage induced by cavitation in hydrocarbons, *Acta Physica Polonica B*, vol. **37**(10), 2006, 2919 - 2931 (ISSN 0587- 4254),
<http://www.actaphys.uj.edu.pl/fulltext?series=Reg&vol=37&page=2919>
3. A. Bărbulescu, C. Koncsag, A new model for estimating mass transfer coefficients for the extraction of ethanethiol with alkaline solutions in packed column, *Applied Mathematical Modelling*, vol. **31**(11), 2007, 2515 - 2523 (ISSN 0307 – 904X), <https://doi.org/10.1016/j.apm.2006.10.003>
4. C. Koncsag, A. Bărbulescu, Modeling the removal of mercaptans from liquid hydrocarbon streams in structured packing columns, *Chemical Engineering and Processing*, vol. **47**(9-10), 2008, 1717 - 1725 (ISSN 0255 – 2701), <https://doi.org/10.1016/j.cep.2007.09.015>

5. A. Bărbulescu, C. Koncsag, Mass transfer at Propanethiol - Buthanethiol Alkaline Extraction from Sour Petroleum Fraction, *Revista de Chimie*, vol. **60**(4), Apr. 2009, 414 – 418 (ISSN 0034 – 7752), <http://www.revistadechimie.ro/arhiva.asp?lim=ro&rev=ch>
6. A. Bărbulescu, E. Băutu, Alternative models in Precipitation Analysis, *An. Șt. Univ. Ovidius Math*, vol. **17**(3), 2009, 45 - 68 (ISSN 1224 – 1784), <http://www.anstuocmath.ro/volume-xvii-2009-fascicola-3>
7. A. Bărbulescu, E. Băutu, Mathematical models of climate evolution in Dobrudja, *Theoretical and Applied Climatology*, vol. **100**(1 – 2), 2010, 29 - 44, (ISSN 0177 – 798X) <https://doi.org/10.1007/s00704-009-0160-7>
8. A. Bărbulescu, E. Băutu, A hybrid approach for modeling financial time series, *International Arab Journal of Information and Technology*, vol. **9**(4), July 2012, 327- 335 (ISSN 1683-3198), <http://www.iajit.org/>
9. C. Maftei, A. Barbulescu, Statistical analysis of precipitation time series in the Dobrudja region, *MAUSAM*, vol. **63**(4), Oct.2012, 553 – 564, <http://metnet.imd.gov.in/imdmausam/>
10. E. Băutu, A. Bărbulescu, Forecasting meteorological time series using soft computing methods: an empirical study, *Applied Mathematics and Information Science*, vol. **7**(4), 2013, 1297 – 1306 (ISSN 1935-0090), <http://naturalspublishing.com/show.asp?JorID=1&pgid=0>
11. A. Bărbulescu, L. Barbeș, Mathematical models for inorganic pollutants in Constanța area, Romania, *Revista de chimie*, vol. **64**(7), 2013, 747 - 753 (ISSN 0034 – 7752), <http://www.revistadechimie.ro/pdf/BARBULESCU%20A.pdf%207%2013.pdf>
12. A. Bărbulescu, L. Barbeș, Assessment of surface water quality Techirghiol Lake using statistical analysis, *Revista de chimie* (ISSN 0034 – 7752), vol. **64**(8), 2013, 868 - 874. <http://www.revistadechimie.ro/pdf/BARBULESCU%20A.pdf%208%2013.pdf>
13. J. Deguenon, A. Bărbulescu, Attachment observability of a rotating body-beam system, *An St. Univ Ovidius Constanta*, vol. **21**(3), 2013, 81 - 93 (ISSN 1224-1784), <http://www.anstuocmath.ro/volume-xxi-2013-fascicola-3>
14. A. Bărbulescu, Something about h-measures of sets in plane, *An St. Univ Ovidius Constanta*, vol. **22**(1), 2014, 35 – 40 (ISSN 1224-1784), <http://www.anstuocmath.ro/volume-xxii-2014-fascicola-1>
15. A. Bărbulescu, J. Deguenon, Models for trend of precipitation in Dobrudja, *Environmental Engineering and Management Journal*, vol. **13**(4), 2014, 873-880 (ISSN 1582 - 9596)
16. A. Bărbulescu, J. Deguenon, Change point detection and models for precipitation evolution. Case study, *Romanian Journal of Physics*, vol. **59**(5-6), 2014, 590 - 600, http://www.nipne.ro/rjp/2014_59_5-6/0590_0600.pdf.
17. L. Barbeș, A. Bărbulescu, C. Rădulescu, C. Stihi, E. D. Chelărescu, Determination of heavy metals in leaves and bark of Populus Nigra L by atomic absorbtion spectrometry, *Romanian Reports on Physics*, vol. **66**(3), 2014, 877 - 886 (ISSN 1221-1451 43 822)
18. A. Bărbulescu, L. Barbeș, Models for the pollutants correlation in the Romanian Littoral, *Romanian Reports in Physics*, vol. **66**(4), 2014, 1189 - 1199 (ISSN 1221-145143822).
19. A. Bărbulescu, J. Deguenon, About the variations of precipitation and temperature evolution in the Romanian Black Sea Littoral, *Romanian Reports in Physics*, vol. **67**(2), 2015, 625 - 637,
20. A. E. Sterpu, A. Bărbulescu, L. Barbes, C.- I. Koncsag, Modelling the mixing process of industrial and domestic wastesludge, *Environmental Engineering and Management Journal*, vol. **14**(6), 1241 - 1246.
21. A. Bărbulescu, C. Maftei, Modeling the climate in the area of Techirghiol Lake (Romania), *Romanian Journal of Physics*, vol. **60**(7-8), 2015, 1163 – 1170.
22. A. - A. Neagu, C. Koncsag, A. Bărbulescu, E. Botez, Calculation methods for gasket plate heat exchangers used in vegetable oil manufacture. Comparative study, *Revista de chimie*, vol. **66**(9), 2015, 1504 – 1508.
23. A. Bărbulescu, M. Gilca, Taste of medicinal plants: a potential tool in predicting ethnopharmacological activities?, *Journal of Ethnopharmacology*, vol. **174**, 464 – 473, 2015, [doi:10.1016/j.jep.2015.08.040](https://doi.org/10.1016/j.jep.2015.08.040).
24. A. A. Neagu, C. I. Koncsag, A. Bărbulescu, E. Botez, Estimation of pressure drop in gasket plate heat exchangers, *Ovidius University Annals of Chemistry*, vol. **27**, no. 1, 2016, pp. 62 – 72.
25. A. Bărbulescu, L. Barbeș, Statistical Analysis and Mathematical Models for the VOCs Concentrations on the Romanian Littoral. A case study, *Analytical Letters*, vol. **49**(3), 2016, 387 – 399,
26. A. Bărbulescu, A new method for estimation the regional precipitation, *Water Resources Management*, vol. **30**(1), 33-42, 2016, <http://link.springer.com/article/10.1007/s11269-015-1152-2>.
27. A. Bărbulescu, Modeling temperature evolution. Case study, *Romanian Reports in Physics*, vol. **68**(2), 788 - 798, 2016.

28. A. Bărbulescu, Models for temperature evolution in Constanta area (Romania), *Romanian Journal of Physics*, vol. **61(3-4)**, 2016, 676 - 686.
29. C. Maftai, A. Bărbulescu, A.A. Cârsteanu, Long-range dependence in the time series of Taița River, *Hydrological Sciences Journal*, vol. **61(9)**, 2016, pp. 1740 - 1747. <https://doi.org/10.1080/02626667.2016.1171869>.
30. A. Bărbulescu, A. E. Sterpu, L. Barbes, C.- I. Koncsag, New correlation for the mixing of waste water sludge, *Romanian Journal of Physics*, vol. **62(1-2)**, 2017, 801.
31. L. Barbeș, A. Bărbulescu, Monitoring and assesment of heavy metals in soil and leaves of Populus Nigra L, *Environmental Engineering and Management Journal*, vol. **16(1)**, 2017, 187 – 196, http://www.eemj.icpm.tuiasi.ro/pdfs/vol16/no1/20_491_Barbes_13.pdf .
32. A. Barbulescu, Modeling the impact of the human activity, behavior and decisions on the environment. Marketing and green consumer, *Journal of Environmental Management*, **204** part 3, 2017, 813, <https://doi.org/10.1016/j.jenvman.2017.10.028>
33. A. Barbulescu, L. Barbes, Modeling the carbon monoxide dissipation in Timisoara, Romania, *Journal of Environmental Management*, **204** part 3, 2017, 831 – 838, <http://dx.doi.org/10.1016/j.jenvman.2017.02.047>.
34. A. Barbulescu, L. Barbes, Mathematical modeling of sulfur dioxide concentration in the Western part of Romania, *Journal of Environmental Management*, **204** part 3, 2017, 825 – 830, <http://dx.doi.org/10.1016/j.jenvman.2017.02.052>.
35. A. Negrea, A. Gabor, C.-M. Davidescu, M. Ciopec, P. Negrea, N. Duteanu, A. Barbulescu, Rare Earth Elements Removal from Water Using Natural Polymer, *Scientific Reports*, **8**:316, 2018, <http://www.nature.com/articles/s41598-017-18623-0>
36. A. Bărbulescu, Y. Nazzal, F. Howari, Statistical analysis and estimation of the regional trend of aerosol size over the Arabian Gulf Region during 2002 -2016, *Scientific Reports*, **8**:9571, 2018, <https://www.nature.com/articles/s41598-018-27727-0>
37. A. Bărbulescu, L. Barbes, Y. Nazzal, New model for inorganic pollutants dissipation on the northern part of the Romanian Black sea coast, *Romanian Journal of Physics*, vol. **63(5-6)**, 806, 2018.
38. A. Bărbulescu, Do the time series statistical properties influence the goodness of fit of GRNN models? Study on financial series, *Applied Stochastic Models in Business and Industry*, 2018, 1-11, <https://doi.org/10.1002/asmb.2315>
39. A. Bărbulescu, N. Duteanu, A. Negrea, M. M. Ghangrekar, New trends in monitoring and removing the pollutants from water, *Journal of Chemistry*, vol. **2018**, 8394086, <https://doi.org/10.1155/2018/8394086>
40. A. Moraru, A. Bărbulescu, C. Duhnea, Consumption and hysteresis - the new, the old, and the challenge, *Economic Research - Ekonomska Istraživanja*, vol. **31(1)**, 2019, 1965 - 1980, <http://doi.org/10.1080/1331677x.2018.1498365>.
41. A. Bărbulescu, A. Moraru, C. Duhnea, Ecolabelling in the Romanian Seaside Hotel Industry – marketing considerations, financial constraints, perspectives, *Sustainability*, vol. **11(1)**, 2019, 265, <https://doi.org/10.3390/su11010265>
42. Y. Nazzal, A. Bărbulescu, F. M. Howari, A. Yousef, A. A. Al-Taani, F. Al Aydarroos, M. Naseem, New insight to dust storm from historical records, UAE, *Arabian Journal of Geosciences*, vol. **12(13)**, 2019, 396, DOI: 10.1007/s12517-019-4555-1.
43. A. Bărbulescu, N. Popescu – Bodorin, History-based long-term predictability of regional monthly fuzzy data, *Stochastic Environmental Research and Risk Assessment*, vol. **33(7)**, 2019, 1435-1441, DOI: 10.1177/s00477-019-01702-1 **Q1**
44. A. Bărbulescu, A. Dani, Statistical analysis of the water quality of the major rivers in India, *Romanian Reports in Physics*, vol. **71(4)**, 2019, 716.
45. A. Bărbulescu, Y. Nazzal, Statistical analysis of the dust storms in the United Arab Emirates, *Atmospheric Research*, vol. **231**, 2020, 104669.
46. A. Bărbulescu, L. Barbeș, Assessing the Danube River water quality of the Danube River (at Chiciu, Romania) by statistical methods, *Environmental Earth Sciences*, vol. **79(6)**, 2020, 122.
47. A. Bărbulescu, A. Băutu, E. Băutu, Particle Swarm Optimization for the Inverse Distance Weighting Distance method, *Applied Sciences-Basel*, vol. **10(6)**, 2020, 2054.
48. J. Deguenon, A. Bărbulescu, Theoretical observers for infinite-dimensional skew-symmetric systems, *Analele Stiintifice ale Universitatii Ovidius din Constanta, seria Matematica*, vol. **28(1)**, Mar 2020, pp. 135-140, DOI: 10.2478/auom-2020-0010.
49. D. Simian, F. Stoica, A. Bărbulescu, Automatic Optimized Support Vector Regression for Financial Data Prediction, *Neural Computing & Applications*, vol. **32(7)**, Apr. 2020, 2383-2396.

