Mustafa Majeed Al-Mukhtar

مصطفى المختار

Professor

CONTACT

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EDUCATION

(01-07-2002) بكلوريوس
Sanitary engineering
University of Technology

(15-03-2007) ماجستير
water resources engineering
University of Technology

(11-08-2015) دكتوراه
water resources engineering and management
TU Freiberg

RESEARCH METRICS

h-index (Scopus)	17
h-index (GS)	19
Citations (Scopus)	1157
Citations (GS)	1572
Documents (Scopus)	41
Documents (GS)	57

AWARDS

• na

PATENTS

• na

RESEARCH INTERESTS

• artificial intelligence methods in water resoucres engineering

PROFILE

Mustafa Al-Mukhtar received the Ph.D. degree from TU Freiberg, Germany, in 2015. With respect to his academic experience profile, he started his academic job, in 2006, as an Assistant Lecturer with the University of Technology, Baghdad, where he is currently working as an Associate Professor in water resources engineering with the Civil Engineering Department. He taught several subjects related to the water resources and hydrological engineering, such as water management, fluid mechanics, hydrology, dams engineering, and statistics. In addition, he was involved in some consultancy projects, such as designing wastewater treatment plant, and environmental impact assessment of several projects. He has supervised on many under and post graduate students. His research interests include using the artificial intelligence methods in water resources management. He is interested in machine learning, statistical, and stochastic modeling, and has been manipulated with variety of statistical software, since 2011. He published several articles in peer reviewed international journals in this field. In 2017, he was honorably selected for the Fulbright Visiting Scholar Program.

ACADEMIC TITLES

2023-05-02	Professor

ADMINISTRATIVE POSITIONS

2020-09-01 - 2023-01-25	Director of Studies and Planning
2016-06-01 - 2018-06-05	post grad coordinator

INTERNATIONAL MEMBERSHIPS

• na

PUBLICATIONS (57)

1. Analysing impact of future emission scenarios on rainfall in rainfed agricultural zones in Northern Iraq using satellite data and CMIP6 models
Natural Hazards 122 (12), 514, 2026 | 2026

2. Potential Spatiotemporal Variability for Meteorological Drought in Anbar Governorate, Iraq Using CMIP6 Models
Warith Scientific Journal of Engineering and Technology 2 (1), 71-88, 2026 | 2026

3. EVALUATING THE AQUACROP MODEL FOR SIMULATING WINTER WHEAT YIELD AND WATER PRODUCTIVITY IN IRAQ
Journal of Engineering Science and Technology 21 (3), 2026 | 2026

4. Implementing Weather Generators for Prediction of Future Climate Changes: A Review Paper
Tikrit Journal of Engineering Sciences 32 (4), 1-18, 2025 | 2025 | Cited: 1

5. Integration of MRMR algorithm with advanced neural networks for modeling long-term crop water demand in agricultural basins
Applied Water Science 15 (8), 217, 2025 | 2025 | Cited: 10

6. **River morphological behavior between two barrages on the Euphrates: A case study**
Heritage and Sustainable Development 6 (2), 429, 2024 | 2024

7. **Evaluating Meteorological Drought and its Impacts on Vegetation Cover and Surface Water in the Headwater of Little Zab River Basin**
Revista de Ciências Agroveterinárias 23 (4), 739-750, 2024 | 2024 | Cited: 3

8. **Preface: International Conferences of Buildings, Construction, and Environmental Engineering (BCEE)**
AIP Conference Proceedings 3219 (1), 010001, 2024 | 2024

9. **Flow modulation on hydraulic river behavior between al-abbassia and al-shammia barrages using HEC-RAS2D**
Engineering and Technology Journal, 0, 2024 | 2024 | Cited: 1

10. **Investigating the hydraulic behaviours of an alluvial meandering river reach between two barrages**
Civil Eng J 10 (05), 4-0, 2024 | 2024 | Cited: 4

11. **Simulation of wheat water footprint using AquaCrop model under the climate change, case study in Qazvin plain**
Applied Water Science 14 (12), 264, 2024 | 2024 | Cited: 11

12. **Prediction of Water Quality Parameters of Tigris River in Baghdad City by Using Artificial Intelligence Methods**
Ecological Engineering & Environmental Technology 25, 2024 | 2024 | Cited: 5

