



# Thamer Muhammed Jamel

ثامر محمد جميل مهدي العنبي

Professor

## PROFILE

Professor of Communications Engineering with 20+ years of experience in adaptive signal processing, 5G/mmWave communications, digital signal processing (DSP), and wireless systems. Published 90+ peer-reviewed papers in IEEE, Scopus, and ISI-indexed journals. Supervised 40+ Master of Science (M.Sc.) theses and 3 Doctor of Philosophy (Ph.D.) dissertations. Expertise in MATLAB, NYUSIM, FPGA programming, machine learning for communications, and channel estimation algorithms. IEEE Member with extensive experience in academic research, teaching, and international collaboration.

## ACADEMIC TITLES

2021-05-11 Professor

## PUBLICATIONS ( 102 )

- Performance Analysis for Joint Channel Estimation and Equalization in OTFS Systems for High Mobility Channels**  
*ACDN: International Conference on Advanced Communications and Digital*..., 2026 | 2026
- Dynamic Modeling of Indoor VLC Networks: The Impact of Human Mobility on Link Reliability and System Design**  
*2026 IEEE 23rd International Multi-Conference on Systems, Signals & Devices*..., 2026 | 2026
- A Distributed Step-Size Control Mechanism for Robust Set-Membership APA in Dynamic Channel Equalization**  
*Journal of Communications Software and Systems* 22 (2), 211-220, 2026 | 2026
- Benchmarking Mitigation Techniques for SISO OOK-FSO Links Under Gamma-Gamma Turbulence, Pointing Errors and Temporal Correlation,**  
*National Journal of Antennas and Propagation* 8 (No.1.), 265-280, 2026 | 2026
- Assessing the performance of multicarrier modulation for 5G and future networks**  
*INTERNATIONAL CONFERENCE ON EMERGING TRENDS IN AI AND COMPUTATIONAL*..., 2026 | 2026
- A Comparative Study of Modulation Schemes and Mitigation Techniques for Gamma-Gamma FSO Channels**  
*International Journal of Electronics and Telecommunication* 72 (2), 1-8, 2026 | 2026
- Sequence-aware OOK detection in turbulent FSO using bidirectional GRU/LSTM**  
*Journal of Optical Communications*, 2026 | 2026 | Cited: 2
- Improving the performance of Gamma–Gamma FSO links with adaptive optics, dynamic beam steering, and strong modulation formats**  
*Journal of Optical Communications*, 2026 | 2026 | Cited: 3
- Explainable SHAP-based feature selection for accurate and computationally efficient network response time prediction in optical communication networks**  
*Journal of Optical Communications*, 2026 | 2026
- mproving the performance of Gamma–Gamma FSO links with adaptive optics, dynamic beam steering, and strong modulation formats**  
*journal of optical communications (Q1 Scopus)* 1, 2026 | 2026
- Advanced Communications and Digital Networks**  
2026

## CONTACT

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## EDUCATION

(23-06-1983) بكوريوس  
electronic  
UoT  
  
(25-11-1990) ماجستير  
electronic and communications  
UoT  
  
(21-05-1997) دكتوراه  
communications  
UoT

## RESEARCH METRICS

|                    |     |
|--------------------|-----|
| h-index (Scopus)   | 0   |
| h-index (GS)       | 7   |
| Citations (Scopus) | 0   |
| Citations (GS)     | 314 |
| Documents (Scopus) | 0   |
| Documents (GS)     | 104 |

## RESEARCH INTERESTS

- Adaptive Signal Processing for Communications Systems
- Adaptive Signal Processing for Communications Systems



