



# Haydar Abdulameer Marhoon

حيدر عبد الامير مرهون عبود الخفاجي

Associate Professor

## ACADEMIC TITLES

2012-09-01	Assistant Professor
2017-01-20	Lecturer
2020-06-11	Associate Professor

## ADMINISTRATIVE POSITIONS

2012-06-01 - 2012-09-01	Network Admin
2003-07-01 - 2012-01-01	Engineering
2020-12-01 - Present	Vice-Chancellor

## PUBLICATIONS ( 149 )

- ECT-DLM: Deep Learning-Based Empirical Curvelet Transform Approach**  
*ICT for Intelligent Systems: Proceedings of ICTIS 2025, Volume 2 2, 37, 2026 | 2026*
- Towards intelligent air quality forecasting using integrated machine learning framework with variational mode decomposition and catboost feature selection**  
*Scientific Reports, 2026 | 2026 | Cited: 1*
- A novel augmented reality and reinforcement learning empowered communication framework for underwater unmanned autonomous vehicle**  
*Scientific Reports, 2026 | 2026*
- Secure IoMT smartwatch-based blood glucose monitoring using multimodal activity and nutrition data with transfer learning**  
*Scientific Reports, 2026 | 2026*
- Traffic congestion estimation and control: A comprehensive review of the applied computational intelligence models**  
*Archives of Computational Methods in Engineering 33 (1), 339-400, 2026 | 2026 | Cited: 3*
- An evolutionary optimized automated machine learning approach to soil unconfined compressive strength prediction for sustainable transportation infrastructure**  
*Transportation Geotechnics 52, 101550, 2025 | 2025 | Cited: 5*
- A PEGASIS RP based-wireless sensor network-enabled smart contact lens for real time ocular monitoring**  
*Results in Engineering 26, 105285, 2025 | 2025 | Cited: 2*
- LEACH-based approach using first-order model for energy efficient routing in WSNs for mobile diabetes patient monitoring**  
*J Wireless Mobile Netw Ubiquitous Comput, 2025 | 2025 | Cited: 2*
- ECT-DLM: Deep Learning-Based Empirical Curvelet Transform Approach for Thoracic Disease Diagnosis from X-RAY Images**  
*International Conference on Information and Communication Technology for&nbsp;..., 2025 | 2025*
- A PEGASIS RP based-Wireless Sensor Network-Enabled Smart Contact Lens for Real Time Ocular Monitoring**  
*Results in Engineering, 105285, 2025 | 2025 | Cited: 2*

## CONTACT

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## EDUCATION

بكالوريوس (01-07-2003)  
Control and System Engineering  
UOTechnology

ماجستير (20-02-2012)  
Computer Networks  
UUM

دكتوراه (20-01-2017)  
Computer Networks  
UUM

## RESEARCH METRICS

h-index (Scopus)	22
h-index (GS)	24
Citations (Scopus)	1607
Citations (GS)	1973
Documents (Scopus)	86
Documents (GS)	94

## RESEARCH INTERESTS

•,Computer Network, WSN, Wireless Communication, Machines Learning AI



11. **An evolutionary optimized automated machine learning approach to soil unconfined compressive strength prediction for sustainable transportation infrastructure**  
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12. **Traffic Congestion Estimation and Control: A Comprehensive Review of the Applied Computational Intelligence Models**  
*Archives of Computational Methods in Engineering, 1-62, 2025 | 2025 | Cited: 1*
13. **A Barrier-Based Machine Learning Approach for Intrusion Detection in Wireless Sensor Networks.**  
*Computers, Materials & Continua 82 (3), 2025 | 2025 | Cited: 1*
14. **Blockchain-Integrated Edge-Cloud-Enabled Healthcare Data Analytics Based on Distributed Federated Learning and Deep Neural Networks**  
*Mesopotamian Journal of CyberSecurity 5 (3), 1122-1140, 2025 | 2025*
15. **Privacy-preserving communication in smart city transportation using elliptic curve cryptography**  
*Scientific Reports 15 (1), 34342, 2025 | 2025 | Cited: 2*
16. **Adaptive Federated Learning Empowered Wireless Localization Framework Using Vehicle Sensors**  
*Journal of Applied Science and Technology Trends 6 (2), 2025 | 2025*
17. **ECT-DLM: Deep Learning Based Empirical Curvelet Transform Approach for Thoracic Disease Diagnosis from X-RAY Images**  
*ICTIS 2025, 2025 | 2025*
18. **Optimizing engineering design problems using adaptive differential learning teaching-learning-based optimization: Novel approach**  
*Expert Systems with Applications, 126425, 2025 | 2025*
19. **Optimizing engineering design problems using adaptive differential learning teaching-learning-based optimization: Novel approach**  
*Expert Systems with Applications 270, 126425, 2025 | 2025 | Cited: 5*
20. **DCSSGA-UNet: Biomedical image segmentation with DenseNet channel spatial and Semantic Guidance Attention**  
*Knowledge-Based Systems 314, 113233, 2025 | 2025 | Cited: 75*
21. **Designing Wireless Sensor Network Data Based Machine Learning Approach for Accurate Human Activity Recognition.**  
*J. Internet Serv. Inf. Secur. 15 (1), 385-400, 2025 | 2025 | Cited: 12*
22. **LEACH-based approach using first-order model for energy efficient routing in WSNs for mobile diabetes patient monitoring**  
*J Wireless Mobile Netw Ubiquitous Comput Dependable Appl. 2025; 16 (2): 105&nbsp;..., 2025 | 2025 | Cited: 2*
23. **Blockchain-Integrated Edge-Cloud-Enabled Healthcare Data Analytics Based on Distributed Federated Learning and Deep Neural Networks**  
*Mesopotamian Journal of CyberSecurity 5 (3), 1122-1140, 2025 | 2025*
24. **Augmented IoT cooperative vehicular framework based on distributed deep blockchain networks**  
*IEEE Internet of Things Journal 11 (22), 35825-35838, 2024 | 2024 | Cited: 23*
25. **Edge-cloud remote sensing data-based plant disease detection using deep neural networks with transfer learning**  
*IEEE Journal of Selected Topics in Applied Earth Observations and Remote&nbsp;..., 2024 | 2024 | Cited: 35*
26. **Federated-reinforcement learning-assisted IoT consumers system for kidney disease images**  
*IEEE Transactions on Consumer Electronics 70 (4), 7163-7173, 2024 | 2024 | Cited: 21*
27. **FDCNN-AS: Federated deep convolutional neural network Alzheimer detection schemes for different age groups**  
*Information Sciences 677, 120833, 2024 | 2024 | Cited: 19*
28. **A deep learning fusion model for accurate classification of brain tumours in Magnetic Resonance images**  
*CAAI Transactions on Intelligence Technology 9 (4), 790-804, 2024 | 2024 | Cited: 49*
29. **Fiber-optics IoT healthcare system based on deep reinforcement learning combinatorial constraint scheduling for hybrid telemedicine applications**  
*Computers In Biology And Medicine 178, 108694, 2024 | 2024 | Cited: 13*

