CURRICULUM VITAE

NAME: ALINA BARBULESCU

Transilvania University of Brașov, Romania
Department of Civil Engineering
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EDUCATION   (higher degrees)

2020 - Ministry of Higher Education, Romania	Habilitation in Cybernetics and Economics Statistics
2014 - Ministry of Higher Education, Romania	Habilitation in Civil Engineering
2014 - Technical University of Civil Engineering, Bucharest	PhD. Civil Engineering (Magna cum Laude)
2003 - Academy of Economic Studies, Bucharest	PhD. Cybernetics and Economic Statistics
"Al. I. Cuza" University, Iasi	PhD. Mathematics
P. Andrei University, Iasi, Faculty of Law	Bachelor in Law
Bucharest University, Faculty of Mathematics	M.Sc. Mathematics
Craiova University, Faculty of Nature Sciences, Mathematics	Bachelor in Mathematics

SCIENTIFIC EMPLOYMENT AND ACADEMIC RESPONSIBILITY

Research Institution or University	From to	Academic responsibilities
Transilvania University of Brasov	Feb 2021 - present	Professor
Technical University of Civil Engineering, Bucharest, Romania	Feb 2015 – present	Ph.D. supervisor
Ovidius University of Constanta, Romania	Feb 2003 - Jan 2021	Assoc. Professor
Higher Colleges of Technology, Sharjah, UAE	Aug 2015 - July 2018	Assoc. 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

INTEREST DOMAINS

- Hydro-meteorological modeling and forecasting
- Probability and Applied Statistics
- Time series analysis and forecasting
- Mathematical Analysis – Hausdorff measures
- Applied statistics

RESEARCH GRANTS OBTAINED BY NATIONAL COMPETITION

1. Grant CNCSIS 902/2007, 2008 – *Studies on metallic materials on naval constructions – Modelling the mass loss in different media* – director
2. Grant ID_262/2007 – 2010 - *Mathematical modelling of the precipitations Dobrogea* – director
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.
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 si statistici bivariate* (RO-FLOOD-SUSCEP) – 246800 lei - mentor

RESEARCH GRANTS OBTAINED ABROAD

- 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

MEMBER IN EDITORIAL BOARDS

1. *Water* – member of Topical Advisory Panel
2. *Atmosphere* – member of Topical Advisory Panel
3. *Hydrology* – member of Topical Advisory Panel
4. *International Journal of Applied Mathematics and Statistics* - member of Editorial Board
5. *International Journal of Mathematics and Computation* - member of Editorial Board
6. *Analele Universitatii "Ovidius" Constanta - Seria Constructii*: - member of Editorial Board

Editor (selection)

1. *Advances in Water, Air and Soil Pollution Monitoring, Modeling and Restoration*, *Toxics,* 2023. https://www.mdpi.com/journal/toxics/special_issues/0I5O0Y56F0
2. *Assessing Water Quality by Statistical Methods,* MDPI, Basel, Switzerland, 2023.
3. *Assessing Atmospheric Pollution and its Impact on the Human Health*, MDPI, Basel, Switzerland, 2023, ISBN 978-3-0365-6321-3
4. *Toxics*, special issue*: Advances in Water, Air and Soil Pollution*, *Monitoring, Modeling and Restoration*, https://www.mdpi.com/journal/toxics/special_issues/0I5O0Y56F0
5. *Water*, special issue*: Assessing Hydrological Drought in a Climate Change: Methods and Measures*, https://www.mdpi.com/journal/water/special_issues/Hydrological_Drought
6. *Atmosphere,* special issue: *Assessing Atmospheric Pollution and Its Impacts on the Human Health*,https://www.mdpi.com/journal/atmosphere/special_issues/Assessing_Atmospheric_Pollution

7. *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/

8. *Remote sensing*, special issue *Remote Sensing of Geo-Hydrological Hazard Assessment*, 2020, https://www.mdpi.com/journal/remotesensing/special_issues/Geo-Hydrological_Process

9. *Water*, special issue *Assessing water quality by statistical methods*, 2019, https://www.mdpi. com/journal/water/special_issues/Water_Quality_Statitcal_Analysis

10. *Journal of Chemistry*, special issue*: New trends in Monitoring and Removing the Pollutants from Water* https://www.hindawi.com/journals/jchem/si/457973/cfp/

11. *Journal of Environmenal Management*, special issue: *Modeling the impact of human activity, behavior and decisions on the environment. Marketing and green consumer* vol. 204, part 3, 2017,.

