

Lista publicațiilor științifice lucrărilor, articolelor/studiilor relevante pentru activitățile de cercetare științifică

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I. Lista celor mai relevante 10 publicații științifice (10 articole științifice în Q1 – WOS)

1. **Costache, R.**, Ciobotaru, N., Crăciun, A., Chakraborty, R., & Pandey, M. (2026). *Fuzzy-decision trees models for flood hazard modeling in the Danube Delta*. Geomatics, Natural Hazards and Risk, 17(1), 2624697. DOI: <https://doi.org/10.1080/19475705.2026.2624697> **ISI I.F. = 4.6 (Q1).**
2. **Costache R. (2025).** *Flood susceptibility estimation using randomization-based machine learning models. A case study at the Putna river basin, Romania*, Geomatics, Natural Hazards and Risk, 2548505. DOI: <https://doi.org/10.1080/19475705.2025.2548505>. **ISI I.F. = 4.6 (Q1).**
3. **Costache R.**, Alireza A., Costache I., Crăciun A., Pham B.T. (2022) *New machine learning ensemble for flood susceptibility estimation*, Water Resources Management. 36(12), 4765-4783. DOI: <https://doi.org/10.1007/s11269-022-03276-0>. **ISI I.F. = 4.3 (Q1).**
4. **Costache R.**, Arabameri A., Costache I., Crăciun A., Islam A.R.M.T., Abba S.I., Sahana M., Pham B.T. (2022) *Flood susceptibility evaluation through deep learning optimizer ensembles and GIS techniques*, Journal of Environmental Management, 316, 115316. DOI: <https://doi.org/10.1016/j.jenvman.2022.115316>. **ISI I.F. = 8.7 (Q1).**
5. **Costache R.**, Tin T.T., Arabameri A., Crăciun A., Ajin R.S., Costache I., Islam A.R..M.T., Abba S.I., Sahana M., Avand M., Pham B.T. (2022) *Flash-flood hazard using Deep Learning based on H2O R package and fuzzy-multicriteria decision-making analysis*, Journal of Hydrology, 609, 127747. DOI: <https://doi.org/10.1016/j.jhydrol.2022.127747>. **ISI I.F. = 6.4 (Q1).** – **Highly Cited paper – Included in the Top 1% of the academic field of Engineering according to Web of Science (Clarivate Analytics) (January/February 2023).**
6. **Costache R.**, Popa M.C., Tien Bui D., Diaconu D.C., Ciubotaru N., Minea G., Pham Q.B. (2020) *Spatial predicting of flood potential areas using novel hybridizations of fuzzy decision-making, bivariate statistics, and machine learning*, Journal of Hydrology, 585, 124808, DOI: <https://doi.org/10.1016/j.jhydrol.2020.124808>. **ISI I.F. = 5.722 (Q1).** – **Highly Cited paper – Included in the Top 1% of the academic field of Environment/Ecology according to Web of Science (Clarivate Analytics).**
7. **Costache, R.**, Hong, H., & Pham, Q. B. (2020). *Comparative assessment of the flash-flood potential within small mountain catchments using bivariate statistics and their novel hybrid integration with machine learning models*. Science of the Total Environment, 711, 134514. DOI: <https://doi.org/10.1016/j.scitotenv.2019.134514>. **ISI I.F. = 7.963 (Q1).** – **Highly Cited paper – Included in the Top 1% of the academic field of Environment/Ecology according to Web of Science (Clarivate Analytics).**
8. **Costache R. (2019).** *Flash-Flood Potential assessment in the upper and middle sector of Prahova river catchment (Romania). A comparative approach between four hybrid models*. Science of The Total Environment, 659, 1115 – 1134. DOI: <https://doi.org/10.1016/j.scitotenv.2018.12.397>. **ISI I.F. = 6.551 (Q1).**
9. **Costache R. (2019).** *Flood Susceptibility Assessment by Using Bivariate Statistics and Machine Learning Models - A Useful Tool for Flood Risk Management*, Water Resources Management, 33(9), 3239 – 3256. DOI: <https://doi.org/10.1007/s11269-019-02301-z>. **ISI I.F. = 2.924 (Q1).**