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*Information Sciences, 120833, 2024 | 2024 | Cited: 2*
31. **Optimal distribution grid allocation of reactive power with a focus on the particle swarm optimization technique and voltage stability**  
*Scientific Reports 14 (1), 10889, 2024 | 2024 | Cited: 11*
32. **Fiber-Optics IoT Healthcare System Based on Deep Reinforcement Learning Combinatorial Constraint Scheduling for Hybrid Telemedicine Applications**  
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33. **Federated-Reinforcement Learning-Assisted IoT Consumers System for Kidney Disease Images**  
*IEEE Transactions on Consumer Electronics, 2024 | 2024 | Cited: 6*
34. **A Metaverse Framework for IoT-Based Remote Patient Monitoring and Virtual Consultations Using AES-256 Encryption**  
*Applied Soft Computing, 111588, 2024 | 2024*
35. **An SDN-enabled Fog Computing Framework for WBAN Applications in the Healthcare Sector**  
*Internet of Things, 101150, 2024 | 2024*
36. **A secure mist-fog-assisted cooperative offloading framework for sustainable smart city development**  
*Digital Communications and Networks, 2024 | 2024 | Cited: 4*
37. **Optimized ensemble deep random vector functional link with nature inspired algorithm and boruta feature selection: Multi-site intelligent model for air quality index forecasting**  
*Process Safety and Environmental Protection 191, 1737-1760, 2024 | 2024 | Cited: 10*
38. **DT-LSMAS: Digital Twin-Assisted Large-Scale Multiagent System for Healthcare Workflows**  
*IEEE Systems Journal, 2024 | 2024 | Cited: 13*
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*Sustainable Energy Technologies and Assessments, 103828, 2024 | 2024*
40. **Enhanced Diagnostic Precision: Deep Learning for Tumors Lesion Classification in Dermatology.**  
*Intelligent Automation & Soft Computing 39 (6), 2024 | 2024*
41. **Optimization of Routing and Cluster Head Selection in WSN: A Survey**  
*International Conference on Forthcoming Networks and Sustainability in the&nbsp;..., 2024 | 2024 | Cited: 1*
42. **PSO-CHS Routing Protocol for Energy Consumption Enhancement in Wireless Sensor Networks**  
*2024 4th International Conference on Mobile Networks and Wireless&nbsp;..., 2024 | 2024*
43. **Retraction notice to" The effect of green belt as an environmentally friendly approach on energy consumption reduction in buildings"[Sustain. Energy Technol. Assessments 53&nbsp;...]**  
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45. **DT-LSMAS: Digital twin-assisted large-scale multiagent system for healthcare workflows**  
*IEEE Systems Journal 18 (4), 1883-1892, 2024 | 2024 | Cited: 14*
46. **Optimal distribution grid allocation of reactive power with a focus on the particle swarm optimization technique and voltage stability**  
*scientific reports 14 (1), 10889, 2024 | 2024 | Cited: 14*
47. **Securing healthcare data in industrial cyber-physical systems using combining deep learning and blockchain technology**  
*Engineering Applications of Artificial Intelligence 129, 107612, 2024 | 2024 | Cited: 89*
48. **A deep learning fusion model for accurate classification of brain tumours in Magnetic Resonance images**  
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51. **A metaverse framework for IoT-based remote patient monitoring and virtual consultations using AES-256 encryption**  
*Applied Soft Computing 158, 111588, 2024 | 2024 | Cited: 50*
52. **Industrial Internet of Water Things architecture for data standarization based on blockchain and digital twin technology**  
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54. **Towards Resilient Machine Learning Models: Addressing Adversarial Attacks in Wireless Sensor Network**  
*Journal of Robotics and Control (JRC) 5 (5), 1599-1617, 2024 | 2024 | Cited: 31*
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*Critical Reviews in Analytical Chemistry 54 (5), 923-941, 2024 | 2024 | Cited: 18*
56. **An SDN-enabled fog computing framework for wban applications in the healthcare sector**  
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57. **Coupled extreme gradient boosting algorithm with artificial intelligence models for predicting compressive strength of fiber reinforced polymer-confined concrete**  
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59. **BEDS: Blockchain energy efficient IoE sensors data scheduling for smart home and vehicle applications**  
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71. **Role of artificial intelligence in analyzing and predicting consumer behavior**  
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78. **Modeling and investigating electric power output maximization for piezoelectric energy harvester**  
*AIP Advances 13 (5), 2023 | 2023 | Cited: 6*
