



# ASAAD SHAKIR HAMEED

اسعد شاكر حميد جاسم

Lecturer

## PROFILE

Asaad Shakir Hameed B.Sc. Degree in Education/sciences of Mathematics from the College of Education, University of Basrah, Iraq, in 2001. Master of mathematics science, specialization in Mathematical analysis from the College of Science, University of Tishreen, Syria, in 2012 and a Ph.D. in Mathematics / Modelling from Universiti Teknikal Malaysia Melaka (UTeM), Malaysia, in 2021. Currently job as Deputy Dean for Administrative Affairs of the Petroleum Engineering College at Al-Ayen University.

## ACADEMIC TITLES

2022-12-28 Lecturer

## ADMINISTRATIVE POSITIONS

2020-06-01 - Present Deputy Dean for Administrative Affairs of the Petroleum Engineering College

2022-10-12 - 2023-05-17 Mazaya University College; Quality Assurance and Academic Performance Unit

## PUBLICATIONS ( 6 1 )

- Evaluating water quality using the Geographical Detector Model in Hong Kong**  
*Physics and Chemistry of the Earth, Parts A/B/C | 2025*
- A review of studies on assessing water quality parameters based on the Google earth Engine imagery**  
*Remote Sensing Applications: Society and Environment | 2025*
- A Detailed Review of the Capacitated Vehicle Routing Problem: Model, Computational Complexity, Solutions, and Practical Applications**  
*Journal of Internet Services and Information Security | 2025*
- Enhancing prediction of dissolved oxygen over Santa Margarita River: Long short-term memory incorporated with multi-objective observer-teacher-learner optimization**  
*Journal of Water Process Engineering | 2025*
- A comparative study for predicting lake evaporation at chah nimeh reservoirs in Iran: employing the ADiPLS-LSTM model with an attention mechanism**  
*Earth Science Informatics | 2025*
- A fuzzy-based approach for clustering the meteorological drought over Iran**  
*Stochastic Environmental Research and Risk Assessment | 2024*
- Comparative Analysis of New Solutions for the Capacitated Vehicle Routing Problem Against CVRPLIB Benchmark**  
*International Journal of Computational and Experimental Science and Engineering | 2024*
- An intelligent deep learning-based approach for downscaling atmospheric general circulation model outputs**  
*Acta Geophysica | 2024*
- A Diabetes Prediction Model Using Hybrid Machine Learning Algorithm**  
*Mathematical Modelling of Engineering Problems | 2024*

## CONTACT

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## EDUCATION

دكتوراه (25-05-2021)

MODELLING

UTeM

## RESEARCH METRICS

|                    |     |
|--------------------|-----|
| h-index (Scopus)   | 10  |
| h-index (GS)       | 0   |
| Citations (Scopus) | 410 |
| Citations (GS)     | 0   |
| Documents (Scopus) | 49  |
| Documents (GS)     | 0   |

## RESEARCH INTERESTS

- Operations Research (OR)
- Reliable Communication Network Design (RCND)
- Meta-heuristic Algorithms (MAs)
- Combinatorial Optimization Problems (COPs)