13. **Advanced long-term actual evapotranspiration estimation in humid climates for 1958–2021 based on machine learning models enhanced by the RReliefF algorithm**
Journal of Hydrology: Regional Studies 56, 102043, 2024 | 2024 | Cited: 30

14. **Drought forecasting model for future climate change effects in a regional catchment area in northern iraq**
Engineering and Technology Journal, 1-15, 2024 | 2024 | Cited: 6

15. **Analyzing the future climate change impacts on meteorological parameters using the LARS-WG model**
Civil Engineering Journal 10 (11), 3754-3778, 2024 | 2024 | Cited: 26

16. **Optimization of Dualistic Reservoir System Two-Dimensional Rule Curve with Three Allocation Rules**
Civil Engineering Journal 10 (2), 404-418, 2024 | 2024 | Cited: 11

17. **Forecasting changes in precipitation and temperatures of a regional watershed in Northern Iraq using LARS-WG model**
Open Engineering 14 (1), 20220567, 2024 | 2024 | Cited: 15

18. **Prediction of Irrigation Water Quality Indices Using Random Committee, Discretization Regression, REPTree, and Additive Regression**
Water Resources Management 38 (1), 343-368, 2024 | 2024 | Cited: 20

19. **Avaliação da seca meteorológica e seus impactos na cobertura vegetal e nas águas superficiais na nascente da bacia do rio Little Zab**
2024

20. **Implementing Management Practices for Enhancing Water-Food Nexus Under Climate Change**
Civil Engineering Journal 9 (12), 3108-3122, 2023 | 2023 | Cited: 23

21. **Assessing the Potential of Hybrid-Based Metaheuristic Algorithms Integrated with ANNs for Accurate Reference Evapotranspiration Forecasting**
Sustainability 15 (19), 14320, 2023 | 2023 | Cited: 8

22. **Forecasting monthly pan evaporation using hybrid additive regression and data-driven models in a semi-arid environment**
Applied Water Science 13 (2), 42, 2023 | 2023 | Cited: 46

23. **Assessing CFSR climate data for rainfall-runoff modeling over an ungauged basin between Iraq and Iran**
Kuwait Journal of Science, 2023 | 2023 | Cited: 12

24. **Monitoring and Modelling Morphological Changes in Rivers Using RS and GIS Techniques**
Civil Engineering Journal 9 (03), 2023 | 2023 | Cited: 26

25. **Proposing Optimal Locations for Runoff Harvesting and Water Management Structures in the Hami Qeshan Watershed, Iraq**
ISPRS International Journal of Geo-Information 12 (8), 312, 2023 | 2023 | Cited: 17

26. **Derivation of Optimal Two Dimensional Rule Curve for Dualistic Reservoir Water-Supply System**
Civil Engineering Journal 9 (07), 2023 | 2023 | Cited: 11

27. **Future Water Requirements and Crop Productivity at Al-Najaf Governorate Under Different Climate Change Scenarios (2020–2080)**
Engineering and Technology Journal 41 (05), 687-697, 2023 | 2023 | Cited: 1

28. **Modeling of Sediment Transport Around A Water Intake In Tigris River–Baghdad Using A Numerical 2d Model**
Iraqi Journal of Science, 2023 | 2023 | Cited: 1

29. **Prediction of Surface Runoff for Mosul Dam Reservoir from Different Regional Catchment Areas Using Arc SWAT Model**
2022 | Cited: 1

30. **Monthly Pan Evaporation Modelling using Hybrid machine learning algorithms in a semi-arid environment**
SSRN Electronic Journal, 2022 | 2022 | Cited: 6

31. **Modeling Flow Patterns in Tigris River–Baghdad Using the CCHE2D model**
IOP Conference Series: Earth and Environmental Science 1120 (1), 012012, 2022 | 2022 | Cited: 1

32. **Groundwater level prediction using machine learning models: A comprehensive review**
Neurocomputing 489, 271-308, 2022 | 2022 | Cited: 469

33. **Assessment of Future Climate Change Impacts on Water Resources of Khabour River Catchment, North Of Iraq**
Engineering and Technology Journal 40 (05), 695-709, 2022 | 2022 | Cited: 8

34. **Modelling the IDF curves using the temporal stochastic disaggregation BLRP model for precipitation data in Najaf City**
Arabian Journal of Geosciences 14 (19), 1957, 2021 | 2021 | Cited: 4