50. A. Bărbulescu, Assessing the groundwater vulnerability: DRASTIC and DRASTIC-like Methods: A review, *Water*, 12(5), May 2020, 1356.
51. L. Barbes, A. Bărbulescu, G. Stanciu, Statistical analysis of mineral elements content in different melliferous plants from the Dobrogea region, România, *Romanian Reports in Physics*, vol. 72(2), 2020, 705.
52. A. Bărbulescu, Y. Nazzal, F. Howari, Assessing the groundwater quality in the Liwa area, the United Arab Emirates, *Water*, 12(10), 2020, 2816.
53. A. Bărbulescu, L. Barbes, Statistical methods for assessing the water quality after the treatment on a Sequencing Batch Reactor, *Science of The Total Environment*, vol. 752, 15 Jan. 2021, 141991.
54. A. Bărbulescu, F. Postolache, New approaches for modeling the regional pollution in Europe, *Science of The Total Environment*, vol. 753, 20 Jan. 2021, 141993.
55. A. Bărbulescu, F. Postolache, C. Ș. Dumitriu, Estimating the precipitation amount at regional scale using a new tool, Climate Analyzer, *Hydrology*, 8(3), 2021, 125, <https://doi.org/10.3390/hydrology8030125>
56. A. Bărbulescu, C. Maftai, Statistical approach of the behavior of Hamcearca River (Romania), *Romanian Reports in Physics*, vol. 73(1), 2021, 703.
57. A.-D. Moraru, C. Duhnea, A. Bărbulescu, M. Juganaru, D. Juganaru, Residents' attitude toward tourism - do the benefits outweigh the downsides? The case of Constanta, Romania, *Sustainability*, vol. 13, 2021, 882.
58. C. Maftai, A. Bărbulescu, S. Rugină, C. D. Nastac, I. M. Dumitru, Analysis of the arbovirois potential occurrence in Dobrogea, Romania, *Water*, vol. 13, 2021, 374.
59. L. Barbes, A. Bărbulescu, G. Stanciu, M. Rotariu, Mineral analysis of different bee products by Flame Atomic Absorption Spectrometry, *Romanian Journal of Physics*, vol. 66(1-2), 2021, 802.
60. A. Al-Taani, Y. Nazzal, F. Howari, J. Iqbal, N. Bou-Orm, C. M. Xavier, A. Bărbulescu, M. Sharma, C.S. Dumitriu, Contamination assessment of heavy metals in agricultural soil, in the Liwa area (UAE), *Toxics*, vol. 9(3), 2021.
61. R. Costache, A. Bărbulescu, Q. B. Pham, Integrated framework for detecting the areas prone to flooding generated by flash-floods in small river catchments - a useful indicator for water quality, *Water*, vol. 13, 2021, 758.
62. A. Bărbulescu, L. Barbes, Modeling the outlet temperature in heat exchangers. Case study, *Thermal Science*, vol. 25, No.1B, 2021, pp. 591-602
63. A. Bărbulescu, C. Șerban, M.-L. Indrean, Improving spatial interpolation quality. IDW versus a genetic algorithm, *Water*, vol. 13, 2021, 863, <https://doi.org/10.3390/w13060863>
64. A. Bărbulescu, C. Ș. Dumitriu, Assessing the water quality by statistical methods, *Water*, vol. 13, 2021, 1026.
65. Y. H. Nazzal, A. Bărbulescu, F. Howari, A.A. Al-Taani, J. Iqbal, C. M. Xavier, M. Sharma, C.S. Dumitriu, Assessment of metals concentrations in agricultural soils of Abu Dhabi Emirate using pollution indices and multivariate statistics, *Toxics*, vol. 9(5), 2021, 95.
66. M. Mihăilescu, A. Negrea, M. Ciopec, P. Negrea, N. Duțeanu, I. Grozav, P. Svera, C. Vancea, A. Bărbulescu, C-S. Dumitriu, Full factorial design for gold recovery from industrial solutions, *Toxics*, vol. 9, 2021, 111.
67. A. Bărbulescu, C. Șerban, S. Caramihai, Assessing the soil pollution using a genetic algorithm, *Romanian Journal of Physics*, vol. 66(3-4), 2021, 806.
68. A. Bărbulescu, C. Ș. Dumitriu, On the Connection between the GEP Performances and the Time Series Properties, *Mathematics*, vol. 9, 2021, 1853.
69. F. Aonofriesei, A. Bărbulescu, C-S. Dumitriu, Statistical analysis of morphological parameters of microbial aggregates in the activated sludge from a wastewater treatment plant for improving its performances, *Romanian Journal of Physics*, vol. 66(7-8), 2021, 809.
70. Y. Nazzal, N. Bou Orm, A. Barbulescu, F. Howari, M. Sharma, A. Badawi, A.A. Al-Taani, J. Iqbal, F. El Ktaibi, C.M. Xavier, C.S. Dumitriu, Study of atmospheric pollution and health risk assessment A case study for the Sharjah and Ajman Emirates (UAE), *Atmosphere*, vol. 12(11), 2021, 1442.
71. A. Bărbulescu, L. Barbeș, C. S. Dumitriu, Assessing the water pollution of Brahmaputra River using water quality indexes, *Toxics*, vol. 9(11), 2021, 297.
72. F. Howari, M. Sharma, Y. Nazzal, A. Bărbulescu, F. AlAydaros, C. M. Xavier, Atmospheric topographic analysis of Mars, *Romanian Reports in Physics*, vol. 73(4), 2021, 805.
73. A. Bărbulescu, L. Barbeș, C. S. Dumitriu, Computer-aided classification of new psychoactive substances, *Journal of Chemistry*, vol. 2021, Article ID 4816970, 11 pag.

74. A. Bărbulescu, L. Barbeș, Statistical Assessment and Modeling of Benzene in Timiș County, România, *International Journal of Environmental Science and Technology*, vol. **19**, 2022, 817-828.
75. A. Bărbulescu, C. S. Dumitriu, C. Maftai, On the Probable Maximum Precipitation Method, *Romanian Journal of Physics*, vol. **67**, 2022, 801.
76. A. Bărbulescu, C. S. Dumitriu, Modeling the Voltage Produced by Ultrasound in Seawater by Stochastic and Artificial Intelligence Methods, *Sensors*, 2022, vol. **22(3)**, 1089.
77. A. Bărbulescu, C. S. Dumitriu, I. Ilie, S. B. Barbeș, Influence of Anomalies on the Models for Nitrogen Oxides, *Atmosphere*, vol. **13**, 2022, 558.
78. A. Bărbulescu, L. Barbeș, C. Ș. Dumitriu, Computer-aided methods for molecular classifications, *Mathematics*, vol. **10(9)**, 2022, 1543.
79. C. Șerban, C. Ș. Dumitriu, A. Bărbulescu, Solving Single Nesting Problem Using a Genetic Algorithm, *Analele Științifice ale Univ. Ovidius Constanta, Matematică*, vol. **30(2)**, 2022, 259-272.
80. A. Bărbulescu, L. Barbeș, C. S. Dumitriu, Impact of soil pollution on melliferous plants, *Toxics*, vol. **10**, 2022, 239.
81. L. Barbeș, A. Bărbulescu, Statistical Assessment, Modeling, and Mitigation of Water and Soil Pollution, *Toxics*, vol. **10(5)**, 2022, 261.
82. A. Bărbulescu, On the spatio-temporal characteristics of the aerosol optical depth in the Arabian Gulf zone, *Atmosphere*, vol. **13(6)**, 2022, 857.
83. A. Bărbulescu, L. Barbeș, Challenges and opportunities in the application of Chemometrics in the pharmaceutical and food science industries, *Journal of Chemistry*, vol. **2022**, Article ID 9823497, 3 pages.
84. A. Bărbulescu, C.S. Dumitriu, N. Popescu-Bodorin, Assessing atmospheric pollution and its impact on the human health. *Atmosphere*, vol. **13(6)**, 2022, 938.
85. C. S. Dumitriu, A. Bărbulescu, C. Maftai, IrrigTool - A New Tool for Determining the Irrigation Rate Based on Evapotranspiration Estimated by the Thornthwaite Equation, *Water*, vol. **14(15)**, 2022, 2399.
86. A. Crăciun, R. Costache, A. Bărbulescu, S. Chandra Pal, I. Costache, C.S. Dumitriu, Modern techniques for flood susceptibility estimation across the Deltaic Region (Danube Delta) from the Black Sea's Romanian Sector, *Journal of Marine Science and Engineering*, vol. **10**, 2022, 1149.
87. N. C. Popescu, A. Bărbulescu, On the flash flood susceptibility and accessibility in the Vărbilău catchment (Romania), *Romanian Journal of Physics*, vol. **67**, 2022, 811.
88. A. Bărbulescu, C. S. Dumitriu, N. Popescu-Bodorin, On the aerosol optical depth series in the Arabian Gulf region, *Romanian Journal of Physics*, vol. **67**, 2022, 814.
89. C.S. Dumitriu, A. Bărbulescu, Artificial intelligence models for the mass loss of copper-based alloys under the cavitation, *Materials*, vol. **15(19)**, 2022, 6695.
90. N. C. Popescu, A. Bărbulescu, Floods simulation on the Vedea River (Romania) using from hydraulic modeling and GIS software. A case study, *Water*, vol. **15(3)**, 2023, 483.
91. A. Bărbulescu, C.S. Dumitriu, Fractal characterization of brass corrosion in cavitation field in seawater, *Sustainability*, vol. **15(4)**, 2023, 3816.
92. A. Bărbulescu, On the regional climate change in the south-eastern part of Romania, *Applied Sciences*, vol. **15(4)**, 2023, 3816.
93. A. Bărbulescu, Fractal characterization of bronze erosion-corrosion in seawater, *Materials*, vol. **16(10)**, 2023, 3877.
94. A. Bărbulescu, S. Mocanu, Assessing Hydrological Drought in a Climate Change: Methods and Measures, *Water*, vol. **15**, 2023, 1978.
95. L. Barbeș, A. Bărbulescu, C.S. Dumitriu, Human health risk assessment to the consumption of medicinal plants with melliferous potential from the Romanian South-eastern region, *Toxics*, vol. **11(6)**, 2023, 520.
96. A. Bărbulescu, F. Postolache – Are the regional precipitation and temperature series correlated? Case study from Dobrogea, Romania, *Hydrology*, vol. **10(5)**, 2023, 109.
97. A. Bărbulescu, L. Barbeș, C.S. Dumitriu, Modeling the chlorine series from the treatment plant of drinking water in Constanta, Romania, *Toxics*, vol. **11(8)**, 699.
98. A. Bărbulescu, Modeling the greenhouse gases data series in Europe during 1990-2021, *Toxics*, vol. **11**, 726.
99. A. Bărbulescu, C. E. Maftai, Evaluating of the Probable Maximum Precipitation. Case study from the Dobrogea region, Romania, *Romanian Reports in Physics*, vol. **75(3)**, 2023, 704.
100. C. Popescu, A. Bărbulescu, Flood Hazard Evaluation using a Flood Potential Index, *Water*, vol. **15(20)**, 2023, 3533.