79. **Machine learning algorithms for high-resolution prediction of spatiotemporal distribution of air pollution from meteorological and soil parameters**  
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82. **Fast Fourier Transform Coupled with Machine Learning Algorithm for K-Complexes Detection**  
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83. **Impact of 5G on the digital marketing industry: Study of selected use cases**  
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85. **Retraction: Moderating role of compassion in the link between fear of Coronavirus disease and mental health among undergraduate students**  
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86. **Machine learning algorithms for high-resolution prediction of spatiotemporal distribution of air pollution from meteorological and soil parameters**  
*Environment International 175, 107931, 2023 | 2023 | Cited: 27*
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*Water resources management 37 (9), 3699-3714, 2023 | 2023 | Cited: 52*
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93. **A mathematical model for the vehicles routing problem with multiple depots, considering the possibility of return using the tabu search algorithm**  
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*Health Information Science: 11th International Conference, HIS 2022, Virtual&nbsp;... , 2022 | 2022*
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*Foundations Of Computing And Decision Sciences* 47 (4), 359-370, 2022 | 2022 | Cited: 3
97. **Fast Fourier Transform Coupled with Machine Learning Algorithm for K-Complexes Detection**  
*Proceedings of Third Doctoral Symposium on Computational Intelligence: DoSCI&nbsp;... , 2022 | 2022*
98. **An Intelligence Approach for Blood Pressure Estimation from Photoplethysmography Signal**  
*International Conference on Health Information Science, 54-63, 2022 | 2022*
99. **Efficient Time-Sensitive Routing Protocol for Wireless Sensor Network (ETSRP)**  
*2022 International Symposium on Multidisciplinary Studies and Innovative&nbsp;... , 2022 | 2022 | Cited: 1*
100. **Multi-objective Mathematical Modeling for Scheduling Machines in Parallel with Batch Processors**  
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102. **Moderating role of compassion in the link between fear of Coronavirus disease and mental health among undergraduate students**  
*Frontiers in psychiatry* 13, 990678, 2022 | 2022 | Cited: 1
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104. **A mathematical model for the vehicles routing problem with multiple depots, considering the possibility of return using the tabu search algorithm**  
*Foundations of Computing and Decision Sciences* 47, 2022 | 2022 | Cited: 1
105. **Smartphone-Based Techniques Using Carbon Dot Nanomaterials for Food Safety Analysis**  
*Critical Reviews in Analytical Chemistry*, 1-19, 2022 | 2022 | Cited: 6
106. **Prediction of molecular diffusivity of organic molecules based on group contribution with tree optimization and SVM models**  
*Journal of Molecular Liquids* 353, 118808, 2022 | 2022 | Cited: 9
107. **A review on material analysis of food safety based on fluorescence spectrum combined with artificial neural network technology**  
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108. **Groundwater level prediction using machine learning models: A comprehensive review**  
*Neurocomputing* 489, 271-308, 2022 | 2022 | Cited: 421

109. **Optimized video internet of things using elliptic curve cryptography based encryption and decryption**  
*Computers and Electrical Engineering* 101, 108022, 2022 | 2022 | Cited: 80
110. **Multiple machine learning models for prediction of CO2 solubility in potassium and sodium based amino acid salt solutions**  
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111. **A comprehensive review on pulsed laser deposition technique to effective nanostructure production: Trends and challenges**  
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116. **Optimization and design of machine learning computational technique for prediction of physical separation process**  
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123. **Comparison of performance among forwarding strategies in CCN: Disaster scenarios**  
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127. **An advanced classification of cloud computing security techniques: A survey**  
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133. **Backbone construction mechanism for deterministic node deployment routing protocols in WSNs**  
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143. **Evaluation of Combination of ACK Filtering and ACK Congestion Control with Pure TCP/NewReno protocol in Asymmetry Network**  
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146. **TCP/IP**  
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