35. **Prediction of lead (Pb) adsorption on attapulgite clay using the feasibility of data intelligence models**
Environmental Science and Pollution Research 28, 31670-31688, 2021 | 2021 | Cited: 35

36. **Modelling of future water use scenarios using WEAP model: a case study in Baghdad City, Iraq**
Engineering and Technology Journal 39 (3), 488-503, 2021 | 2021 | Cited: 26

37. **Proposition of new ensemble data-intelligence models for surface water quality prediction**
IEEE Access 9, 108527-108541, 2021 | 2021 | Cited: 128

38. **Modeling the monthly pan evaporation rates using artificial intelligence methods: a case study in Iraq**
Environmental Earth Sciences 80 (1), 39, 2021 | 2021 | Cited: 55

39. **Modeling of pan evaporation based on the development of machine learning methods**
Theoretical and Applied Climatology 146 (3-4), 961-979, 2021 | 2021 | Cited: 49

40. **Modelling water quantity parameters using Artificial Intelligence techniques, A case study Abu-Ziriq Marsh in south of Iraq.**
IOP Conference Series: Materials Science and Engineering 737 (1), 012156, 2020 | 2020 | Cited: 6

41. **Preface**
IOP Conference Series: Materials Science and Engineering | 2020

42. **Random forest, support vector machine, and neural networks to modelling suspended sediment in Tigris River-Baghdad**
Environmental monitoring and assessment 191 (11), 673, 2019 | 2019 | Cited: 116

43. **Modeling water quality parameters using data-driven models, a case study Abu-Ziriq marsh in south of Iraq**
Hydrology 6 (1), 24, 2019 | 2019

44. **Modelling the Ecosystem Behavior of Abu-Ziriq Marsh in South of Iraq Under Different Water Discharges Scenarios**
Engineering and Technology Journal 37 (10), 442-452, 2019 | 2019 | Cited: 4

45. **Future predictions of precipitation and temperature in Iraq using the statistical downscaling model**
Arabian Journal of Geosciences, 2019 | 2019 | Cited: 89

46. **Integrated approach to forecast future suspended sediment load by means of SWAT and artificial intelligence models, a case study**
Freiberg Online Geoscience 51 (Jun), 52-77, 2018 | 2018 | Cited: 2

47. **Derivation of suspended sediment data for Al-Adhiam watershed-Iraq using artificial neural network model**
MATEC Web of Conferences 162, 03014, 2018 | 2018 | Cited: 1

48. **Evaluation of different types of artificial intelligence methods to model the suspended sediment load in Tigris River**
MATEC Web of Conferences 162, 03003, 2018 | 2018 | Cited: 5

49. **Performance of SWAT Model for Long-Term Runoff Simulation within Al-Adhaim Watershed, Iraq**
International Journal of Scientific & Engineering Research 8 (10), 1510-1517, 2017 | 2017 | Cited: 11

50. **Modelling the root zone soil moisture using artificial neural networks, a case study**
Environmental Earth Sciences 75 (15), 1124, 2016 | 2016 | Cited: 23

51. **Modelling Hydrological and Suspended Sediment Processes in the Upper Reach of the Spree River, Germany**
2015

52. **Prediction suspended sediment load using artificial neural network: a case study in the upper reach of the Spree river, Germany**
IAMG 17 (September), 621-625, 2015 | 2015

53. **Assessing the impacts of climate change on hydrology of the upper reach of the spree river: Germany**
Water resources management 28, 2731-2749, 2014 | 2014 | Cited: 54

54. **Runoff and sediment yield modeling by means of WEPP in the Bautzen dam catchment, Germany**
Environmental earth sciences 72 (6), 2051-2063, 2014 | 2014 | Cited: 28

55. **Evaluation of the climate generator model CLIGEN for rainfall data simulation in Bautzen catchment area, Germany**
Hydrology Research 45 (4-5), 615-630, 2014 | 2014 | Cited: 23

56. **Methodology for Water Balance in Hemren Reservoir**
Engineering and Technology Journal 28 (22), 2010 | 2010

57. **Modeling water quality parameters using data-driven models, a case study Abu-Ziriq marsh in south of Iraq. Hydrology 6(1), 24 (2019)**
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