10. **Costache R.** (2019). *Flash-flood Potential Index mapping using weights of evidence, decision Trees models and their novel hybrid integration*, Stochastic Environmental Research and Risk Assessment, 33(7), 1375 – 1402. DOI: <https://doi.org/10.1007/s00477-019-01689-9>. **ISI I.F. = 2.237 (Q1).**

II. Lista brevetelor de invenție și a altor titluri de proprietate industrială

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III. Lista cărților de autor și a volumelor editate și publicate

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IV. Lista articolelor/studiilor in extenso, publicate în reviste din fluxul științific internațional principal

1. Radu, A., Comănescu, L., Ciobotaru, N., & **Costache, R.** (2026). Riverbed Evolution Trends Based on the Channel-Forming Discharge Concept: A Climate Change Scenario Analysis to 2100 for the Ialomița River, Romania. *Water*, 18(3), 420. DOI: <https://doi.org/10.3390/w18030420> **ISI I.F. = 3 (Q2).**
2. **Costache, R.**, Ciobotaru, N., Crăciun, A., Chakraborty, R., & Pandey, M. (2026). Fuzzy-decision trees models for flood hazard modeling in the Danube Delta. *Geomatics, Natural Hazards and Risk*, 17(1), 2624697. DOI: <https://doi.org/10.1080/19475705.2026.2624697> **ISI I.F. = 4.6 (Q1).**
3. **Costache R. (2025).** *Flood susceptibility estimation using randomization-based machine learning models. A case study at the Putna river basin, Romania*, Geomatics, Natural Hazards and Risk, 2548505. DOI: <https://doi.org/10.1080/19475705.2025.2548505>. **ISI I.F. = 4.6 (Q1).**
4. Chakraborty R., Pramanik M., Ali T., Islam A. R. M. T., Pande C. B., **Costache R.**, & Abioui, M. (2025). *Advanced neural network approaches for optimal check dam site selection in sub-tropical climates*, Advances in Space Research, 76(1), 90-109. <https://doi.org/10.1016/j.asr.2025.04.037>. **ISI I.F. = 2.8 (Q1).**
5. Ajin R. S., **Costache R.***, Bărbulescu A., Fanti R., Segoni, S. (2025). *Flood Susceptibility Assessment Using Multi-Tier Feature Selection and Ensemble Boosting Machine Learning Models*, Water, 17(14), 2041. DOI: <https://doi.org/10.3390/w17142041>. **ISI I.F. = 3 (Q2).**
6. Bianchi S., Matteoni M., Kim K., Koniari A. M., Koning K., **Costache R.**, Ciobotaru N., Luna-Navarro A., Peng Z., Ciurlanti J., Shahriari H., Mittal D., Stavridou E., Silva A., Plamieri M., Pampanin S., Petrini F., Overend, M. (2025). *Resilience Readiness Levels for Buildings: Establishing Multi-Hazard Resilience Metrics and Rating Systems*, International Journal of Disaster Risk Reduction, 128, 105746, DOI: <https://doi.org/10.1016/j.ijdr.2025.105746> **ISI I.F. = 4.5 (Q1).**
7. Nguyen D.-D., Tiep N.V., Bui Q.-A.T., Le H.V., Prakash I., **Costache R.**, Pandey M., Pham B.T. (2025) *Landslide Susceptibility Mapping Using RBFN-Based Ensemble Machine Learning Models*, CMES-Computer Modeling in Engineering & Sciences, 142(1), 467-500. DOI: <https://doi.org/10.32604/cmescs.2024.056576> **ISI I.F. = 2.5 (Q2).**
8. Abba S.I., Pham Q.B., Malik A., **Costache R.**, Gaya M.S., Abdullahi J., Usman A.G., Saini