101. Y. Nazzal, A. Bărbulescu, M. Sharma, F. Howari, M. Naseem, Evaluating the contamination by the indoor dust in Dubai, *Toxics*, vol. **11(11)**, 2023, 933.
102. A. Bărbulescu, L. Barbeș, Assessing the efficiency of the drinking water treatment plant using statistical methods and quality indices, *Toxics*, vol. **11(12)**, 2023, 988.
103. L. Zhen, A. Bărbulescu, Comparative Analysis of Convolutional Neural Network-Long Short-Term Memory, Sparrow Search Algorithm-Backpropagation Neural Network, and Particle Swarm Optimization-Extreme Learning Machine for the Water Discharge of the Buzău River, Romania, *Water*, vol. **16**, 2024, 289.
104. H. B. Daskin, A. Bărbulescu, R. Muntean, E.C. Akçay, A comparative analysis of the criteria for choosing sustainable materials for façades in Turkey and the European Union, *Sustainability*, vol. **16**, 2024, 1539.
105. Y. Saliba, A. Bărbulescu, A Downscaling MERRA-2 Reanalysis PM2.5 series over the Arabian Gulf by Inverse Distance Weighting, Bicubic Spline Smoothing, and Spatio-temporal Kriging, *Toxics*, vol. **12**, 2024, 177.
106. S.-B. Barbes, A. Bărbulescu, L. Barbeș, Assessing Benzene and TVOC Pollution and the Carcinogenic and Noncarcinogenic Risks to the Workers in an Industrial Plant in the Southeastern Part of Romania, *Toxics*, vol. **12(3)**, 2024, 187.
107. A. Bărbulescu, Statistical analysis and modeling of the CO₂ series emitted by Thirty European countries, *Climate*, vol. **12(3)**, 2024, 34.
108. A. Bărbulescu, N. Mohammed, Study of the river discharge alteration, *Water*, vol. **16**, 2024, 808. Q2
109. C. E. Cazacu, C. Ș. Dumitriu, A. Bărbulescu, Concrete CFRP-reinforced beam performances, tests and simulations, *Sustainability*, vol. **16(7)**, 2024, 2614
110. A. Bărbulescu, L. Barbeș, C. Ș. Dumitriu, Advances in Water, Air and Soil Pollution Monitoring, Modeling and Restoration, *Toxics*, vol. **12(4)**, 2024, 244
111. Y. Saliba, A. Bărbulescu, A comparative evaluation of spatial interpolation techniques for maximum temperature series in the Montreal region, *Romanian Reports in Physics*, vol. **76(1)**, 2024, 701.
112. A. Bărbulescu, L. Zhen, Forecasting the River Water Discharge by Artificial Intelligence Methods, *Water*, vol. **16(9)**, 1248.
113. A. Bărbulescu, Y. Saliba, Sensitivity Analysis of the Inverse Distance Weighting and Bicubic Spline Smoothing Models for MERRA-2 Reanalysis PM_{2.5} series in the Persian Gulf Region, *Atmosphere*, vol. **15(7)**, 2024, 748.
114. N. Popescu-Bodorin, A. Bărbulescu, A ten times smaller version of CPC Global Daily Precipitation Dataset for parallel distributed processing in Matlab and R, *Romanian Reports in Physics*, <https://rrp.nipne.ro/IP/AP733.pdf>
115. A. Bărbulescu, C. Ș. Dumitriu, About the long-range dependence of cavitation effect on a copper alloy, *Romanian Journal of Physics*, vol. **69(5-6)**, 2024, 904.
116. R. Calotă, O. Pop, F. Bode, C. Croitoru, A. Serafim, A. Barbulescu, C. Damian, L. Tefas, A Novel Concept of Nano-Enhanced Phase Change Material for Solar Energy Storage Enhancement, *Materials*, vol. **17**, 2024, 288. <https://doi.org/10.3390/ma17174268>
117. M.V. Stancu, M. I. Chevereșan, D. Sârbu, A. Maizel, R. Soare, A. Bărbulescu, C. S. Dumitriu, Influence of marine currents, waves and shipping traffic on Sulina channel fairway at the mouth of Black Sea, *Water*, **16(19)**, 2024, 2779; <https://www.mdpi.com/2073-4441/16/19/2779>; DOI: 10.3390/w16192779; WOS: 001332130200001
118. L. Zhen, A. Barbulescu, Echo State Network and Sparrow Search –Echo State Network for Modeling the Monthly River Discharge, *Water*, **6(20)**, 2024, 2916. <https://www.mdpi.com/2073-4441/16/20/2916>; DOI: 10.3390/w16202916; WOS:001341753900001
119. C. Popescu, A. Bărbulescu, A practical approach on reducing the flood impact: A case study from Romania, *Applied Sciences*, **14(22)**, 2024, 10378. <https://www.mdpi.com/2076-3417/14/22/10378>.
120. C.E. Maftai, A. Bărbulescu, A. Osman. Assessment of the drought risk in Constanța County, Romania, *Atmosphere*, **15(11)**, 2024, 1281. <https://www.mdpi.com/2073-4433/15/11/1281>.
121. A. Bărbulescu, S.B. Barbeș, L. Barbeș, C.S. Dumitriu, Investigation of VOC Series Collected in a Refinery and Their Classification Based on Statistical Features, *Applied Sciences*, **14(24)**, 11921. <https://www.mdpi.com/2076-3417/14/24/11921>.
122. R. Costache, A. Crăciun, N. Ciobotaru, A. Bărbulescu, Intelligent methods for estimating the flood susceptibility in the Danube Delta, Romania, *Water*, **16(23)**, 2024, 3511. <https://www.mdpi.com/2073-4441/16/23/3511>.

123. D. Simian, E.M. Șerban, A. Bărbulescu, Machine Learning-Based Multifaceted Analysis Framework for Comparing and Selecting Water Quality Indices, *Water Resources Management*, 39, 2025, 847-863; <https://doi.org/10.1007/s11269-024-03993-8>.
124. G. Radu, M.I. Chevereșan, S. Perju, A. Bărbulescu, Integrating Nature-Based Solutions for increased resilience to urban flooding in the Climate Change Context, *Hydrology*, 12(1), 2025, 16. .
125. Y. Saliba, A. Bărbulescu, Assessing Pollution with Heavy Metals and its Impact on Population, *Toxics*, 13(1), 2025, 52; <https://www.mdpi.com/2305-6304/13/1/52>.
126. Y. Saliba, A. Bărbulescu, A Multi-Method Approach to Analyzing Precipitation Series and Their Change points in Semi-Arid Climates: The Case of Dobrogea, *Water*, 17(3), 2025, 391; <https://doi.org/10.3390/w17030391>.
127. A. Bărbulescu, Modeling Greenhouse Gas Emissions from Agriculture, *Atmosphere*, 16(3), 2025, 295; <https://doi.org/10.3390/atmos16030295>.
128. Z. Liu, A. Bărbulescu, Quantum Neural Networks Approach for Water Discharge Forecast, *Applied Sciences*, 15(8), 2025, 4119; <https://doi.org/10.3390/app15084119>
129. C. Popescu, A. Bărbulescu, Flooding simulation at the confluence between the Strâmba and Aluniș Rivers in the Vărbilău Catchment, in Romania, *Romanian Reports in Physics*, accepted.

II. ARTICLES IN WOS PROCEEDINGS

1. A. Bărbulescu, New results about the H-measure of a set, *Analysis and Optimization of Differential Systems*, vol. 121, 2003, pp. 43-48 (ISSN 1571 – 5736) [WOS:000183539500005](https://www.wos.org/wos/record/000183539500005)
2. C. Maftai, A. Bărbulescu, Statistical analysis of climate evolution in Dobrudja region, *Lecture Notes in Engineering and Computer sciences*, WCE 2008, vol.II, pp.1082-1087 (ISBN 978 – 988 – 98671 – 9 – 5), http://www.iaeng.org/publication/WCE2008/WCE2008_pp1082-1087.pdf
[WOS:000259580600203](https://www.wos.org/wos/record/000259580600203)
3. A. Bărbulescu, D. - C. Toncu, L. Orac, Analysis and models of some composites corrosion evolution, *Recent Advances in Materials Science*, 2008, pp. 63 – 69 (ISSN 1790-2769), <http://www.wseas.us/e-library/conferences/2008/bucharest2/material/materials12.pdf>
[WOS:000259580600203](https://www.wos.org/wos/record/000259580600203)
4. A. Bărbulescu, E. Pelican, On the Sulina Precipitation Data Analysis Using the ARMA models and a Neural Network Technique, *Recent Advances in Mathematical and Computational Methods in Science and Engineering*, Part II, 2008, pp.508 – 511 (ISSN 1790 – 2769),
<http://www.wseas.us/e-library/conferences/2008/bucharest2/macmese/macmese-S09.pdf>
[WOS:000262436800107](https://www.wos.org/wos/record/000262436800107)
5. A. Bărbulescu, E. Pelican, ARIMA models for the analysis of the precipitation evolution, *Recent Advances in Computers*, 2009, pp. 221 – 226 (ISSN 1790-5109) [WOS:000276790600032](https://www.wos.org/wos/record/000276790600032)
<http://www.wseas.us/e-library/conferences/2009/rodos/COMPUTERS/COMPUTERS32.pdf>
6. A. Bărbulescu, F. Stoica, L. F. Stoica, Sensemaking with Interactive Data Visualization, in *Proceedings of the 28th IBIMA Conference*, Sevilla, Spain, 9-10.11.2016, Vision 2020: Innovation Management, Development Sustainability, and Competitive Economic Growth, K.S. Soliman editor, pp. 3213 – 3228, International Business Information Management Association (IBIMA)
https://www.researchgate.net/publication/311456424_Sensemaking_with_Interactive_Data_Visualization
[WOS:000392785700327](https://www.wos.org/wos/record/000392785700327)
7. A. Bărbulescu, S.V. Balaș, I.E. Koles, C.A. Mnerie, On the Long Range Dependence Property of the Electrical Signals Collected in Cavitation Field, in *Soft Computing Applications*, vol. 357 of the series *Advances in Intelligent Systems and Computing*, (eds. V.E. Balas, L. C. Jain, B. Kovacevic), Springer, 2016, pp 781-789 (ISBN: 978-3-319-18415-9 (Print) 978-3-319-18416-6 (Online)).
https://link.springer.com/chapter/10.1007/978-3-319-18416-6_61 [WOS:000452854600005](https://www.wos.org/wos/record/000452854600005)
8. C. A. Mocanu - Vargancsik, A. Barbulescu, On the variability of a river water flow, under seasonal conditions. Case study, WRE 2019, Macao, *IOP Conference Series: Earth and Environmental Science*, 344, 2019, 012028. doi:10.1088/1755-1315/344/1/012028. [WOS:000562941100027](https://www.wos.org/wos/record/000562941100027)
9. A. Bărbulescu, L. Barbes, A. Dani, Statistical analysis of the quality indicators of the Danube River (in Romania), in Naddeo V., Balakrishnan M., Choo KH. (eds), *Frontiers in Water-Energy-Nexus—Nature-Based Solutions, Advanced Technologies and Best Practices for Environmental Sustainability*, *Advances in Science, Technology & Innovation (IEREK Interdisciplinary Series for Sustainable Development)*, Springer,

Cham, 2020, pp. 277-279, ISBN:978-3-030-13067-1, https://doi.org/10.1007/978-3-030-13068-8_69.
[WOS:000652171300069](#)

10. A. Dani, A. Bărbulescu, Statistical Analysis of the Water Quality of the Major Rivers in India, in Naddeo V., Balakrishnan M., Choo KH. (eds), *Frontiers in Water-Energy-Nexus—Nature-Based Solutions, Advanced Technologies and Best Practices for Environmental Sustainability, Advances in Science, Technology & Innovation (IEREK Interdisciplinary Series for Sustainable Development)*, Springer, Cham, 2020, pp. 281-283, ISBN:978-3-030-13067-1, [WOS:000652171300070](#).