10. **Analyzing the impact of socio-environmental parameters on wheat and barley cultivation areas using the geographical detector model**  
*Physics and Chemistry of the Earth* | 2024
11. **Climate-Responsive Crop Forecasting: An Eemd-Lstm Fusion Approach for Improved Strategic Crop Yield Simulation**  
*SSRN* | 2024
12. **Identifying the most effective climate parameters on crop yield in rain-fed agriculture and irrigated farming in Iran**  
*Physics and Chemistry of the Earth* | 2024
13. **International Journal of Hospitality and Tourism Systems: A Bibliometric Analysis**  
*International Journal of Hospitality and Tourism Systems* | 2024
14. **Spatial downscaling of the GCMs precipitation product over various regions of Iran: Application of Long Short-Term Memory model**  
*Physics and Chemistry of the Earth* | 2024
15. **Analytical model for thermoelastic damping in in-plane vibrations of circular cross-sectional micro/nanorings with dual-phase-lag heat conduction**  
*Journal of Vibration Engineering & Technologies* 12 (1), 797-810, 2024 | 2024 | Cited: 7
16. **Fuzzy-Based Clustering for Larger-Scale Deep Learning in Autonomous Systems Based on Fusion Data**  
*Journal of Intelligent Systems and Internet of Things* 9 (1), 69-83, 2023 | 2023 | Cited: 1
17. **Intelligent Load Identification of Household-Smart Meters Using Multilevel Decision Tree and Data Fusion Techniques**  
*Journal of Intelligent Systems and Internet of Things* 9 (1), 24-35, 2023 | 2023
18. **Intelligent Multilevel Fusion System for Wireless Sensor Network Virtualization Using Deep Reinforcement Learning in Education**  
*Fusion: Practice and Applications* 10 (1), 116-16-127, 2023 | 2023
19. **Analytical Model for Thermoelastic Damping in In-Plane Vibrations of Circular Cross-Sectional Micro/Nanorings with Dual-Phase-Lag Heat Conduction**  
*Journal of Vibration Engineering & Technologies*, 1-14, 2023 | 2023 | Cited: 6
20. **Couple stress-based thermoelastic damping in microrings with rectangular cross section according to Moore–Gibson–Thompson heat equation**  
*Archives of Civil and Mechanical Engineering* 23 (3), 151, 2023 | 2023 | Cited: 3
21. **An Enhanced Ant Colony System Algorithm Based on Subpaths for Solving the Capacitated Vehicle Routing Problem**  
*Symmetry* 15 (11), 2020, 2023 | 2023 | Cited: 26
22. **A novel class of adaptive observers for dynamic nonlinear uncertain systems**  
*Expert Systems*, e13412, 2023 | 2023
23. **The Maximum Scatter Travelling Salesman Problem: A Hybrid Genetic Algorithm**  
*International journal of computer science and network security: IJCSNS* 23 (6&nbsp;...), 2023 | 2023
24. **Applying the Roulette Wheel Selection Approach to Address the Issues of Premature Convergence and Stagnation in the Discrete Differential Evolution Algorithm**  
*Applied Computational Intelligence and Soft Computing* 2023, 2023 | 2023 | Cited: 1
25. **Correction to: Analytical Model for Thermoelastic Damping in In-Plane Vibrations of Circular Cross-Sectional Micro/Nanorings with Dual-Phase-Lag Heat Conduction (Journal of Vibration Engineering & Technologies, (2023), 10.1007/s42417-023-00876-x)**  
*Journal of Vibration Engineering and Technologies* | 2023
26. **Harmony Search Algorithm for Solving Combinatorial Optimization Problems: Bibliometric Analysis**  
*Mathematical Modelling of Engineering Problems* | 2023
27. **Impact on Higher Education and College Students in Dijlah University after COVID through E-learning**  
*Computer-Aided Design and Applications* | 2023

28. **Harmony Search Algorithm for Solving Combinatorial Optimization Problems: Bibliometric Analysis.**  
*Mathematical Modelling of Engineering Problems 10 (3), 2023 | 2023 | Cited: 2*
29. **Superconvergence of conforming and nonconforming finite element approximation for elliptic problems by L2-projection**  
*AIP Conference Proceedings 2591 (1), 2023 | 2023*
30. **Networks Cyber Security Model by Using Machine Learning Techniques**  
*International Journal of Intelligent Systems and Applications in Engineering&nbsp;..., 2022 | 2022 | Cited: 2*
31. **IMPLEMENTATION OF THE ENHANCED ANT COLONY SYSTEM ALGORITHM TO SOLVE RELIABLE COMMUNICATION NETWORK DESIGN.**  
*Eastern-European Journal of Enterprise Technologies 117 (9), 2022 | 2022*
32. **Hybrid Genetic Algorithms for the Asymmetric Distance-Constrained Vehicle Routing Problem**  
*Mathematical Problems in Engineering 2022, 2022 | 2022 | Cited: 12*
33. **IMPLEMENTATION OF THE ENHANCED ANT COLONY SYSTEM ALGORITHM TO SOLVE RELIABLE COMMUNICATION NETWORK DESIGN**  
*Eastern-European Journal of Enterprise Technologies | 2022*
34. **Peer Review #2 of "KL-MOB: automated COVID-19 recognition using a novel approach based on image enhancement and a modified MobileNet CNN (v0.1)"**  
*2021*
35. **Peer Review #4 of "KL-MOB: automated COVID-19 recognition using a novel approach based on image enhancement and a modified MobileNet CNN (v0.2)"**  
*2021*
36. **A Hybrid Method Integrating a Discrete Differential Evolution Algorithm with Tabu Search Algorithm for the Quadratic Assignment Problem: A New Approach for Locating Hospital Departments**  
*Mathematical Problems in Engineering | 2021*
37. **Transfer Learning to Detect COVID-19 Automatically from X-Ray Images Using Convolutional Neural Networks**  
*International Journal of Biomedical Imaging, 2021 | 2021 | Cited: 114*
38. **A hybrid method integrating a discrete differential evolution algorithm with tabu search algorithm for the quadratic assignment problem: A new approach for locating hospital&nbsp;...**  
*Mathematical Problems in Engineering 2021, 1-21, 2021 | 2021 | Cited: 10*
39. **A HYBRID METHOD INTEGRATING A RANK-BASED ANT SYSTEM ALGORITHM WITH INSERT AND SWAP ALGORITHM FOR THE CAPACITATED VEHICLE ROUTING PROBLEM SOLUTION**  
*Journal of Theoretical and Applied Information Technology 99 (3), 685-695, 2021 | 2021*
40. **KL-MOB Automated Covid-19 Recognition Using a Novel Approach Based on Image Enhancement and a Modified MobileNet CNN (preprint)**  
*2021*
41. **KL-MOB: automated COVID-19 recognition using a novel approach based on image enhancement and a modified MobileNet CNN**  
*PeerJ Computer Science 7, e694, 2021 | 2021 | Cited: 7*
42. **Using Machine Learning Technologies to Classify and Predict Heart Disease**  
*International Journal of Advanced Computer Science and Applications 12 (3&nbsp;..., 2021 | 2021 | Cited: 7*
43. **Pedestrian and Objects Detection by Using Learning Complexity-Aware Cascades**  
*2021 2nd Information Technology To Enhance e-Learning and Other Application&nbsp;..., 2021 | 2021 | Cited: 3*
44. **Experimental study of hybrid genetic algorithms for the maximum scatter travelling salesman problem**  
*International Journal of Advanced Computer Science and Applications 12 (8), 2021 | 2021 | Cited: 2*
45. **An efficient improvement of ant colony system algorithm for handling capacity vehicle routing problem**  
*International Journal of Industrial Engineering Computations 11 (4), 549-564, 2020 | 2020 | Cited: 34*

