



Farhad Ezzulddin Mahmood

فرهاد عزالدین محمود

Assistant Professor

ACADEMIC TITLES

2022-11-01 Assistant Professor

PUBLICATIONS (53)

- Capacity and Interference Analysis for Heterogeneous Mobile Communication Networks**
Periodica Polytechnica Electrical Engineering and Computer Science 70 (1), 52-59, 2026 | 2026
- Fairness-aware Joint Pattern and Power Design for Downlink PDMA Systems**
Journal of Telecommunications and Information Technology (ISSN 1899-8852) 2 ..., 2026 | 2026
- Novel Four-Port Diplexer-Antenna System with Simultaneous Isolation Enhancement and Impedance Control**
JOURNAL OF COMMUNICATIONS SOFTWARE AND SYSTEMS | 2026
- Analysis of the Impact of Vehicular Communication Technologies in Intelligent Transportation Systems**
Journal Europeen des Systemes Automatisees 59 (5), 1225, 2026 | 2026
- Secure Virtual Reality Streaming Under Attack: Fine-Grained Modeling of the Latency Security Trade-Off**
<https://doi.org/10.18280/ijssse.160301>, 2026 | 2026 | Cited: 1
- Mathematical Modeling and SDN-Driven Defense for Wi-Fi MAC-Layer Vulnerabilities in Access Points**
International Journal of Safety and Security Engineering | 2026
- Water-filling Optimization for Codebook Beam Sweeping: Power Allocation versus Time-resource Allocation**
International Journal of Intelligent Engineering and Systems 19 (7), 1002-1016, 2026 | 2026
- Evaluating the Impact of Window Size on Model Accuracy in Solar Irradiance Forecasting Using XGBoost**
Mathematical Modelling of Engineering Problems 12 (9), 2025 | 2025 | Cited: 2
- Breaking Barriers in-Vivo THz Communication Analysis for Nano Networks in Human Tissues**
Periodica Polytechnica Electrical Engineering and Computer Science, 1-7, 2025 | 2025 | Cited: 4
- Empowering Clean Air and Advanced 5G Communications with Deep Learning and IoT-Based Monitoring**
Journal of Communications 19 (12), 2024 | 2024
- Securing Smart Grids: Machine Learning-Driven Ensemble Intrusion Detection for IoT RPL Networks**
International Journal of Safety and Security Engineering, 2024 | 2024 | Cited: 6
- Li-Fi technology in optical communication systems: A review**
Al-Iraqia Journal for Scientific Engineering Research 3 (3), 163-171, 2024 | 2024 | Cited: 7
- Collaborative Intrusion detection system to identify joint attacks in routing protocol for low-power and lossy networks routing protocol on the internet of everything**
Mesopotamian Journal of CyberSecurity 4 (3), 251-277, 2024 | 2024 | Cited: 8
- Voltage and Reactive Power Control Approach to Address Over-Voltage Issues in High PV Penetration Networks**
International Journal of Electrical and Electronics Research (IJEER) 12 (4 ..., 2024 | 2024 | Cited: 1
- Vehicle accessibility using RFID technology**
Przegląd Elektrotechniczny 99, 2023 | 2023 | Cited: 2

CONTACT

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EDUCATION

دكتوراه (30-05-2019)
Electrical Engineering
The University of Kansas
ماجستير (01-04-2008)
Electrical Engineering
Univeristy of Mosul

RESEARCH METRICS

h-index (Scopus)	9
h-index (GS)	11
Citations (Scopus)	259
Citations (GS)	381
Documents (Scopus)	41
Documents (GS)	50