11. A-M. Badea, C.-C. Băcăuanu, A. Bărbulescu, Prediction of greenhouse series evolution. Case study, *International Conference on Modelling and Development of Intelligent Systems MDIS 2019: Modelling and Development of Intelligent Systems, Communications in Computer and Information Science book series (CCIS)*, vol. 1126, D. Simian, L. Stoica (Eds.), Springer, Cham, 2020, pp.133-145, ISBN:978-3-030-39236-9. https://link.springer.com/chapter/10.1007%2F978-3-030-39237-6_9 [WOS:000656877000009](#).

12. A. Bărbulescu, C.S. Dumitriu, ARIMA and Wavelet-ARIMA Models for the Signal Produced by Ultrasound in Diesel, *Proceedings of the 25th International Conference on System Theory, Control and Computing (ICSTCC)*, Iasi, Romania, Oct. 20-23, 2021, 671-676, DOI: 10.1109/ICSTCC52150.2021.9607321. [WOS:000859487900111](#)

13. A. Bărbulescu, C.S. Dumitriu, Assessing the Fractal Characteristics of Signals in Ultrasound Cavitation, *Proceedings of the 25th International Conference on System Theory, Control and Computing (ICSTCC)*, Iasi, Romania, Oct. 20-23, 2021, 677-681, DOI:10.1109/ICSTCC52150.2021.9607168. [WOS:000859487900112](#)

14. C. Popescu, A. Bărbulescu, Flood simulation on the Vedeia River in Alexandria, Romania, using hydraulic modelling and GIS techniques, *IOP Conference Series: Earth and Environmental Science*, vol. **1185**, 2023, 012026, doi:10.1088/1755-1315/1185/1/012026 [WOS:001007152800025](#)

15. M. I. Chevereșan, M. Mainerici, A. Bărbulescu, Advancing Water Resource Management in Romania through National-Level Decision Support Systems, *2024 10th International Conference on Control, Decision and Information Technologies (CoDIT)*, Vallette, Malta, July 01-04, 2024, pp.1756-1761. doi: [10.1109/CoDIT62066.2024.10708555](#) [WOS:001345039101134](#)

16. M. I. Chevereșan, M.V. Stancu, D. Sarbu, A. Maizel, R. Soare, A. Bărbulescu, Modeling the influence of the navigation depths increase upon Riverbeds, Banks, Fairways, and Dikes. A Case Study in the Black Sea. *2024 10th International Conference on Control, Decision and Information Technologies (CoDIT)*, Vallette, Malta, July 01-04, 2024, pp. 2164-2169, doi: 10.1109/CoDIT62066.2024.10708465. [WOS:001345039102032](#)

III. ARTICLES IN JOURNALS INDEXED IN INTERNATIONAL DATA BASES

1. A. Bărbulescu, About the (α, p) - capacity of a set, *An. Șt. Univ. "Ovidius", Mathematics*, vol. **6**(2), 1998, pp. 5 – 14. (ISSN 1224 – 1784) (Zblatt, Math Rev)

2. A. Bărbulescu, Some determination methods for the relations between p – module and p – capacity, *An. Șt. Univ. "Ovidius", Mathematics*, vol.7(2), 1999, pp.1–7 (ISSN 1224 – 1784) <http://www.anstuocmath.ro/> (Zblatt, Math Rev)

3. A. Bărbulescu, About the positivity of the Hausdorff h - measure, *An. Șt. Univ. "Ovidius", Mathematics*, vol. **8**(1), 2000, pp.17-24. (ISSN 1224 – 1784) <http://www.anstuocmath.ro/> (Zblatt, Math Rev)

4. A. Bărbulescu, About a program for the calculus of the Padé approximants, supplement to vol. **IX** (2), *An. Șt. Univ. "Ovidius", Mathematics*, 2001, pp. 187 - 193 (ISSN 1224 - 1784) <http://www.anstuocmath.ro/> (Zblatt, Math Rev)

5. A. Bărbulescu, About the h -measure of a set. II, *An. Șt. Univ. "Ovidius", Mathematics*, vol. **9**(2), 2001, pp. 5 - 8 (ISSN 1224 – 1784) <http://www.anstuocmath.ro/> (Zblatt, Math Rev)

6. A. Bărbulescu, About a program for the calculus of the Padé approximants. II, *Automation Computers Applied Mathematics*, vol. **11**, no.1, 2002, pp. 13 – 19 (ISSN 1221 – 437x) (Zblatt, Math Rev)

7. A. Bărbulescu, The modeling of the unemployment in Romania, after 1990, *Bull. Sci. Univ. Baia Mare, seria B, Mathematics – Informatics*, vol. **XVIII**, nr. 2, 2002, pp. 141 - 146 (ISSN 1224 - 3221) http://carpathian.ubm.ro/?m=past_issues (Zblatt, Math Rev)

8. A. Bărbulescu, Some models for the voltage, *An. Șt. Univ. "Ovidius", Mathematics*, vol.10 (2), 2002, pp.1-7 (ISSN 1224 – 1784) <http://www.anstuocmath.ro/> (Zblatt, Math Rev)

9. A. Bărbulescu, On the h – measure of a set, *Revue Roumaine de Mathématiques pures et appliqués*, Tom **XLVII**, Nos. 5 - 6, 2002, pp. 547 - 552 (ISSN 0035 – 3965) (Zblatt)
10. A. Bărbulescu, Applications of some equivalence relation in the determination of the relations between some type of capacities and their values, *Seminar on fixed point theory*, **III**/2002, pp. 203 – 208 (ISSN 1583 – 5022) http://www.math.ubbcluj.ro/~nodeacj/vol_3%282002%29.htm (Zblatt, Math Rev)
11. A. Bărbulescu, C. Dumitriu, On the freeboard calculus, *Automation, Computers Applied Mathematics*, vol. **13**, no.3, 2004, pp. 13 – 20 (ISSN 1221 – 437x) http://www.acam.utcluj.ro/web/index.php?option=com_content&view=article&id=50&Itemid=56 (Zblatt, Math Rev)
12. A. Bărbulescu, V. Mârza, Some results regarding the ultrasonic cavitation, *Acta Universitatis Apulensis*, No.7/2004, Alba – Iulia, pp. 31 - 38. (ISSN 1582 – 5329) <http://www.uab.ro/auajournal/acta7.html> (Zblatt, Math Rev)
13. A. Bărbulescu, On a class of functions with the graph Box dimension s , *An. Șt. Univ. "Ovidius", Mathematics*, vol.**12** (2), 2004, pp. 1 - 8. (ISSN 1224 – 1784) <http://www.anstuocmath.ro/> (Zblatt, Math Rev)
14. V. Mârza, A. Bărbulescu, G. Mândrescu, The electrical effect induced by the cavitation bubbles, *Romanian Journal of Physics*, vol. **49**, nos.1- 2, 2004, pp.189 -193 (ISSN 1221 – 146x)
15. A. Bărbulescu, Boundedness conditions of Hausdorff measures in measures metric spaces, *An. Șt. Univ. "Ovidius", Mathematics*, vol. **13**(2), 2005, pp. 1-8 (ISSN 1224 – 1784) <http://www.anstuocmath.ro/> (Zblatt, Math Rev)
16. D. Savin, A. Bărbulescu, The Diophantine equation $x^4 - q^4 = py^7$ in special conditions, *Automation, Computers Applied Mathematics*, vol. **15**, no.2, 2006, pp. 295 – 300 (ISSN 1221 – 437x) http://www.acam.utcluj.ro/web/index.php?option=com_content&view=article&id=50&Itemid=56 (Zblatt, Math Rev)
17. L. Roșu, A. Bărbulescu, S. Hancu, A. Dumitru, Deterministic multivariate model for simulation of downstream bival automatic controller in irrigation systems, *An. Șt. Univ. "Ovidius", Mathematics*, vol. **15**(2), 2007, pp.71-82 (ISSN 1224 – 1784) <http://www.anstuocmath.ro/> (Zblatt, Math Rev)
18. A. Bărbulescu, Results on fractal measure of some sets, *Theory of Stochastic Processes*, **13**(29), nos. 1 - 2, 2007, pp.13 – 22 (ISSN 0321 – 3900) http://tsp.imath.kiev.ua/published/volume13_1_2/ (Zblatt, Math Rev)
19. A. Bărbulescu, ARIMA models for unemployment, *Creative Mathematics and Informatics*, **17**, 2008, pp. 78-83 (ISSN 1584- 286x) http://creative-mathematics.ubm.ro/?m=past_issues (Zblatt, Math Rev)
20. A. Bărbulescu, E. Băutu, Meteorological Time Series Modelling Using an Adaptive Gene Expression Programming, *Recent Advances in Evolutionary Computing*, 2009, pp. 17 – 23 (ISBN 978 – 960 – 474 – 067 – 3, ISSN 1790 – 5109) (ACM)
21. A. Bărbulescu, E. Băutu, ARIMA Models versus Gene Expression Programming In Precipitation Modeling, *Recent Advances in Evolutionary Computing*, 2009, pp.112 – 117 (ISBN 978 – 960 – 474 – 067 – 3, ISSN 1790 – 5109) (ACM)
22. A. Bărbulescu, E. Băutu, ARIMA and GEP models for climate variation, *International Journal of Mathematics and Computation*, June 2009, vol. 3, No J09, pp. 1-7 (ISSN 0974 - 5718), <http://www.ceser.res.in/ceserp/index.php/ijmc/issue/archive> (Zblatt, Math Rev)
23. A. Bărbulescu, E. Băutu, Time Series Modeling Using an Adaptive Gene Expression Programming, *International Journal of Mathematical Models and Methods in Applied Sciences*, Issue 2, vol. 3, 2009, pp. 85 – 93 (ISSN 1998-0140) (SCOPUS)
24. A. Bărbulescu, D - C. Toncu, Modelling Precipitation Influence on Tăbăcărie Lake Water Quality, *Mathematical Methods, Computational Techniques, Intelligent Systems*, 2010, pp.152 - 158 (ISSN: 1790 – 2769, ISBN 978-960-474-188-5) (Zblatt)
25. A. Bărbulescu, The analysis of correlation of some ions concentration in rainwater in an urban area, *International Journal of Mathematical Models and Methods in Applied Sciences*, Issue **2**, vol. 4, 2010, pp.105 – 112 (ISSN 1998-0140) (SCOPUS)
26. A. Bărbulescu, C. Șerban (Gherghina), C. Maftai, Statistical Analysis and Evaluation of Hurst Coefficient for Annual and Monthly Precipitation Time Series, *WSEAS Transactions on Mathematics*, Issue **10**, vol. 9, Oct. 2010, pp. 791 – 800 (ISSN 1109 – 2769) (SCOPUS)
27. C. Șerban, C. Maftai, A. Bărbulescu, Assessment of Evapotranspiration Using Remote Sensing Data and Grid Computing and Application, *WSEAS Transactions on Computers*, Issue **11**, vol. 9, Nov. 2010, pp. 245 – 1254 (ISSN 1109-2750) (SCOPUS)
28. A. Bărbulescu, C. Șerban (Gherghina), C. Maftai, Evaluation of Hurst exponent for precipitation time series, *Latest Trends on Computers*, Vol.**II**, 2010, pp. 590 – 595 (ISSN 1792 – 4251, ISBN: 978 – 960 – 474 – 213 – 4) (SCOPUS)