12. **Adaptive Hamiltonian-based LMS for non-stationary systems: a receding horizon optimal control approach**  
*International Journal of Data Science and Analytics* 22 (188 (2026)), 2-17, 2026 | 2026
13. **An investigation of the effects of dynamic human obstacle movement on the performance of indoor visible light communication systems**  
*Journal of Optics* 55 (2), 1659-1675, 2026 | 2026 | Cited: 6
14. **Signal Detection for Free Space Optical Communication in Turbulent Channels: A Literature Survey**  
*2026 IEEE 23rd International Multi-Conference on Systems, Signals & Devices*, 2026 | 2026
15. **A Performance and Evaluation of OTFS Modulation Systems Using Different High Mobility Channels**  
*International Journal of Electronics and Telecommunications* 71 (2), 505-512, 2025 | 2025 | Cited: 3
16. **A Literature Review with Simulation on Visible Light Communication Systems Using Non-Orthogonal Multiple Access Techniques,**  
*2025 IEEE 22nd International Multi-Conference on Systems, Signals & Devices*, 2025 | 2025 | Cited: 2
17. **Optimized channel capacity for DWT-OFDM based NOMA with adaptive power allocation in VLC system communication**  
*Journal of Optical Communications*, 2025 | 2025
18. **Beamforming array antenna: New innovative research using partial update adaptive algorithms**  
*AIP Conference Proceedings* 3350 (1), 030014, 2025 | 2025
19. **Deep Learning-Based Frameworks for Channel Estimation in OTFS Over High Mobility Channels**  
*International Journal of Computing* 18 (1), 1-16, 2025 | 2025
20. **A review: Chromatic dispersion compensation techniques for FBMC-OQAM optical communication**  
*AIP Conference Proceedings* 3169 (1), 040002, 2025 | 2025 | Cited: 2
21. **Comparative study of equalizer methods for filter bank multicarrier offset-QAM system**  
*INTERNATIONAL RESEARCH CONFERENCE ON ENGINEERING AND APPLIED SCIENCES 2023*, 2025 | 2025
22. **Comparative Analysis of Orthogonal Time Frequency Space in Mobile Communications: A Review and Simulation Study**  
*2025 IEEE 22nd International Multi-Conference on Systems, Signals & Devices*, 2025 | 2025 | Cited: 4
23. **A new method for mitigating phase noise in FBMC-OQAM optical communication systems**  
*INTERNATIONAL RESEARCH CONFERENCE ON ENGINEERING AND APPLIED SCIENCES 2023*, 2025 | 2025 | Cited: 1
24. **A Predictive Decision Aid for Resource Management in Mobile VLC-NOMA Engineering Systems**  
*2025 International Conference on Decision Aid Sciences and Applications*, 2025 | 2025
25. **Performance evaluation of channel estimation for filter bank multicarrier modulation**  
*AIP Conference Proceedings* 3002 (1), 020010, 2024 | 2024
26. **Improve the FBMC-OQAM Optical Chain utilizing Equalizers with M-BPS**  
*2024 10th International Engineering Conference on Advances in Computer and*, 2024 | 2024
27. **Efficient Pruned-DFT FBMC-OQAM for Performance Enhancement of MIMO Channel Equalization Techniques**  
*International Journal of Electronics and Telecommunication* 70 (4), 915-921, 2024 | 2024 | Cited: 2
28. **Innovative approaches to beam forming antenna array systems with adaptive Partial Update NLMS algorithms**  
*e-Prime-Advances in Electrical Engineering, Electronics and Energy* 10, 100855, 2024 | 2024 | Cited: 1
29. **Optimizing chromatic dispersion compensation using the adaptive maximum likelihood algorithm for FBMC-OQAM fiber optic systems**  
*AIP Conference Proceedings* 3002 (1), 020008, 2024 | 2024 | Cited: 2
30. **Investigating Human Impediments to Indoor Visible Light Communications**  
*2024 21st International Multi-Conference on Systems, Signals & Devices (SSD)*, 2024 | 2024 | Cited: 4
31. **Digital beamforming enhancement with LSTM-based deep learning for millimeter wave transmission**  
*Open Engineering* 14 (Issue 1), 2-8, 2024 | 2024 | Cited: 3