RESEARCH INTERESTS

- wireless communications
- AI
- Energy Efficiency



16. **Load demand forecasting using extreme gradient boosting (xgboost)**
2023 IEEE Industry Applications Society Annual Meeting (IAS), 1-7, 2023 | 2023 | Cited: 26
17. **Vehicle Accessibility Using RFID Technology,Dostępność pojazdu za pomocą technologii RFID**
Przegląd Elektrotechniczny | 2023
18. **Long-term solar irradiance forecasting using multilinear predictors**
International Journal of Electrical and Electronic Engineering ..., 2023 | 2023 | Cited: 20
19. **Non orthogonal multiple access verses orthogonal multiple access performance comparison in 5G communication system**
Przegląd Elektrotechniczny 99, 2023 | 2023 | Cited: 7
20. **Non Orthogonal Multiple Access verses Orthogonal Multiple Access performance comparison in 5G communication systems**
Przegląd Elektrotechniczny | 2023
21. **Load demand forecasting in smart microgrid using NWP via feature engineering**
2023 IEEE International Conference on Energy Technologies for Future Grids ..., 2023 | 2023 | Cited: 5
22. **Design and Simulation of a High Gain Microstrip Patch Antenna for 5G Communication Systems**
2023 International Conference on Engineering, Science and Advanced ..., 2023 | 2023 | Cited: 2
23. **Dynamic Forecasting of Solar Energy Microgrid Systems Using Feature Engineering**
IEEE Transactions on Industry Applications, 2022 | 2022 | Cited: 75
24. **Beam and channel tracking for 5G communication systems using adaptive filtering techniques: a comparison study**
Journal of Communications Software and Systems 18 (3), 244-251, 2022 | 2022 | Cited: 11
25. **Energy Efficiency Parameters Evaluation for 5G Application**
2022 4th International Conference on Advanced Science and Engineering ..., 2022 | 2022
26. **Modeling and Analysis of Millimeter-Wave Propagation in Dusty Environments**
TELKOMNIKA (Telecommunication Computing Electronics and Control) 20 (4), 2022 | 2022 | Cited: 7
27. **Efficient power allocation algorithm in downlink cognitive radio networks**
ETRI Journal 44 (3), 400-412, 2022 | 2022 | Cited: 10
28. **Semi-circular compact CPW-fed antenna for ultra-wideband applications**
TELKOMNIKA (Telecommunication Computing Electronics and Control) 20 (6 ..., 2022 | 2022 | Cited: 4
29. **Beam tracking channel for millimeter-wave communication system using least mean square algorithm**
Al-Rafidain Engineering Journal (AREJ) 26 (2), 118-123, 2021 | 2021 | Cited: 7
30. **Beam tracking using least mean squares algorithm for single-cell massive MIMO communication system**
IOP Conference Series: Materials Science and Engineering 1152 (1), 012004, 2021 | 2021 | Cited: 4
31. **Comparative Study the Effect of Antenna Selection on Capacity and Energy Efficiency of 5G Systems**
IOP Conference Series: Materials Science and Engineering 1152 (1), 012013, 2021 | 2021 | Cited: 2
32. **Study of the Impact of Antenna Selection Algorithms of Massive MIMO on Capacity and Energy Efficiency In 5G Communication Systems**
Al-Rafidain Engineering Journal (AREJ) 26 (2), 164-170, 2021 | 2021 | Cited: 6
33. **Energy-efficient wireless communications: From energy modeling to performance evaluation**
IEEE Transactions on Vehicular Technology 68 (8), 7643-7654, 2019 | 2019 | Cited: 34
34. **Modeling and Analysis of Energy Efficiency in Wireless Handset Transceiver Systems**
University of Kansas, 2019 | 2019 | Cited: 1
35. **Modeling and Analysis of Power Amplifier Dissipation Energy in Wireless Handset Transceivers**
ICNC18, 2018 | 2018 | Cited: 3
36. **Energy Consumption vs. Bit Rate Analysis Toward Massive MIMO Systems**
IEEE ISC2 2018, 2018 | 2018 | Cited: 10
37. **Modeling and Analysis of Energy Consumption for MIMO Systems**
Wireless Communications and Networking Conference (WCNC), 2017 IEEE, 2017 | 2017 | Cited: 15

38. **Modeling and Analysis of Energy Consumption for RF Transceivers in Wireless Cellular Systems**
2015 IEEE Global Communications Conference (GLOBECOM), 1 - 6, 2015 | 2015 | Cited: 27
39. **The Antenna Team**
Medicine, Conflict and Survival 29 (1), 77-81, 2013 | 2013
40. **A UWB fractal antenna for body area network applications**
2012 Loughborough Antennas & Propagation Conference (LAPC), 1-4, 2012 | 2012 | Cited: 13
41. **Mobile radio propagation prediction for two different districts in Mosul-City**
MATLAB-A Fundamental Tool for Scientific Computing and Engineering ..., 2012 | 2012 | Cited: 12
42. **CPW-fed UWB antenna with band-notch by hexagonal shape slot**
2012 International Conference on Future Communication Networks, 69-71, 2012 | 2012 | Cited: 11
43. **Mobile radio propagation path loss simulation for two districts of different buildings structures in Mosul-city**
Iraqi Journal for Electrical And Electronic Engineering | 2011 | Cited: 1
44. **The design of fractal antennas for UWB using MoM**
2011 Loughborough Antennas & Propagation Conference, 1-4, 2011 | 2011 | Cited: 4
45. **Analysis, simulation and modeling of mobile Rayleigh fading channel using LabVIEW**
2011 Loughborough Antennas & Propagation Conference, 1-6, 2011 | 2011 | Cited: 4
46. **Investigation of mobile cellular system performance using queuing theorem for arrival requests**
2011 Loughborough Antennas & Propagation Conference, 1-5, 2011 | 2011 | Cited: 2
47. **Performance enhancement in WCDMA cellular network**
2011 Loughborough Antennas & Propagation Conference, 1-7, 2011 | 2011 | Cited: 1
48. **Mobile Positioning System using Signal Strength Measurement for WCDMA System**
Al-Rafidain Engineering Journal 19 (1), 22-28, 2011 | 2011
49. **A Proposed Positioning System Using Signal Strength Measurement for WiFi Systems**
The 4th International Scientific Conference of Salahaddin University-Erbil ..., 2011 | 2011
50. **Investigation of Macrocell / Microcell Channels Selection In Multitier Cellular Networks**
AL-Rafidain Engineering Journal (AREJ) | 2010 | Cited: 2
51. **Mobile radio propagation path loss simulation for two districts of different buildings structures in Mosul-city**
Energy, Power and Control (EPC-IQ), 2010 1st International Conference on-NO ..., 2010 | 2010 | Cited: 1
52. **Using RFID technology in finding position and tracking based on RSSI**
2009 International Conference on Advances in Computational Tools for ..., 2009 | 2009 | Cited: 18
53. **Planning and design of a WCDMA network compatible with existing GSM system in Mosul city**
Systems, Signals and Devices, 2008. IEEE SSD 2008. 5th International Multi ..., 2008 | 2008 | Cited: 6