46. **A new hybrid approach based on discrete differential evolution algorithm to enhancement solutions of quadratic assignment problem**  
*International Journal of Industrial Engineering Computations 11 (1), 51-72, 2020 | 2020 | Cited: 27*
47. **MULTI-OBJECTIVES ANT COLONY SYSTEM FOR SOLVING MULTI-OBJECTIVES CAPACITATED VEHICLE ROUTING PROBLEM**  
*Journal of Theoretical and Applied Information Technology 98 (24), 14, 2020 | 2020 | Cited: 6*
48. **An Efficient Crossover Operator for Quadratic Assignment Problem Based on Discrete Differential Evolution Algorithm**  
*International Journal of Advanced Science and Technology 28 (8), 591 - 601, 2019 | 2019*
49. **Using improved discrete differential evolution algorithm to solve quadratic assignment model: a hospital case study**  
*2019*
50. **Enhancing Solutions of Capacity Vehicle Routing Problem based on an Improvement Ant Colony System Algorithm**  
*Journal of Advanced Research in Dynamical and Control Systems 11 (01-Special&nbsp;..., 2019 | 2019 | Cited: 3*
51. **An Efficient Hybrid Approach in Solving the Multiple Postman Problem**  
*International Journal of Engineering & Technology 7 (4.36), 154-159, 2018 | 2018*
52. **Improved Discrete Differential Evolution Algorithm in Solving Quadratic Assignment Problem for best Solutions**  
*(IJACSA) International Journal of Advanced Computer Science and Applications&nbsp;..., 2018 | 2018 | Cited: 5*
53. **A comparative study between the branch and cut algorithm and ant colony algorithm to solve the electric meter reader problem in rural areas**  
*Opcion 34 (86), 1525-1539, 2018 | 2018 | Cited: 5*
54. **Review on the methods to solve combinatorial optimization problems particularly: quadratic assignment model**  
*International Journal of Engineering & Technology 7 (3.20), 15-20, 2018 | 2018 | Cited: 18*
55. **A comparative study between the branch and cut algorithm and ant colony algorithm to solve the electric meter reader problem in rural areas,Un estudio comparativo entre el algoritmo de corte y ramificación y el algoritmo de colonias de hormigas para resolver el problema del lector de medidor eléctrico en áreas rurales**  
*Opcion | 2018*
56. **Stability of -saddle points And -extreme saddlepoints**  
*2017*
57. **Review paper in vehicle routing problem and future research trend**  
*International Journal of Applied Engineering Research 12 (22), 12279-12283, 2017 | 2017 | Cited: 8*
58. **Stability of-saddle points And-extreme saddlepoints**  
*Journal of Education for Pure Science 7 (1), 2017 | 2017*
59. **NEW TYPES OF CONTINUOUS FUNCTIONS IN IDEAL TOPOLOGICAL SPACES**  
*JOURNAL OF INTERNATIONAL ACADEMIC RESEARCH FOR MULTIDISCIPLINARY 3 (12), 50-57, 2016 | 2016*
60. **Plasma estradiol-17B (beta) concentration during estrous cycle in the nili-ravi buffalo**  
*1990*
61. **A novel class of adaptive observers for dynamic nonlinear uncertain systems**  
*Expert Systems, e13412, 0*