PUBLICATIONS (selection)

I. ARTICLES IN JOURNALS INDEXED IN WEB OD SCIENCE

1. Bărbulescu, V. Mârza, Electrical effect induced at the boundary of an acoustic cavitation zone, *Acta Physica Polonica B*, vol. **37**, no. 2, 2006, pp. 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**, no. 10, 2006, pp.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*, 31, Issue 11, 2007, pp. 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*, 47**,** Issues 9-10**,** 2008, pp. 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, no. 4, aprilie 2009, pp. 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. Şt. Univ. Ovidius Math,* vol. 17(3), 2009, pp. 45 - 68 (ISSN 1224 – 1784) , IF: 0.333 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, nos. 1 - 2, 2010, pp. 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, no. 4, July 2012, pp. 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**, no. 4, October 2012, pp. 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, no. 4, pp. 1297 - 1306, 2013 (ISSN 1935-0090), http://naturalspublishing.com/show.asp?JorID=1&pgid=0

11. A. Bărbulescu, L. Barbeş, Mathematical models for inorganic pollutants in Constanța area, Romania, *Revista de chimie* vol. **64**(**7**), 2013 pp. 747 - 753 (ISSN 0034 – 7752), http://www.revistadechimie.ro/pdf/BARBULESCU%20A.pdf%207%2013.pdf

12. A. Bărbulescu, L. Barbeş, Assessment of surface water quality Techirghiol Lake using statistical analysis, *Revista de chimie* (ISSN 0034 – 7752), vol. **64**(8), 2013, pp. 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, pp. 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, pp. 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, pp. 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, pp. 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, pp. 877 - 886 (ISSN 1221-1451 43 822), http://www.rrp.infim.ro/2014_66_3/A26.pdf.

18. A. Bărbulescu, L. Barbeș, Models for the pollutants correlation in the Romanian Littoral, *Romanian Reports in Physics*, vol. **66**(4), 2014, pp. 1189 - 1199 (ISSN 1221-145143822), http://www.rrp.infim.ro/2014_66_4/A26.pdf

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, pp. 625 - 637, http://www.rrp.infim.ro/2015_67_2/A30.pdf

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), pp. 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, pp.1163 - 1170, www.nipne.ro/rjp/2015_60_7-8/1163_1170.pdf.

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**, no.9, 2015, pp. 1504 - 1508, http://www.revistadechimie.ro/pdf/NEAGU%20ANISOARA.pdf%209%2015.pdf.

23. A. Bărbulescu, M. Gilca, Taste of medicinal plants: a potential tool in predicting etnopharmacological activities?, *Journal of Ethnopharmacology*, vol. **174**, pp. 464 – 473, 2015, doi:10.1016/j.jep.2015.08.040.

24. 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, pp. 387 – 399, http://www.tandfonline.com/doi/full/10.1080/00032719.2015.1027897.

25. A. Bărbulescu, A new method for estimation the regional precipitation, *Water Resources Management,* vol. **30,** Issue 1, pp 33-42, 2016, http://link.springer.com/article/10.1007/s11269-015-1152-2.

26. A. Bărbulescu, Modeling temperature evolution. Case study, *Romanian Reports in Physics*, vol. **68**, no. 2, pp. 788 - 798, 2016, IF: 1.367 http://www.rrp.infim.ro/2016_68_2/A32.pdf.

27. A. Bărbulescu, Models for temperature evolution in Constanta area (Romania), *Romanian Journal of Physics,* no. 3 - 4, 2016, pp. 676 - 686 http://www.nipne.ro/rjp/2016_61_3-4/0676_0686.pdf.