32. **Performance Analysis of Pilot-Symbol Aided Channel Estimation (PSACE) in FBMC-OQAM System**  
*2024 21st International Multi-Conference on Systems, Signals & Devices (SSD&nbsp;..., 2024 | 2024 | Cited: 5*
33. **Performance study of the compensations dispersion systems for an optical filter bank multicarrier transceivers technique**  
*Journal of Optics, 2024 | 2024 | Cited: 4*
34. **Phase Noise Compensation in Optical Fiber Based on Filter Bank Multi-Carrier in 5G Applications**  
*Advancements in Sustainability Systems, 75, 2024 | 2024*
35. **Using of Deep Learning in Beamforming Antenna Array**  
*Wasit Journal of Engineering Sciences 12 (4), 40-51, 2024 | 2024 | Cited: 2*
36. **Review of: Deep Learning (DL) for Beamforming Array (BFA) Antenna**  
*2024 21st International Multi-Conference on Systems, Signals & Devices (SSD&nbsp;..., 2024 | 2024 | Cited: 2*
37. **Performance Evaluation of SISO-OFDM Channel Equalization Utilizing Deep Learning**  
*The 16th International Conference on the Developments in eSystems&nbsp;..., 2024 | 2024 | Cited: 3*
38. **A Deep Learning Approach to Evaluating SISO-OFDM Channel Equalization**  
*Wasit Journal of Engineering Sciences 12 (2), 110-124, 2024 | 2024 | Cited: 5*
39. **Efficient FBMC-OQAM Channel Equalization Through Pruned DFT**  
*The 16th International Conference on the Developments in eSystems&nbsp;..., 2024 | 2024 | Cited: 5*
40. **Comparison of multicarrier communication systems performances Over 5G TDL-C Channel Model**  
*2024*
41. **Evaluating the Performance of 5G Modulation and Beyond: A Review Study**  
*2024 21st International Multi-Conference on Systems, Signals & Devices (SSD&nbsp;..., 2024 | 2024 | Cited: 3*
42. **Compensating Chromatic Dispersion and Phase Noise using Parallel AFB-MBPS For FBMC-OQAM Optical Communication System**  
*International journal of electrical and computer engineering systems 14 (8&nbsp;..., 2023 | 2023 | Cited: 8*
43. **A Review of Phase Noise Compensation Techniques in Optical Fiber System Based-on Filter Bank Multi-Carrier**  
*1st International Conference on Sustainability System Development (ICSSD2023&nbsp;..., 2023 | 2023 | Cited: 2*
44. **Beamforming Array Antenna Technique Based on Partial Update Adaptive Algorithms**  
*International Journal of Electrical and Computer Engineering Systems 14 (No&nbsp;..., 2023 | 2023 | Cited: 5*
45. **An overview for channel equalization techniques in filter bank**  
*The Second International Conference on Advanced Computer Applications&nbsp;..., 2023 | 2023 | Cited: 7*
46. **Overview on Deep learning aided channel Equalizer Techniques**  
*2023 Second International Conference on Advanced Computer Applications (ACA&nbsp;..., 2023 | 2023 | Cited: 5*
47. **An Overview on Deep Learning Aided Channel Equalizer**  
*The Second International Conference on Advanced Computer Applications&nbsp;..., 2023 | 2023*
48. **Equalization methods for Filter Bank Multicarrier OQAM**  
*Wasit Journal of Engineering Sciences 11 (3), 106-119, 2023 | 2023 | Cited: 3*
49. **Performance Evaluation of Beamforming Array Antennas Based on Partial Update LMS and NLMS Adaptive Algorithms**  
*The Sixth International Iraqi Conference on Engineering Technology and its&nbsp;..., 2023 | 2023 | Cited: 2*
50. **Beamforming Array Antenna (BAA): New Innovative Research Using Partial Update Adaptive Algorithms**  
*The 4 th International Conference on Electromechanical Engineering & its&nbsp;..., 2023 | 2023 | Cited: 2*
51. **An overview for filter bank multicarrier using channel estimation 5G wireless communication**  
*AIP Conference Proceedings 2820 (1), 2023 | 2023 | Cited: 3*
52. **Ball's-Based Adaptive Channel Estimation Scheme Using RLS Family-Types Algorithms**  
*International Journal of Computing and Digital Systems 12 (01), 2022 | 2022 | Cited: 5*
53. **Space Division Multiple Access Base Station (SDMA) Based on Block Adaptive Euclidean Direction Search Algorithm**  
*IEIESPC IEIE Transactions on Smart Processing & Computing 11 (02), pp.133-139, 2022 | 2022 | Cited: 4*
54. **Investigation Of Suitable 5G Millimeter Wave Frequencies For Kut-City in Iraq**  
*International Journal of Computing and Digital Systems 11 (1), 1427-1438, 2022 | 2022 | Cited: 2*