29. C. Șerban (Gherghina), C. Maftei, A. Bărbulescu, Estimation of Evapotranspiration Using Remote Sensing Data and Grid Computing: A Case Study in Dobrogea, Romania, *Latest Trends on Computers*, Vol. II, 2010, pp. 596 – 601 (ISSN 1792 – 4251, ISBN 978-960-474-213-4) (SCOPUS)
30. C. Maftei, A. Bărbulescu, C. Buta, C. Șerban (Gherghina), Change Points Detection and Variability Analysis of some Precipitation Series, *Recent Researches in Computational Techniques, Non-Linear Systems and Control*, 2011, pp. 232 – 237 (ISBN 978-1-61804-011-4) (ACM)
31. Deguenon, A. Bărbulescu, Study of Extreme Daily Rainfall Using GPD Model, *International Journal of Mathematics and Computation*, vol.11, no. J11, 2011, pp. 28 – 37 (ISSN 0974 – 5718) <http://www.ceserp.com/cp-jour/index.php?journal=ijmc> (Zblatt, Math Rev)
32. C. (Gherghina) Șerban, C. Maftei, A. Bărbulescu, A Web Services Composition with BPEL for Satellite-based Land Surface Temperature Estimation, *International Journal of Mathematics and Computation*, vol.11, no. J11, 2011, pp. 61 – 72 (ISSN 0974 – 5718) <http://www.ceserp.com/cp-jour/index.php?journal=ijmc> (Zblatt, Math Rev)
33. J. Deguenon, A. Bărbulescu, Trends of extreme precipitation events in Dobrudja, *Ovidius University Annals, Series: Civil Engineering*, vol.1, no.7, Nov.2011, pp. 73 – 80 (ISSN 1584 – 5990) (Index Copernicus)
34. C. Maftei, A. Bărbulescu, C. Șerban (Gherghina), I. Ilie, Statistical analysis of precipitation variability in Dobrudja region, *Ovidius University Annals, Series: Civil Engineering*, vol. 1, no.7, nov. 2011, pp. 81-92, (ISSN 1584 – 5990) (Index Copernicus)
35. A. Bărbulescu, J. Deguenon, Mathematical models for extreme monthly precipitation, *Ovidius University Annals, Series: Civil Engineering*, vol. 13, no. 7, nov. 2011, pp. 93 – 104, (ISSN 1584– 5990) (Index Copernicus)
36. A. Bărbulescu, C. Șerban, Statistical and multifractal analysis of rainfall of Romania, *International Journal of Ecological Economics & Statistics*, vol. 25, issue 2, 2012, pp. 1-11, (ISSN 0973 – 7537) <http://ceser.in/ceserp/index.php/ijeess/issue/view/138> (Zblatt)
37. A. Bărbulescu, About Fibonacci numbers and functions, *International Journal of Mathematics and Computers in Simulation*, Issue 1, vol. 6, 2012, pp. 222 – 229, (ISSN 1998-0159), www.naun.org/journals/mcs/17-916.pdf (SCOPUS)
38. A. Bărbulescu, J. Deguenon, Nonparametric methods for fitting the precipitation variability applied to Dobrudja region, *International Journal of Mathematical Models and Methods in Applied Sciences*, Issue 4, vol. 6, 2012, pp. 608 – 615, (ISSN 1998 – 0140) (SCOPUS)
39. A. Bărbulescu, J. Deguenon, Modeling the annual precipitation evolution in the region of Dobrudja, *International Journal of Mathematical Models and Methods in Applied Sciences*, Issue 5, vol. 6, 2012, pp. 617 – 624, (ISSN 1998 – 0140) <http://naun.org/multimedia/NAUN/m3as/16-240.pdf> (SCOPUS)
40. A. Bărbulescu, J. Deguenon, Fitting Precipitation Variability in Dobrudja region, *Recent Researches in Applied Computers and Computational Science (ACACOS '12)*, 2012, pp. 30-35 (ISBN 978-1-61804-084-8) (ACM)
41. A. Bărbulescu, J. Deguenon, Nonparametric models for the regional precipitation evolution in Dobrudja, *Recent Researches in Applied Computers and Computational Science (ACACOS '12)*, 2012, pp. 41-45 (ISBN 978-1-61804-084-8) (ACM)
42. C. Maftei, A. Bărbulescu, P. Hubert, C. Șerban, G. Dobrică, Statistical analysis of precipitation from Constanța (Romania) Meteorological Station, *Recent Researches in Applied Computers and Computational Science (ACACOS '12)*, 2012, pp. 52 - 57 (ISBN 978-1-61804-084-8) (ACM)
43. J. Deguenon, A. Bărbulescu, Fractal characterization of rainfall in Benin, *International Journal of Ecological Economics & Statistics*, Issue No. 3, Vol. 30, April 2013, pp. 46 – 55 (ISSN 0973 – 7537) <http://ceserp.com/cp-jour/index.php?journal=ijeess&page=issue&op=view&path%5B%5D=185> (MathRev, Zblatt)
43. A. Bărbulescu, A. Petac, Statistical assesment of precipitation evolution. Case study, *Automation, Computers Applied Mathematics*, vol. 22(1), 2013, pp. 7 - 15. (MathRev)
44. G. Minea, A. Bărbulescu, Statistical assessing of hydrological alteration of Buzău River induced by Siriu dam (Romania), *Forum geographic*, vol. 13(1), 2014, pp. 50 – 58, DOI: 10.5775/fg.2067-4635.2014.104.i (Index Copernicus, EBSCO, Ulrich).
45. F. Stoica, A. Bărbulescu, L. F. Stoica, Tuning Extreme Learning Machines with genetic algorithms, Modelling and Development of Intelligent Systems, Proceedings of Fifth International Conference June 23 – 25, 2017, Sibiu, Romania, 2018, pp. 72-81 (Zblatt)
46. C.A. Mocanu - Vargancsik, A. Bărbulescu, Analysis on variability of Buzău River discharges, *Ovidius University Annals Series: Civil Engineering*, Year 20, 2018, pp. 51-56.

47. C. A. Mocanu-Vargancsik, A. Barbulescu, Study of the Temperature's Evolution Trend on the Black Sea Shore at Constanta, Sea-Conf 2019, *IOP Conference Series: Journal of Physics Conference Series*, no. **1297**, 2019, art. 012010. doi:10.1088/1742-6596/1297/1/012010.
48. A. Bărbulescu, C. S. Dumitriu, Markov Switching Model for Financial Time Series, "Ovidius" University Annals, *Economic Sciences Series*, vol. **XXI**, Issue **1**, 2021, pp. 193- 198.
49. A. Bărbulescu, C. S. Dumitriu, Artificial intelligence models for financial time series, *Ovidius" University Annals, Economic Sciences Series*, vol. **XXI**, Issue **1**, 2021, pp. 685 – 690.
50. C.S. Dumitriu, A. Bărbulescu, Copper corrosion in ultrasound cavitation field, *The Annals of Dunarea de Jos University of Galati, Fascicle IX, Metallurgy and Materials Science*, vol. **3**, 2021, pp. 31-35.
51. A. Bărbulescu, C.S. Dumitriu, RBF model for the mass loss of a brass in cavitation field, *The Annals of Dunarea de Jos University of Galati, Fascicle IX, Metallurgy and Materials Science*, nr. **4**, 2021, pp. 17-21.
52. A. Bărbulescu, C.S. Dumitriu, On the fractal characteristics of some meteorological extreme series recorded at Constanta, Romania, *Ovidius University Annals of Constanta - Series Civil Engineering*, year **23**, pp. 77-82, 2021. DOI: 10.2478/ouacsce-2021-009.
53. A. Bărbulescu, C.S. Dumitriu, The impact of the implementation of the European Directive COM(2011) 144 on pollution and traffic events, "Ovidius" University Annals, *Economic Sciences Series*, vol. **XXI**, Issue **2**, 2021, pp. 64-70.
54. C. Șerban, A. Bărbulescu, C. Ș. Dumitriu, Maximum precipitation interpolation using an evolutionary optimized IDW algorithm, *IOP Conference Series: Earth and Environmental Science*, **958**, 2022, 012006, DOI: doi:10.1088/1755-1315/958/1/012006. (SCOPUS)
55. A. Bărbulescu, C.S. Dumitriu, F. Dragomir, Detecting Aberrant Values and Their Influence on the Time Series Forecast, Proc. of the International Conference on Electrical, Computer, Communications and Mechatronics Engineering (ICECCME), 7-8 October 2021, Mauritius, DOI: 10.1109/ICECCME52200.2021.9591085. (SCOPUS)
56. F. Dragomir, C.S. Dumitriu, A. Bărbulescu, Recommendation systems - modeling abusive clauses in e-commerce, Proc. of the International Conference on Electrical, Computer, Communications and Mechatronics Engineering (ICECCME), 7-8 October 2021, Mauritius, DOI: 10.1109/ICECCME52200.2021.9590828. (SCOPUS)
57. C. Popescu, A. Bărbulescu, C.S. Dumitriu, Modeling Road Accessibility in a Flood-Prone Area in Romania, *Engineering Proceedings*, vol. **39(1)**, 2023, 22, https://doi.org/10.3390/engproc2023_039022 (SCOPUS)
58. N. Popescu-Bodorin, M. Nagy, A. Bărbulescu Dismounting the so-called Condorcet Drivers Paradox, *Procedia Computer Science*, vol. **214(C)**, 2023, 1077-1081, DOI:10.1016/j.procs.2022.11.280 (SCOPUS)
59. S. Mocanu, C.-Ș. Dumitriu, A. Bărbulescu, Experimental setup for automatic position control of an adjustable cantilever under external load, *2024 16th International Conference on Electronics, Computers and Artificial Intelligence (ECAI)*, Iasi, Romania, 2024, pp. 1-4, doi: 10.1109/ECAI61503.2024.1060748.
60. R. -M. Galeș, C. -Ș. Dumitriu, A. Bărbulescu and M. Chevereșan, Using Alize Software to Simulate the Forest Roads Resistance in Different Scenarios, *2024 4th International Conference on Electrical, Computer, Communications and Mechatronics Engineering (ICECCME)*, Male, Maldives, 2024, pp. 1-5, doi: 10.1109/ICECCME62383.2024.10796869; <https://0a106vrsr-y-https-ieeeexplore-ieee-org.z.e-nformation.ro/document/10796869> (SCOPUS).
61. Y. Saliba, A. Bărbulescu, A critical approach to clustering precipitation series in the Dobrogea region, Romania, *E3S Web of Conferences EENVIRO 2024*, **608**, 2025, 05027, <https://doi.org/10.1051/e3sconf/202560805027> (SCOPUS).