- G. (2025) *Optimization of Extreme Learning Machine with Metaheuristic Algorithms for Modelling Water Quality Parameters of Tamburawa Water Treatment Plant in Nigeria*, Water Resources Management, 39 (3), 1377-1401. DOI: <https://doi.org/10.1007/s11269-024-04027-z>. **ISI I.F. = 4.7 (Q1).**
9. Islam A.R.M.T., Mia M.U., Nova N.A., Chakraborty R., Khan M.S.I., Ghose B., Pal S.C., Bari A.B.M.M., Alam E., Islam M.K., Alshehri M.A., Abdo H.G., **Costache R.** (2025) *Enhancing flood susceptibility mapping in Meghna River basin by introducing ensemble Naive Bayes with stacking algorithms*, Geomatics Natural Hazards and Risk, 16(1), 2464049, DOI: <https://doi.org/10.1080/19475705.2025.2464049>. **ISI I.F. = 4.6 (Q1).**
 10. Diaconu D.C., **Costache R.***, Islam A.R.M.T., Pandey M., Pal S.C., Mishra A.P., Pande C.B. (2024) *Developing flood mapping procedure through optimized machine learning techniques. Case study: Prahova river basin, Romania*, Journal of Hydrology: Regional Studies, 54, 101892, DOI: <https://doi.org/10.1016/j.ejrh.2024.101892>. **ISI I.F. = 5 (Q1).**
 11. Pandey A., Parashar D., Palni S., Sarkar M.S., Mishra A.P., Singh A.P., **Costache R.**, Abdulqadim T.J., Pande C.B., Tolche A.D., Khan M.Y.A. (2024) *Spatiotemporal snowline status and climate variability impact assessment: a case study of Pindari River Basin, Kumaun Himalaya, India*, Environmental Sciences Europe, 36, 104. DOI: <https://doi.org/10.1186/s12302-024-00924-7>. **ISI I.F. = 6 (Q1).**
 12. Jaydhar, A. K., Pal, S. C., Saha, A., Islam, A. R. M. T., Ruidas, D., **Costache, R.** (2024). *Hydrogeochemical properties of groundwater and associated human health hazards in coastal multiaquifers of India*. Environmental Science and Pollution Research, 31(12), 18054-18073. <https://doi.org/10.1007/s11356-023-27765-w>
 13. Dandapat K., Chatterje U., Das S., Patra A., Manna H., Ghosh A., Pal S.C., Islam A.R.M.T., **Costache R.**, Alam E., Islam M.K. (2024) *Assessment of groundwater potential zones in data-scarce regions using GIS-based multicriteria decision making approach*, Geocarto International, 39(1), 2311202. DOI: <https://doi.org/10.1080/10106049.2024.2311202>. **ISI I.F. = 3.5 (Q2).**
 14. Pande C.B., Egbueri J.C., **Costache R.**, Sidek L.M., Wang Q., Alshehri F., Din N.M., Gautam V.K., Pal S.C. (2024) *Predictive modeling of land surface temperature (LST) based on Landsat-8 satellite data and machine learning models for sustainable development*, Journal of Cleaner Production, 141035, <https://doi.org/10.1016/j.jclepro.2024.141035> **ISI I.F. = 10 (Q1).**
 15. Alam M.M., Akter M.Y., Islam A.R.M.T., Mallick J., Kabir Z., Chu R., Arabameri A., Pal S.C., Al Masudi M.A., **Costache R.**, Senapathi V. (2024) *A review of recent advances and future prospects in calculation of reference evapotranspiration in Bangladesh perspective using soft computing models*, Journal of Environmental Management, 351, 119714 DOI: <https://doi.org/10.1016/j.jenvman.2023.119714>. **ISI I.F. = 8.4 (Q1).**
 16. Tuyen T.T., Al-Ansari N., Nguyen D.D., Le H.M., Phan T.N.Q, Prakash I., **Costache R.***, Pham B.T. (2024) *Prediction of White Spot Disease Susceptibility in Shrimps Using Decision Trees based Machine Learning Models*, Applied Water Science, 14, 2. DOI: <https://doi.org/10.1007/s13201-023-02049-3>. **ISI I.F. = 5.7 (Q1).**
 17. **Costache R.**, Arabameri A., Costache I., Crăciun A., Abu Reza Md. Towfiqul Islam A.R.M.T., Abba S.I., Sahana M., Pandey M., Trung Tin T.T., Pham B.T. (2024) *Flood hazard potential evaluation using decision tree state-of-the-art models*, Risk Analysis, 44(2), 439-458. DOI: <https://doi.org/10.1111/risa.14179>. **ISI I.F. = 3.3 (Q1).**
 18. Rashid M., Haider S., Masood M.U., Pande C.P., Tolche A.D., Alshehri F., **Costache R.**,