28. C. Maftei, A. Bărbulescu, A.A. Cârsteanu, Long-range dependence in the time series of Taiţa River, *Hydrological Sciences Journal*, vol. **61**(9), 2016, pp. 1740 - 1747. https://doi.org/10.1080/02626667.2016.1171869.

29. 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, art. 801, http://www.nipne.ro/rjp/2017_62_1-2/rjp062_1-2_801.pdf.

30. L. Barbeș, A. Bărbulescu, Monitoring and assessement of heavy metals in soil and leaves of Populus Nigra L, *Environmental Engineering and Management Journal*, 16(1), 2017, pp. 187 – 196, http://www.eemj.icpm.tuiasi.ro/pdfs/vol16/no1/20_491_Barbes_13.pdf .

31. 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, pp. 813, https://doi.org/10.1016/j.jenvman.2017.10.028

32. A. Barbulescu, L. Barbes, Modeling the carbon monoxide dissipation in Timisoara, Romania, Journal of Environmental Management, 204 part 3, 2017, pp. 831 – 838, http://dx.doi.org/10.1016/j.jenvman.2017.02.047.

33. A. Barbulescu, L. Barbes, Mathematical modeling of sulfur dioxide concentration in the Western part of Romania, *Journal of Environmental Management*, 204 part 3, 2017, pp. 825 – 830, http://dx.doi.org/10.1016/j.jenvman.2017.02.052.

34. 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, DOI:10.1038/s41598017-18623, http://www.nature.com/articles/s41598-017-18623-0

35. 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*,* DOI:10.1038/s41598-018-27727-0 https://www.nature.com/articles/s41598-018-27727-0

36. 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, https://www.nipne.ro/rjp/2018_63_5-6/RomJPhys.63.806.pdf

37. 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

38. A. Bărbulescu, N. Duteanu, A. Negrea, M. M. Ghangrekar, New trends in monitoring and removing the pollutants from water, *Journal of Chemistry*, vol. 2018, art. ID 8394086, https://doi.org/10.1155/2018/8394086

39. A. Moraru, A. Bărbulescu, C. Duhnea, Consumption and hysteresis - the new, the old, and the challenge, *Economic Research - Ekonomska Istraživanja*, vol. **31**(1), 2019, pp.1965 - 1980, http://doi.org/10.1080/1331677x.2018.1498365.

40. 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

41. Y. Nazzal, A. Bărbulescu, F. M. Howari, A. Yousef, A. A. Al-Taani, F. Al Aydaroos, 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.

42. 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, pp.1435-1441, DOI: 10.117/s00477-019-01702-1

43. A. Bărbulescu, A. Dani, Statistical analysis of the water quality of the major rivers in India, *Romanian Reports in Physics*, vol. **71**, no. 4, 2019, art.716.

44. A. Bărbulescu, Y. Nazzal, Statistical analysis of the dust storms in the United Arab Emirates, *Atmospheric Research*, vol. **231**, 2020, 104669.

45. 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.

46. A. Bărbulescu, A. Băutu, E. Băutu, Particle Swarm Optimization for the Inverse Distance Weighting Distance method, *Applied Sciences-Basel*, vol. **10(6)**, 2020, 2054; doi:10.3390/app10062054

47. J. Deguenon, A. Bărbulescu, Theoretical observers for infinite-dimensional skew-symmetric systems, *Analele Stiinţifice ale Universitatii Ovidius din Constanta, seria Matematica*, vol. **28**(1), Mar 2020, pp. 135-140, DOI: 10.2478/auom-2020-0010.

48. D. Simian, F. Stoica, A. Bărbulescu, Automatic Optimized Support Vector Regression for Financial Data Prediction, *Neural Computing & Applications*, vol. **32**(7), Apr. 2020, pp. 2383-2396

49. A. Bărbulescu, Assessing the groundwater vulnerability: DRASTIC and DRASTIC-like Methods: A review, *Water*, **12**(5), May 2020, 1356; https://doi.org/10.3390/w12051356

50. 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.

51. A. Bărbulescu, Y. Nazzal, F. Howari, Assessing the groundwater quality in the Liwa area, the United Arab Emirates, *Water*, **12**(10), 2020, 2816.