IV. ARTICLES IN OTHER PEER REVIEWED INTERNATIONAL JOURNALS

1. A. Bărbulescu, About the positivity of the Hausdorff h - measure, *Bull for Applied & Computing Math.* (**XCVI – A**), Technical University of Budapest, 2001, pp. 117 -124 (ISSN 0133 – 3526)
2. A. Bărbulescu, C. Gherghina, Mathematical modeling of the water retention in different soil textural type, *Bull. For Applied & Computer Mathematics* (**XCVI – C**), Technical University of Budapest, 2001, pp. 23 – 30 (ISSN 0133 – 3526)
3. A. Bărbulescu, C. Maftai, Mathematical modeling of the erosion process for the experimental plot, *Bull. For Applied & Computer Mathematics* (**XCVI – C**), Technical University of Budapest 2001, pp. 31 – 38 (ISSN 0133 – 3526)

4. A. Bărbulescu, C. Maftai, C. Dumitriu, The modeling of the climatic process that participates at the sizing of an irrigation system, *Bull. for Applied & Computer Mathematics (XCVII – D)*, Technical University of Budapest, 2002, pp. 11 – 20 (ISSN 0133 – 3526)
5. A. Bărbulescu, *Application of the differential equations in epidemiology*, *Bull. for Applied & Computer Mathematics (XCVII – D)*, Technical University of Budapest, 2002, pp. 21 – 26 (ISSN 0133 – 3526)
6. A. Bărbulescu, A model for the water leakage after a torrential rain, *Bull. for Applied & Computer Mathematics (XCVIII – C)*, Technical University of Budapest, 2003, pp. 133 – 138 (ISSN 0133 – 3526)
7. A. Bărbulescu, C. Ciobanu, Mathematical characterization of the signals that determine the erosion by cavitation, *International Journal Mathematical Manuscripts* vol.1, no.1 (2007), pp. 42 – 48 (ISSN 0974 – 2883), www.ripublication.com/volume/ijmmv1n2.htm
8. C. Ciobanu, A. Bărbulescu, Something about Conformal Mapping in Hydrodynamic, *International Journal Mathematical Manuscripts* vol.1, no.1 (2007), pp. 59 – 64 (ISSN 0974 – 2883), www.ripublication.com/volume/ijmmv1n2.htm
9. C. Maftai, C. Gherghina, A. Bărbulescu, A computer program for statistical analyzes of hydro - meteorological data, *International Journal Mathematical Manuscripts* vol.1, no.1 (2007), pp. 95 – 103 (ISSN 0974 – 2883), www.ripublication.com/volume/ijmmv1n2.htm
10. A. Bărbulescu, L. Orac, Corrosion analysis and models for some composites behavior in saline media, *International Journal of Energy and Environment*, Issue 1, vol.2, 2008, pp. 35-44 (ISSN 1109 – 9577), <http://www.naun.org/journals/energyenvironment/>

V. ARTICLES IN ROMANIAN CNCS B/B+ - QUOTED JOURNALS AT THE APPARITION MOMENT (NOW in INTERNATIONAL DATA BASES)

1. A. Bărbulescu, C. Gherghina, L. Roșu, *Rezultate experimentale privind circulația apei în medii poroase nesaturate*, *Bull. Tehn. Univ „Gh. Asachi” Iași*, Tom XLVII (LI), fasc. 1- 4 II, 2001, pp. 219 – 224 (ISSN 1224 – 3892)
2. A. Bărbulescu, Applications of the time series in the experimental determination of the soil humidity, *Analele Universității din Oradea, Științe economice*, tom X, 2001, pp. 37 – 41 (ISSN 1582 – 5450)
3. A. Bărbulescu, About some properties of the Hausdorff measure, *Sci. Bull. „Politehnica” Univ. Timișoara, Transactions on Mathematics – Physics*, 2003, pp.17 – 22 (ISSN 1224 – 6069)
4. A. Bărbulescu, V. Mârza, Electrical phenomena induced by cavitation in oil, *Sci. Bull. of the „Politehnica” University of Timișoara, Transactions on Mechanics*, Tome 49 (63), 2004, pp.117-121 (ISSN 1224 – 6077)
5. C. Koncsag, A. Bărbulescu, Mathematical model for the estimation of mass transfer coefficients at the extraction of thiols with alkaline solutions in packed columns, *Chem. Bull. Politehnica University (Timișoara)*, vol.49 (63), 1-2, 2004, pp. 30 – 35 (ISSN 1224 – 6018)
6. A. Bărbulescu, C.S. Dumitriu, Models of the mass loss of some copper alloys, *Chem. Bull. Politehnica University (Timișoara)*, vol. 52 (66), 1-2, 2007, pp.120-123 (ISSN 1224 – 6018)
http://www.chemicalbulletin.ro/Chemical-Bulletin-Issue_iD.html

VI. OTHER PEER REVIEWED ROMANIAN JOURNALS AT THE APPARITION MOMENT

1. A. Bărbulescu, La finitude d'une h - mesure Hausdorff d' une ensemble des points dans le plan, *Analele Universității "Valahia", Târgoviște*, fasc. II, 1995/1996, pp. 93 – 99, (ISSN 1453 – 8202)
2. A. Bărbulescu, Some remarks on a note about Steffensen type discrete inequalities, *Analele Universității "Valahia", Târgoviște*, fasc. II 1995/1996, pp.19 – 22 (ISSN 1453 – 8202)
3. A. Bărbulescu, G. S. Badea, *L' optimisation de l'activité économique par rapport au prix des facteurs de production utilisés et l'assurance du profit maximum*, *Analele Universității "Valahia", Târgoviște*, fasc. II 1995/1996, pp. 110 – 117 (ISSN 1453 – 8202)
4. A. Bărbulescu, G. S. Badea, L'élasticité des phénomènes économiques et les décisions de l'agent économique, *Analele Universității "Valahia", Târgoviște*, Nr.5/1997, pp.107 – 111 (ISSN 1453 – 8202)
5. A. Bărbulescu, G. S. Badea, Sur l'élasticité des phénomènes économiques, *Analele Universității "Valahia", Târgoviște*, nr. 5/1997, pp.147 – 151 (ISSN 1453 – 8202)
6. A. Bărbulescu, G. S. Badea, *L'analyse du comportement de l'agent économique*, *Analele Universității "Valahia", Târgoviște*, nr. 6/1998, pp. 168 –172 (ISSN 1453 – 8202)

7. A. Bărbulescu, G. S. Badea, A mathematical model for the incomes distribution realised in the economic activity, *Bull. Sci. Pitesti Univ., Mathematics and Informatics*, No. 2, 1998, pp. 7 – 12 (ISSN 1453 – 116X) (in Romanian)
8. R. Şelescu, A. Bărbulescu, The bending of the nonprismatic bars, with constant section and the inertia moment variable periodic, *Bull. Sci. Pitesti Univ., Mathematics and Informatics*, No. 2, 1998, pp. 209 – 222 (ISSN 1453 – 116X) (in Romanian)
9. A. Bărbulescu, Considerations on a theorem that evaluates the Hausdorff dimension of a graph of a function, *Seminar Series in Mathematics, Miscellanea 1: Second Part of the Proceedings of Conference of Romanian Math. Soc.*, „Ovidius” University Press, Constanța, 2000, pp. 1 – 5 (ISSN 12223 – 723x)
10. A. Bărbulescu, C. Gherghina, L. Roşu, About the general equation of the water vertical movement in unsaturated porous media, *An. Sci. „Ovidius” Univ. Constanța, Civil Engineering, II – III*, 2002, Special Edition, pp. 461 – 464 (ISSN 1589 – 5990)
11. C. Maftai, A. Bărbulescu, J. Deguenon, *Mathematical model for trend detection in the Dobrudja region, Ovidius Univ. An., Series Civil Engineering*, Vol.1, No. 10, 2008, pp. 113 - 117 (ISSN 1589 – 5990)

VII. ARTICLES IN VOLUMES OF INTERNATIONAL CONFERENCES

1. C. Gherghina, A. Bărbulescu, L. Roşu, On a method of determination of hydraulic conductivity of soils in the interval of active humidity, *Proceedings of international Symposium “The land amelioration between the present and future”*, Timișoara, 30.04.2001, pp. 24 –30 (ISBN 973 – 8347 – 29 – 2) (in Romanian)
2. A. Bărbulescu, Aspects of the demographic phenomena evolution in Romania, after 1990, *Proceedings of the 3-rd International Conference of PhD. Students, Economics*, Miskolc, 13 – 18.08.2001, pp. 1- 8 (ISBN 963 661 480 6, ISBN 963 661 481 4)
3. A. Bărbulescu, C. Gherghina, Experimental research regarding the soil water retention on irrigated fields, *Proceedings of the 3-rd International Conference of PhD. Students, Engineering Sciences*, Miskolc, 13 – 18.08.2001, pp. 585 – 588 (ISBN 963 661 480 6, ISBN 963 661 482 2)
4. A. Bărbulescu, The modeling of the natural increase in Romania, *Proceedings of the International Conference on Naval and Marine Education*, Constanța, 14 – 16.11. 2002, pp. 105 -110
5. A. Bărbulescu, C. Dumitriu Freeboard program development, *Proceedings of the 6th Balkan Conference on Operational Research*, Tessaoniki, 22 – 25.05.2002, T4B2, 9p.
6. A. Bărbulescu, V. Mârza, Some models for the voltage induced in a liquid by cavitation, *Proceedings of Conference 2004: Dynamical systems and applications*, Antalya, Turkey, 5- 10.07.2004, GBS Publishers, 2005, pp. 158 – 165 (ISBN 81 – 89476 – 00 – 9) <http://faculty.uaeu.ac.ae/hakca/proceeding.htm>
7. C. Maftai, A. Bărbulescu, Program for the management of the pluviometrical and limnimetrical data, *Proceedings of Conference 2004: Dynamical systems and applications*, Antalya, Turkey, 5- 10.07.2004, pp. 508 – 514 (ISBN 81 – 89476 – 00 – 9) <http://faculty.uaeu.ac.ae/hakca/proceeding.htm>
8. A. Bărbulescu, Hausdorff h-measure and Box dimension of some sets, *Workshop on Fractal Analysis*, Eisenach, Germany, 11 – 17.09.2005, <http://www.minet.uni-jena.de/~cfa-ln.html>
9. A. Bărbulescu, The estimation of the graph Box dimension of a class of fractals, *The 7th Balkan Conference on Operational Research*, Constanța, 25 - 28.05.2005 (ISBN 973 – 8303 – 69 – 9) <http://fmi.unibuc.ro/balkan-conf/CD/Section1/index.html>
10. C. Dumitriu, A. Bărbulescu, A method for the single direction nesting computation, *The 7th Balkan Conference on Operational Research*, Constanța, 25 - 28.05.2005 (ISBN 973 – 8303 – 69 – 9) <http://fmi.unibuc.ro/balkan-conf/CD/Section5/index.html>
11. C. Maftai, A. Bărbulescu, Computing the intensity - duration - frequency curves for a Romanian catchment, *Proceedings of The third International Conference of Mathematical Sciences*, 3 - 6.03.2008, Al Ain, pp. 1178 - 1186.
12. C. Maftai, A. Bărbulescu, Frequential Models for the Precipitation Evolution in Romania, *Proceedings of the 5th International Conference “Dynamical Systems and Applications”*, Ovidius University Annals Series: Civil Engineering Vol. 1, Special Issue 11, June 2009, pp. 73 – 80, http://constructii.univ-ovidius.ro/ct/publicatii/anale_ing_2009.html
13. E. Băutu, A. Bărbulescu, Forecasting Financial Time Series with a Hybrid ARIMA-GEP Approach, *Proceedings of the 9th Balkan Conference on Operational Research* (Constanta, Romania, September 02-06, 2009), V. Preda and I. Mierlus - Mazilu Eds., ISBN 973-86979-9-9.