- Elkhrachy I. (2023). *Sustainable Water Management for Small Farmers with Center Pivot Irrigation: A Hydraulic and Structural Design Perspective*, Sustainability, 15(23), 16390, DOI: <https://doi.org/10.3390/su152316390> . **ISI I.F. = 3.3 (Q2).**
19. Thanh B.N., Phong T.V., Trinh P.T., **Costache R.**, Amiri M., Nguyen D.D., Le H.V., Prakash I., Pham B.T. (2023) *Prediction of Coastal Erosion Susceptible Areas of Quang Nam Province, Vietnam Using Machine Learning Models*, Earth Science Informatics, 17, 401–419. DOI: <https://doi.org/10.1007/s12145-023-01182-6>. **ISI I.F. = 2.7 (Q2).**
 20. Pal S.C., Chakraborty R., Islam A.R.M.T., Roy P., Chowdhuri I., Saha A., Islam A., **Costache R.**, Alam E. (2023) *Land use and climate change-induced soil erosion mapping in a sub-tropical environment*, Geomatics, Natural Hazards and Risk, 14(1), 2270129, DOI: <https://doi.org/10.1080/19475705.2023.2270129> . **ISI I.F. = 4.5 (Q1).**
 21. Haider S., Masood M.U., Rashid M., Alshehri F., Pande C.B., Katipoğlu O.M., **Costache R.** (2023) *Simulation of the Potential Impacts of Projected Climate and Land Use Change on Runoff under CMIP6 Scenarios*, Water, 15(19), 3421, DOI: <https://doi.org/10.3390/w15193421>. **ISI I.F. = 3 (Q2).** - **HOT CITED PAPER – Included in the top 0.1% of papers in the academic field of Environment/Ecology according to Web of Science (Clarivate Analytics) (November/December 2023).**
 22. Shelar R.S., Nandgude S.B., Pande C.B., **Costache R.**, El-Hiti G.A., Tolche A.B., Son C.T., Yadav K.K. (2023) *Unlocking the hidden potential: Groundwater zone mapping using AHP, remote sensing and GIS techniques*, Geomatics, Natural Hazards and Risk, 14(1), 2264458, DOI: <https://doi.org/10.1080/19475705.2023.2264458>. **ISI I.F. = 4.5 (Q1).**
 23. Bien T.X., Iqbal M., Jamal A., Nguyen D. D., Phong T.V., **Costache R.***, Ho S.L., Le H.V., Nguyen H.B.T., Prakash I., Pham B.T. (2023) *Integration of Rotation Forest with MultiBoost Ensemble Methods with Forest by Penalizing Attributes for Spatial Prediction of Landslide Susceptible Areas*, Stochastic Environmental Research and Risk Assessment, 37(12), 4641–4660. DOI: <https://doi.org/10.1007/s00477-023-02521-1>. **ISI I.F. = 3.9 (Q1).**
 24. Pandey A., Sarkar M.S., Palni S., Parashar D., Singh G., Kaushik S., Chandra N., **Costache R.**, Singh A.P., Mishra A.P., Almohamad H., Al-Mutiry M., Abdo H.G. (2023) *Multivariate statistical algorithms for landslide susceptibility assessment in Kailash Sacred Landscape, Western Himalaya*, Geomatics, Natural Hazards and Risk, 14(1), 2227324, DOI: <https://doi.org/10.1080/19475705.2023.2227324>. **ISI I.F. = 4.5 (Q1).**
 25. Jannat J.N., Mia M.Y., Jion M.M.M.F, Islam M.S., Ali M.M., Siddique M.A.B., Rakib M.R.J., Ibrahim S.M., Pal S.C., **Costache R.**, Malafaia G., Islam A.R.M.T. (2023) *Pollution trends and ecological risks of heavy metal(loid)s in coastal zones of Bangladesh: A chemometric review*, Marine Pollution Bulletin, 191, 114960. DOI: <https://doi.org/10.1016/j.marpolbul.2023.114960>. **ISI I.F. = 5.3 (Q1).**
 26. Mia Md. U., Chowdhuri T.N., Chakraborty R., Pal S.C., Al-Sadoon M.K., **Costache R.**, Islam A.R.M.T. (2023) *Flood Susceptibility Modeling Using an Advanced Deep Learning-Based Iterative Classifier Optimizer*, Land, 12(4), 810. DOI: <https://doi.org/10.3390/land12040810>. **ISI I.F. = 3.2 (Q2).**
 27. Chandra N., Singh G., Rai I.D., Mishra A.P., Kazmi M.Y., Pandey A., Jalal J.S., **Costache R.**, Almohamad H., Al-Mutiry M., Al-Mutiry M., Abdo H.G. (2023) *Predicting Distribution and Range Dynamics of Three Threatened Cypripedium Species under Climate Change Scenario in Western Himalaya*. Forests, 14(3), 633. <https://doi.org/10.3390/f14030633>. **ISI I.F. = 2.4 (Q1).**
 28. Bhagya S.B., Sumi A.S., Balaji S., Danumah J.H., **Costache R.**, Rajaneesh A., Gokul A., Chandrasenan C.P., Quevedo R.P., Johny A., Sajinkumar K.S., Saha S., Ajin R.S., Mammen