52. 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.

53. A. Bărbulescu, F. Postolache, New approaches for modeling the regional pollution in Europe, *Science of The Total Environment*, vol. **753**, 20 Jan. 2021, 141993

54. **A. Bărbulescu**, C. Maftei, Statistical approach of the behavior of Hamcearca River (Romania), *Romanian Reports in Physics*, vol. **73**(1), 2021, 703. (ISSN 1841-8759) FI 2,147 (in 2019)

55. 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.

56. C. Maftei, A. Bărbulescu, S. Rugină, C. D. Nastac, I. M. Dumitru, Analysis of the arbovirosis potential occurence in Dobrogea, Romania, *Water*, **13**, 2021, 374.

57. 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.

58. 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(3)**, 2021, 53.

59. 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. https://doi.org/10.3390/w13060758

60. A. Bărbulescu, L. Barbes, Modeling the outlet temperature in heat exchangers. Case study, *Thermal Science*, **25**, No.1B, 2021, pp. 591-602

61. A. Bărbulescu, C. Șerban, M.-L. Indrecan, Improving spatial interpolation quality. IDW versus a genetic algorithm, *Water*, **13**, 2021, 863, https://doi.org/10.3390/w13060863

62. A. Bărbulescu, C. Ș. Dumitriu, Assessing the water quality by statistical methods, *Water* **13**, 2021, 1026.

63. 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(5)**, 2021, 95.

64. 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.

65. A. Bărbulescu, C. Șerban, S. Caramihai, Assessing the soil pollution using a genetic algorithm, *Romanian Journal of Physics,* **66**(3-4), 2021, 806.

66. A. Bărbulescu, C. Ș. Dumitriu, On the Connection between the GEP Performances and the Time Series Properties, *Mathematics*, **9**, 2021,1853.

67. 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*, **66(7-8**), 2021, 809.

68. 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.

69. A. Bărbulescu, L. Barbeș, C. S. Dumitriu, Assessing the water pollution of Brahmaputra River using water quality indexes, *Toxics*, vol. **9(11),** 2021, 297.

70. F. Howari, M. Sharma, Y. Nazzal, A. Bărbulescu, F. AlAydaroos, C. M. Xavier, Atmospheric topographic analysis of Mars, *Romanian Reports in Physics*, vol. **73**(4), 2021, 805.

71. A. Bărbulescu, L. Barbeș, C. S. Dumitriu, Computer-aided classification of new psychoactive substances, *Journal of Chemistry*, vol. **2021**, Article ID 4816970, 11 pag.

72. A. Bărbulescu, L. Barbeș, Statistical Assessment and Modeling of Benzene in Timiș County, România, *International Journal of Environmental Science and Technology*, vol.**1 9**, 2022, pp. 817-828.

73. A. Bărbulescu, C. S. Dumitriu, C. Maftei, On the Probable Maximum Precipitation Method, *Romanian Journal of Physics*, vol. **67,** 2022, 801.

74. 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.

75. A. Bărbulescu, C. S. Dumitriu, I. Ilie, S. B. Barbeș, Influence of Anomalies on the Models for Nitrogen Oxides, *Atmosphere*, vol. **13**, 2022, 558.

76. A. Bărbulescu, L. Barbeș, C. Ș. Dumitriu, Computer-aided methods for molecular classifications, *Mathematics*, vol. **10(9),** 2022, 1543.

77. 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.

78. A. Bărbulescu, L. Barbeș, C. S. Dumitriu, Impact of soil pollution on melliferous plants, *Toxics,* vol. **10**, 2022, 239.

79. L. Barbeș, A. Bărbulescu, Statistical Assessment, Modeling, and Mitigation of Water and Soil Pollution, *Toxics*, vol. **10**(5), 2022**,** 261; https://doi.org/10.3390/toxics10050261.

80. A. Bărbulescu, On the spatio-temporal characteristics of the aerosol optical depth in the Arabian Gulf zone, *Atmosphere*, **vol. 13**(6), 2022, 857, https://doi.org/10.3390/atmos13060857.

81. 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 https://doi.org/10.1155/2022/9823497.

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