14. J. Deguenon, A. Bărbulescu, M. Sarr, GPD Models for extreme rainfall with cyclic trend detection over ten stations in Dobrudja, *Computational Engineering in Systems Applications*, vol. II, 2011, pp. 131 – 136 (ISBN: 978-1-61804-014-5)
15. Bărbulescu, D. Savin, Some Congruences of Fibonacci and Lucas numbers and Properties of Fibonacci Functions, *Recent Researches in Applied Mathematics and Informatics*, 16th WSEAS Int. Conf. on APPLIED MATHEMATICS, Montreux, pp.129-133 (ISBN: 978-1-61804-059-6)
16. A. Sanayei, F. R. Roodposhti, T. Torabi, A. Bărbulescu, A Link between Economic Crisis and Chaos Control, *Mathematical Models and Methods in Applied Sciences*, 2012, pp.141-145.
17. A. Bărbulescu, L. Barbeș, Models for Pollutants Evolution in an Urban Area, *Mathematical Models and Methods in Applied Sciences*, 2012, pp.151-156.
18. A. Bărbulescu, I. Ilie, Stock Market Indices Prediction Using Time Series Analysis, *Mathematical Models and Methods in Applied Sciences*, 2012, pp. 180 - 185.
18. A. Bărbulescu, I. Ilie, Stock Market Indices Prediction Using Time Series Analysis, *Mathematical Models and Methods in Applied Sciences*, 2012, pp. 180-185
19. A. Bărbulescu, D. Simian, Theoretical and practical approaches for time series prediction, Proceedings of Third International Conference on Modeling and Development of Intelligent Systems, October 10 - 12, 2013, Sibiu, Romania, Lucian Blaga University Press, 2014, pp. 40 – 48.
20. A. Bărbulescu, L. Barbes, Modelling the pollutants distribution, Proceedings of the 14th International Conference on Environmental Science and Technology Rhodes. Editor: T.D. Lekkas; ISBN: 978-960-7475-52-7; ISSN: 1106-5516. http://cest2015.gnest.org/papers/cest2015_00435_poster_paper.pdf
21. A. Bărbulescu, Statistical Assessment and Model for a River Flow under Variable Conditions, Proceedings of the 15th International Conference on Environmental Science and Technology Rhodes. Editor: T.D. Lekkas, https://cest.gnest.org/sites/default/files/presentation_file_list/cest2017_00715_poster_paper.pdf
22. V. Minzatu, C.M. Davidescu, M. Ciopec, P. Negrea, N. Duteanu, A. Negrea, A. Barbulescu, Modeling approach of adsorptive removal of arsenic from aqueous solution, Proceedings of the 15th International Conference on Environmental Science and Technology Rhodes. Editor: T.D. Lekkas, https://cest.gnest.org/sites/default/files/presentation_file_list/cest2017_00913_poster_paper.pdf
22. F. Stoica, A. Bărbulescu, L. F. Stoica, Tuning Extreme Learning Machines with genetic algorithms, Modelling and Development of Intelligent Systems, Proceedings of Fifth International Conference June 23 – 25, 2017, Sibiu, Romania, pp.72-81, 2018.

VIII. ARTICLES IN PROCEEDINGS OF NATIONAL CONFERENCES

1. A. Bărbulescu, The estimation of the p - modulus and of the p-capacity of a set, *Proceedings of the annual meeting of the Romanian Society of Mathematical Sciences*, 1998, pp.75 – 80 (ISBN 973 – 98789 – 0 – 3) (In Romanian)
2. A. Bărbulescu, G. S. Badea, Econometric methods for the determination of the causality relations between the economic phenomena, *Proceedings of SIMPEC '98*, Brasov, Romania, tom II, pp.333 – 337 (ISBN 973 – 98329 – 8 – 9) (In Romanian)
3. A. Bărbulescu, *About the entropic optimal probabilistic densities*, Proceedings of the Scientific Session "The role of the statistics in the market economy", ASE Bucharest, Romania, 19 – 20.03. 1999, pp.143 – 145 (In Romanian)
4. A. Bărbulescu, G. S. Badea, Theoretic considerations about FPP and CO for many products, *Bulletin SECOMAR*, 3–5.06.1999, Constanța, Romania, vol.VI, pp.19 – 23 (In Romanian)
5. A. Bărbulescu, About some relations between capacities and Hausdorff measures, *The symposium of "Petru Maior" University*, Targu Mures, Romania, 16-18.10.2000, vol.7, pp.13 - 20 (ISBN 973 – 8084 – 10 – 5) (In Romanian)
6. A. Bărbulescu, G. S. Badea, Econometric methods for the analysis of the economic increase, *The symposium of "Petru Maior" University*, Targu Mures, Romania, 16-18.10.2000, vol.12, pp. 15 - 20 (ISBN 973 – 8084 – 10 – 5)(In Romanian)
7. A. Bărbulescu, G. S. Badea, Econometric methods for the determination of the FPP, in "Actual problems of statistics", Junimea, Iasi, Romania, 2000, pp. 83 - 90 (ISBN 973 – 37 – 0530 – 6) (In Romanian)
8. A. Bărbulescu, G. S. Badea, Econometric methods for the determination of CO, in "Actual problems of statistics", Junimea, Iasi, 2000, pp. 91 – 98 (ISBN 973 – 37 – 0530 – 6) (In Romanian)
9. C. Gherghina, L. Rosu, C. Arsenie, A. Bărbulescu, Considerations on the equation of the water vertical movement in unsaturated porous media, *The Conference "The engineering of the underground water resources"*,

Technical University of Civil Engineering, Bucharest, Romania, 28 – 29.06.2001, pp. 184 -189 (ISBN 973 – 8165 – 03 – 2) (In Romanian)

10. A. Bărbulescu, Unemployment evolution in Romania, in „The Statistics in social and economic research”, Junimea, Iasi, 2001, pp. 327 – 331 (ISBN 973 – 37 – 0637 – x) (In Romanian)

11. A. Bărbulescu, V. Mârza, On some effects of the cavitation bubbles, *Series on Mathematical Modelling of Environmental and Life Sciences Problems*. Proceedings of the second workshop, June, 2003, Bucharest, Romania. Proceedings of the third workshop, May, 2004, Constanța, Romania, Romanian Academy Publishing House, Bucharest, 2004, pp.111 – 116 (ISBN 973 – 27 – 1113 – 2)

12. A. Bărbulescu, C.S. Dumitriu, Mathematical aspects of the study of the cavitation in liquids, *Proceedings of the 4th Workshop on Mathematical Modeling of Environmental and Life Sciences Problems*, Constanța, 7 - 11.09.2005, Romanian Academy Publishing House, Bucharest, 2006, pp.7-14 (ISBN (10) 973-27-1358-5, ISBN (10) 978 - 973 - 27-1358-7)

13. C. Maftai, A. Bărbulescu, Modeling the relation between the hydraulic conductivity and the depth, *Proceedings of the 5th Workshop on Mathematical Modeling of Environmental and Life Sciences Problems*, Constanța, 10-14.09.2006, Romanian Academy Publishing House, 2007, pp. 147-152 (ISBN (10) 978 - 973-27-1641 – 0)

14. E. Pelican, A. Bărbulescu, Forecasting rainfalls in Dobroudgea Area Using Wavelets and Neural Networks Techniques, *Mathematical Modeling of Environmental and Life Sciences Problems, Proceedings of the sixth workshop, September 2007. Proceedings of the seventh workshop, September, 2008*, Constanța, Ed. Academiei Romane, Bucuresti, 2010, pp. 211 – 218 (ISBN 978 - 973 – 27 – 1903 – 9).

IX. ARTICLES PRESENTED IN INTERNATIONAL CONFERENCES, PUBLISHED AS ABSTRACTS OR UNPUBLISHED

1. A. Bărbulescu, *On some relations between p – module and p – capacity and of the metodes of their determination*, Conference on mathematical Analysis and Applications, Craiova, Romania, 30.04 – 2.05. 1998

2. A. Bărbulescu, G. S. Badea, *The rational comportment of economic agent*, Symposium of Oradea University, Romania, 29 – 30.05.1998 (in Romanian)

3. A. Bărbulescu, G. S. Badea, *The analysis of production alternatives. The transformation curve and the opportunity cost*, Symposium of Oradea University, Romania, 29 – 30.05.1998 (in Romanian)

4. A. Bărbulescu, G. S. Badea, *The determinarea of the boundary of production oportunities and oportunity cost by econometric methods*, The AI XXII-th Congres of Romanian- American Academy, 22-24.06.1997, Târgoviște (publicat numai abstract)

5. A. Bărbulescu, *Some results on the h -measure of a set*, Conference on Practical applications of fractals, The Abdus Salam International Centre for Theoretical Physics, Trieste, 17 – 19.11. 2004

6. A. Bărbulescu, *About some class of fractal functions*, Congreso Internactional Mediterraneo de Matematicas, Almeria, Espana, 6 - 10.05.2006, Abstract Book, p.83

7. C. Maftai, A. Bărbulescu, C. Buta and D. Teodorescu, *The temporal and spatial evolution of the precipitation in Dobrogea and its influence on the water resources*, The 9th International Precipitations Conference, Paris, 12-14.11.2007

8. A. Bărbulescu, *Modeling the seasonal evolution of precipitations in Dobrudja*, EGU, Viena, 14 - 18.04.2008, EGU2008-A-05498, Geophysical Research Abstracts, Vol.10, 2009, eISSN: 1607-7962

<http://meetings.copernicus.org/www.cosis.net/abstracts/EGU2008/05498/EGU2008-A-05498.pdf>

9. A. Bărbulescu, D - C. Toncu, *Study of some composites corrosion*, RSE – SEE, Rovinj, Croatia, 4 - 8.05.2008 (http://www.rse-see.net/First_RSE-SEE_Abstract_Collection.pdf)

10. A. Bărbulescu, D - C. Toncu, *Copper - based alloys corrosion behaviour in circulated medium*, RSE – SEE, Rovinj, Croatia, 4 - 8.05.2008 (http://www.rse-see.net/First_RSE-SEE_Abstract_Collection.pdf)

11. A. Bărbulescu, E. Pelican, *Modeling the evolution of precipitation in a region of Romania*, 7-th World Congress of Probability and Statistics, 14-19.07.2008, Singapore
<http://www.ims.nus.edu.sg/Programs/wc2008/index.htm>