- P.C., Abdelrahman K., Fnais M.S., Abioui M. (2023) *Landslide susceptibility assessment of a part of the Western Ghats (India) employing the AHP and F-AHP models and comparison with existing susceptibility maps*, Land, 12(2), 468. <https://doi.org/10.3390/land12020468>. **ISI I.F. = 3.2 (Q2).** – Highly Cited paper – Included in the Top 1% of the academic field of Plant & Animal Science according to Web of Science (Clarivate Analytics) (November/December 2023).
29. Biswas T., Pal S.C., Ruidas D., Islam A.R.M.T., Saha A., **Costache R.**, Shit M. (2023) *Modelling of groundwater potential zone in hard rock-dominated drought-prone region of eastern India using integrated geospatial approach*, Environmental Earth Sciences, 82 (81). <https://doi.org/10.1007/s12665-023-10768-8>. **ISI I.F. = 2.8 (Q2).**
 30. Sinha A., Nikhil S., Ajin R.S., Danumah J.H., Saha S., **Costache R.**, Rajaneesh A., Sajinkumar K.S., Amrutha K., Johny A., MARzook F., Mammen P.C., Abdelrahman K., Fnais M.S., Abioui M. (2023) *Wildfire Risk Zone Mapping in Contrasting Climatic Conditions: An Approach Employing AHP and F-AHP Models*, Fire, 6(2), 44. DOI: <https://doi.org/10.3390/fire6020044>. **ISI IF = 3 (Q1).** – Highly Cited paper – Included in the Top 1% of the academic field of Plant & Animal Science according to Web of Science (Clarivate Analytics) (January/February 2023).
 31. Varol M., Habib M.A., Islam A.R.M.T., Phoungthong K., Khan R., Islam M.S., Hasanuzzaman M., Mia M.Y., **Costache R.**, Pal S.C. (2023) *Receptor model-based source-specific health risks of toxic metal(loid)s in coal basin-induced agricultural soil in northwest Bangladesh*, Environmental Geochemistry and Health, 45(11), 8539-8564. DOI: <https://doi.org/10.1007/s10653-023-01740-3>. **ISI I.F. = 3.2 (Q2)**
 32. Abdo H.G., Almohamad H., Dughairi A.A.A., Ali S.A., Parvin F., Elbeltagi A., **Costache R.**, Mohammed S., Al-Mutiry M., Alsafadi K. (2022) *Spatial implementation of frequency ratio, statistical index and index of entropy models for landslide susceptibility mapping in Al-Balouta river basin, Tartous Governorate, Syria*, Geoscience Letters, 9:45. DOI: <https://doi.org/10.1186/s40562-022-00256-5>. **ISI I.F. = 4 (Q1).**
 33. Mithun, S., Sahana, M., Chattopadhyay, S., Chatterjee, S., Islam, J., & **Costache, R.** (2022). *Comparative Framework for Spatially Explicit Urban Growth Modeling for Monitoring Urban Land-Use Efficiency and Sustainable Urban Development (SDG 11.3. 1): A study on Kolkata Metropolitan Area, India*. Geocarto International, 37(27), 17933-17970. DOI: <https://doi.org/10.1080/10106049.2022.2136259>. **ISI I.F. = 3.8 (Q2).**
 34. Yu, H., Arabameri, A., **Costache, R.**, Crăciun A., Arora, A. (2022). *Land subsidence susceptibility assessment using advanced artificial intelligence models*. Geocarto International. 37(27), 18067-18093. DOI: <https://doi.org/10.1080/10106049.2022.2136265>. **ISI I.F. = 3.8 (Q2).**
 35. Bien T.X., Truyen P.T., Phong T.V., Nguyen D.D., Amiri M., **Costache R.***, Duc D.M., Le H.V., Nguyen H.B.T., Prakash I., Pham B.T. (2022), *Landslide Susceptibility Mapping at Sin Ho, Lai Chau Province, Vietnam Using Ensemble Models Based on Fuzzy Unordered Rules Induction Algorithm*, Geocarto International. 37(27), 17777-17798. DOI: <https://doi.org/10.1080/10106049.2022.2136253>. **ISI I.F. = 3.8 (Q2)**
 36. Nguyen M.D., **Costache R.**, Sy A.H., Ahmadzadeh H., Le H.V., Prakash I., Pham B.T. (2022) *Novel approach for soil classification using machine learning methods*, Bulletin of Engineering Geology and the Environment, 81, 468. DOI: <https://doi.org/10.1007/s10064-022-02967-7>. **ISI I.F. = 4.2 (Q1).**
 37. Crăciun A., **Costache R.**, Bărbulescu A., Pal S.C., Costache I., Dumitriu C.Ş. (2022) *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(8), 1149. DOI: <https://doi.org/10.3390/jmse10081149>. **ISI I.F. = 2.9 (Q1).**
38. Mia M.U., Rahman M., Elbeltagi A., Abdullah-al-Mahbub M., Islam H.M.T., Pal S.C., **Costache R.**, Islam A.R.M.T., Islam M.M., Ningsheng C. (2022) *Sustainable flood risk assessment using deep learning-based algorithms with a blockchain technology*, Geocarto International. DOI: <https://doi.org/10.1080/10106049.2022.2112982>. **ISI I.F. = 3.8 (Q2).**
 39. **Costache R.**, Alireza A., Costache I., Crăciun A., Pham B.T. (2022) *New machine learning ensemble for flood susceptibility estimation*, Water Resources Management. 36(12), 4765-4783. DOI: <https://doi.org/10.1007/s11269-022-03276-0>. **ISI I.F. = 4.3 (Q1).**
 40. Senan C.P.C., Ajin R.S., Danumah J.H., **Costache R.**, Arabameri A., Rajaneesh A., Sajinkumar K.S., Kuriakose S.L. (2022) *Flood vulnerability of a few areas in the foothills of the Western Ghats: A comparison of the AHP and F-AHP models*, Stochastic Environmental Research and Risk Assessment. 37(2), 527-556. DOI: <https://doi.org/10.1007/s00477-022-02267-2>. **ISI I.F. = 4.2 (Q1).**
 41. Manzar M.S., Benaafi M., **Costache R.**, Alagha O., Mu'azu N.D., Zubair M., Abdullahi J., Abba S.I. (2022) *New generation neurocomputing learning coupled with a hybrid neuro-fuzzy model for quantifying water quality index variable: A case study from Saudi Arabia*, Ecological Informatics, 70, 101696. DOI: <https://doi.org/10.1016/j.ecoinf.2022.101696>. **ISI I.F. = 5.1(Q2).**