12. A. Bărbulescu, *Mathematical Models for the prediction of the precipitations effects*, New statistical trend in hydrological modeling, Capri, 13-17.10.2008, www.ihp2008capri.it

13. A. Bărbulescu, D - C. Toncu, *The analysis of the rain influence on water quality*, The role of hydrology in water resources management, Capri, 13-17.10.2008, www.ihp2008capri.it

14. A. Cârsteanu, A. Bărbulescu, A. Ionescu, *Scale behaviour of dry spells*, EGU 2009, art. EGU2009 - 13946, NH1.1 Geophysical Research Abstracts, eISSN: 1607-7962, http://meetingorganizer.copernicus.org/EGU2009/oral_programme/681
15. E. Pelican, A. Bărbulescu, *Prediction of Dobroudja Precipitations Using Wavelet Analysis*, EGU 2009, art. EGU2009 - 9778, CL54/NP4.5, Geophysical Research Abstracts, eISSN: 1607-7962 <http://meetingorganizer.copernicus.org/EGU2009/EGU2009-9778.pdf>
16. A. A. Carsteanu, A. Barbulescu, K.M. Ba, J.J. Castro, C. Diaz-Delgado, L.G. Escandon – Alcazar, *Detecting climate-scale patterns in rainfall and runoff variability*, Workshop on Geocomplexity, 28-29.05.2009, YorkUniversity, http://ormserver.arts.yorku.ca/index.php?option=com_content&task=blogcategory&id=35&Itemid=64
17. A. Cârsteanu, A. Bărbulescu, K. Ba, J. Castro, C. Diaz-Delgado, *Comparison of multifractals parameters of rainfall and drainoff between Romania and Mexico*, Dynamical Systems and Applications, 15-18.06.2009, Constanța, http://constructii.univ-ovidius.ro/doc/conferinte/ICDSA2009/Book_of_Abstracts.pdf
18. A. Bărbulescu, J. Deguenon, *Nonparametric Models for Trend Evolution of Precipitation in the Dobrudja Region*, EGU2010-14804 – Viena 2010, <http://meetingorganizer.copernicus.org/EGU2010/EGU2010-14804-1.pdf>
19. C. Maftai, A. Bărbulescu, G. Dobrică, *Change climate impact in hydrological events in Dobrogea region*, <http://meetingorganizer.copernicus.org/EGU2013/EGU2013-6212.pdf>
20. A. Bărbulescu, *Are Performances of GRNN Models Influenced by the Statistical Properties of the Time Series? The 4th Abu Dhabi University Annual International Conference Mathematical Science and its Applications*, Abu Dhabi University A. Barbulescu, 23-26.12.2015.
21. A. Bărbulescu, *On the relationship between the statistical properties of the time series and its GRNN model*, The 15th International Conference on Applied Mathematics and Computer Science, Cluj-Napoca, July 5–7, 2016, <http://www.tucn.ro/angheluta2016/pdf/2016-Abstracts-Angheluta-web.pdf>
22. A. Bărbulescu, S. Mascu, *Modeling the relationship between energy, carbon and water efficiency of the most sustainable corporations in the world using GLM method*, EcoSummit 2016, Montpellier, France, 29.08 – 2.09.2017
23. A. Bărbulescu, S. Mascu, *The Impact of Environmental Tax Revenue on Air Pollution in Central and Eastern European Countries: An Empirical Analysis*, Montpellier, France, 29.08 – 2.09.2017
24. A. Moraru, A Barbulescu, *A Case Study on Challenges and Perspectives of Ecolabelling in the Romanian Seaside Hotel Industry*, Montpellier, France, 29.08 – 2.09.2017
25. A. Bărbulescu, *Modeling the impact of atmospheric condition on the evolution of the pollutants' concentration series*, The 5th Abu Dhabi University Annual International Conference Mathematical Science and its Applications, Abu Dhabi University, 23-26.12.2017.

X. BOOKS

1. A. Bărbulescu, *Mathematics for economists*, Macarie, Targoviste, 1996 (ISBN 973- 9220 – 67 – 3) (in Romanian)
2. A. Bărbulescu, *Elements of Calculus for economists*, Macarie, Targoviste, 1997, 323p (ISBN 973 – 9304 – 90 – 7)(in Romanian)
3. A. Bărbulescu, *Exercise book with solved problems for economists. Calculus*, Macarie, Targoviste, 1998 (ISBN 973 – 9304 – 91 – 5) (in Romanian)
4. A. Bărbulescu, *Exercise book with solved problems for economists. Algebra, linear programming, graphs*, Stolnicul Cantacuzino, Targoviste, 1998 (ISBN 973 – 85679 – 0 – 1) (in Romanian)
5. A. Bărbulescu, *Elements of probability theory and mathematical statistics, for economists*, Stolnicul Cantacuzino, Targoviste, 1998 (ISBN 973 – 8153 – 08 – 7) (in Romanian)
6. A. Bărbulescu, G. S. Badea, *The mathematical modeling of the rational behavior of economics agents*, Macarie, Targoviste, 1997 (ISBN 973 – 9304 – 92 – 3)(in Romanian)
7. A. Bărbulescu, G. S. Badea, *Exercise book for Economy*, Macarie, Targoviste, 1997 (ISBN 973 – 9304 – 93 – 1) (in Romanian)
8. G. S. Badea, A. Bărbulescu, *Elements of economic theory*, Macarie, Targoviste, 2000 (ISBN 973 – 8153 – 08 – 7) (in Romanian)
9. A. Bărbulescu, *Elements of probability theory and mathematical statistics*, “Ovidius” University Press, Constanta, 2002 (ISBN 973 – 614 – 049 – 0) (in Romanian)

10. A. Bărbulescu, *Time series with applications*, Junimea, Iasi, 2002 (ISBN 972 – 37 – 0764 – 3) (in Romanian)
11. A. Bărbulescu, *Exercise Book for Calculus*, Dada, Constanta, 2003 (ISBN 973 – 85263 – 3 – 7) (in Romanian)
12. A. Bărbulescu, *Lecture Notes in Calculus*, Ovidius University Press, Constanta, 2004, 210p (ISBN 973 – 614 – 179 – 9) (in Romanian)
13. A. Bărbulescu, *Elements of complex functions and applications*, Ed. Dada, Constanta, 2005 (973 – 85263 – 6 – 1) (in Romanian)
14. A. Bărbulescu, *Lecture Notes in Algebra and analytical geometry*, Ex Ponto, Constanta, 2005 (ISBN 973 – 644 – 456 – 7) (in Romanian)
15. A. Bărbulescu, D. Savin, *234 solved problems of complex functions*, Sitech, Craiova, 2006 (ISBN 973 – 746 – 184 – 3) (in Romanian)
16. C. S. Dumitriu, A. Bărbulescu, *Studies on the copper base alloys used in naval constructions – modeling the loss mass in different media*, Sitech, Craiova, 2007 (ISBN 978 – 873 – 746 – 660 – 0) (in Romanian)
17. V. Mârza, A. Bărbulescu, *Circuits and passive components: laboratory works*, „Ovidius” University Press, Constanța, 2008, 175p (ISBN 978 – 973 – 614 – 422 – 6) (in Romanian)
18. A. Bărbulescu, *Statistical methods with applications*, Ovidius University Press, Constanța, 2009, ISBN 978 – 973 – 614 – 499 – 8 (in Romanian)
19. A. Bărbulescu, C. Maftai, E. Băutu, *Modeling the hydro-meteorological time series. Applications to Dobrudja region*, LAP Lambert Academic Publishing, Germany, 2010 (ISBN 978 – 3 – 8433 – 6578 – 9) http://isbndb.com/d/book/modeling_the_hydro_meteorological_time_series.html
20. A. Bărbulescu, J. Deguenon, D. Teodorescu, *Study on water resources in the Black Sea region*, Nova Publishers, USA, 2011 (ISBN 978 – 1 – 61122 – 542 – 4)
21. C. I. Koncsag, A. Bărbulescu, Liquid-liquid extraction with and without a chemical reaction, in *Mass Transfer in Multiphase Systems and its Applications* (ed. M. El-Amin), InTech, Austria, 2011, pp. 207 - 232 (ISBN 978 – 953 – 307 – 215 – 9) <http://www.intechopen.com/articles/show/title/liquid-liquid-extraction-with-and-without-a-chemical-reaction>
22. A. Bărbulescu, D. Teodorescu, J. Deguenon, Study on Water Resources in the Romanian Black Sea Region, in *The Black Sea: Dynamics, Ecology and Conservation*, (eds. A.M. Ryann, N.J. Perkins), Nova Publishers, USA, 2011, pp 175-205 (ISBN 978-1-61122-855-7) https://www.novapublishers.com/catalog/product_info.php?products_id=25135&osCsid=6e51b2a230f110203982a2975218db2e
23. A. Bărbulescu, *Studies on time series. Applications in Environmental Sciences*, Springer, 2016, <http://www.springer.com/gp/book/9783319304342>
24. A. Bărbulescu, S. Mascu, Modeling the relationship between the energy, carbon, water efficiency of the most sustainable corporations in the world, in Hošková-Mayerová, S., Flaut, C., Maturo, F. (eds.), *Algorithms as a basis of modern applied mathematics*, Springer Series: Studies in Fuzziness and Soft Computing, 404, Springer International Publishing, 2021, pp. 61-68, e-ISSN 978-3-030-61334-1. https://doi.org/10.1007/978-3-030-61334-1_2 (SCOPUS).
25. A. Bărbulescu, L. Barbeș, C.-S. Dumitriu, Statistical Assessment of the Water Quality Using Water Quality Indicators. A case study from India, in Vaseashta, A., Maftai, C. (eds.), *Water Safety, Security and Sustainability, Advanced Sciences and Technologies for Security Applications*, Springer, 2021, pp. 599-613, ISBN 978-3-030-76010-6. https://doi.org/10.1007/978-3-030-76008-3_26.
26. A. Bărbulescu, C.S. Dumitriu, *Bazele statistice ale Teoriei Fiabilității*, Ed. Sitech, Craiova, 2022, 146 p, ISBN 978-606-11-8120-9
27. C. S. Dumitriu, A. Bărbulescu, *Știința materialelor. Suport de curs pentru învățământul superior*, Ed. Sitech, Craiova, 2022, 120 p, ISBN 978-606-11-8122-3.
28. C. Popescu, A. Bărbulescu, Flash flood simulation between Slănic and Vărbilău rivers in Vărbilău village, Prahova county, Romania, using hydraulic modeling and GIS techniques, in: *Modelling and Development of Intelligent Systems. MDIS 2022. Communications in Computer and Information Science (CCIS)*, vol. 1761. Springer, Cham, 2023. https://doi.org/10.1007/978-3-031-27034-5_21, pp. 309-327 (SCOPUS).
29. G. Dobrică, C. Maftai, A. Bărbulescu, C. Șerban, Analysis methods for hydrological drought in Maftai, C., Radu, M., Vaseashta, A., (eds.), *Modeling and Monitoring Extreme Hydrological Events*, IGI Global, 2024, pp. 90-113, ISBN13: 9781668487716 (SCOPUS).

Patent no RO 123086-B1 (30.09.2010), A. Barbulescu, V. Marza, C.S. Dumitriu, Installation and method for measuring and determining the effects produced by cavitation in ultrasound field in stationary and circulating media.