 42. **Costache R.**, Arabameri A., Costache I., Crăciun A., Islam A.R.M.T., Abba S.I., Sahana M., Pham B.T. (2022) *Flood susceptibility evaluation through deep learning optimizer ensembles and GIS techniques*, Journal of Environmental Management, 316, 115316. DOI: <https://doi.org/10.1016/j.jenvman.2022.115316>. **ISI I.F. = 8.7 (Q1).**
 43. Wen T., Tiewang W., Arabameri A., Nalivan O.A., Pal S.C., Saha A., **Costache R.** (2022) *Land-subsidence susceptibility mapping: Assessment of an adaptive neuro-fuzzy inference system–genetic algorithm (ANFIS–GA) hybrid model*, Geocarto International, 37(26), 12194-12218. DOI: <https://doi.org/10.1080/10106049.2022.2066198>. **ISI I.F. = 3.8 (Q2).**
 44. **Costache R.**, Tin T.T., Arabameri A., Crăciun A., Ajin R.S., Costache I., Islam A.R..M.T., Abba S.I., Sahana M., Avand M., Pham B.T. (2022) *Flash-flood hazard using Deep Learning based on H2O R package and fuzzy-multicriteria decision-making analysis*, Journal of Hydrology, 609, 127747. DOI: <https://doi.org/10.1016/j.jhydrol.2022.127747>. **ISI I.F. = 6.4 (Q1).** – Highly Cited paper – Included in the Top 1% of the academic field of Engineering according to Web of Science (Clarivate Analytics) (January/February 2023).
 45. Arabameri A., Santosh M., Rezaie F., Saha S., **Costache R.**, Roy J., Mukherjee K., Tiefenbacher J., Moayedi H. (2022). *Application of novel ensemble models and k-fold CV approaches for Land subsidence susceptibility modelling*, Stochastic Environmental Research and Risk Assessment. 36(1), 201-223. DOI: [10.1007/s00477-021-02036-7](https://doi.org/10.1007/s00477-021-02036-7). **ISI I.F. = 4.2 (Q1).**
 46. **Costache R.**, Pham Q.B., Arabameri A., Diaconu D.C., Costache I., Crăciun A., Ciobotaru N., Pandey M., Arora A., Ali S.A., Pham B.T., Nguyen H., Tuan H.A., Avand M. (2022). *Flash-flood propagation susceptibility estimation using weights of evidence and their novel ensembles with multicriteria decision making and machine learning*, Geocarto International, 37(25), 8361-8393. DOI: <https://doi.org/10.1080/10106049.2021.2001580>. **ISI I.F. = 3.8 (Q2).**
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V. Lista altor lucrări și contribuții științifice

Capitole de carte publicate ca autor/co-autor

1. **COSTACHE, R.** Groundwater potential assessment in Dobrogea region of Romania using artificial intelligence and bivariate statistics – Chapter 21, pp. 379-396; In: APPLICATIONS OF ARTIFICIAL INTELLIGENCE IN MINING AND GEOTECHNICAL ENGINEERING.

Editor(s): Hoang N., Bui X.-N., Topal E., Zhou J., Choi Y., Zhang W.; **Published 2024.**
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