55. **A Review: Deep Learning Aided Channel Estimation Techniques for Wireless Communication System**  
*2022 Iraqi International Conference on Communication and Information&nbsp;...,, 2022 | 2022 | Cited: 5*
56. **5G with millimeter waves The Effects Of Different Weather Conditions On 5G Millimeter Waves Propagations at 38 GHz and 73 GHz For Kut-City in Iraq: 5G millimeter waves**  
*Wasit Journal of Engineering Sciences 10 (2), 20-33, 2022 | 2022 | Cited: 4*
57. **5G Channel Estimation for SISO OFDM Communication Systems Using Deep Learning**  
*3rd International Conference on Electromechanical Engineering and its&nbsp;...,, 2022 | 2022 | Cited: 5*
58. **An overview for the effects of different weather conditions on 5G millimeter waves propagations**  
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59. **Optimum and Appropriate 5G Millimeter Wave Frequencies for Baghdad City**  
*The 3rd Conference of Post Graduate Researches & Graduation Projects CPGR, 1-8, 2021 | 2021 | Cited: 6*
60. **Time Domain Pilot-Based Channel Estimation (TDPCE) Using Kalman Filtering for OFDM System**  
*ICEST 2020 , March 2021IOP Conference Series Materials Science and&nbsp;...,, 2021 | 2021*
61. **5G Channel Characterization at Millimeter-Wave for Baghdad City: An NYUSIM-based Approach**  
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62. **Novelty Study of the Window Length Effects on the Adaptive Beam-forming Based-FEDS Approach**  
*International Journal of Computing and Digital Systems 9 (6), 1221-1227, 2020 | 2020 | Cited: 8*
63. **Qos mapping method based on DSCP/IP in LTE and EDCA AC/MAC in wifi network**  
*2019 12th International Conference on Developments in eSystems Engineering&nbsp;...,, 2019 | 2019 | Cited: 3*
64. **Optimal Window Length and Performance Analysis of FEDS Based Adaptive Beam Forming Approach over Rayleigh Fading Channel**  
*International Journal of Computing and Digital Systems IJCDS 8 (4), 397-404, 2019 | 2019 | Cited: 1*
65. **New Performance Enhancement of Adaptive IIR Filtering Applications**  
*2018 Third Scientific Conference of Electrical Engineering (SCEE), 7-12, 2018 | 2018*
66. **Performance enhancement of Echo Cancellation Using a Combination of Partial Update (PU) Methods and New Variable Length LMS (NVLLMS) Algorithm**  
*Journal of Engineering 24 (5), 66-85, 2018 | 2018 | Cited: 6*
67. **New proposed adaptive beamforming algorithms based on merging CGM and NLMS methods**  
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68. **FPGA Based Adujsted Step Size LMS Algorithm for Adaptive Noise Cancellation**  
*Association of Arab Universities Journal of Engineering Sciences 25 (4), 85-104, 2018 | 2018 | Cited: 2*
69. **Performance evaluation of the fast euclidean direction search algorithm for adaptive beamforming applications**  
*2016 Al-Sadeq International Conference on Multidisciplinary in IT and&nbsp;...,, 2016 | 2016 | Cited: 3*
70. **A New Variable Length LMS Algorithm for Partial Update Adaptive Filtering Driven by Cyclostaionary Signal**  
*International Journal of Computing and Digital Systems 5 (05), 2016 | 2016 | Cited: 7*
71. **Performance enhancement of adaptive beamforming algorithms based on a combination method**  
*2015 IEEE 12th International Multi-Conference on Systems, Signals & Devices&nbsp;...,, 2015 | 2015 | Cited: 5*
72. **Performance enhancement of smart antennas algorithms for mobile communications system**  
*International Journal of Circuits, Systems and Signal Processing 8, 313-320, 2014 | 2014 | Cited: 7*
73. **Noise canceller using a new modified adaptive step size LMS algorithm**  
*WSEAS Transaction on signal processing 10, 637-644, 2014 | 2014 | Cited: 8*
74. **New Combined Adaptive (NCA) Algorithm for Smart Antenna System Applications**  
*IETE Journal of Research 60 (2), 119-127, 2014 | 2014 | Cited: 1*
75. **Fast adaptive beamforming algorithm for a smart antenna system in mobile communications**  
*International Journal of Advancements in Computing Technology (IJACT) 5 (16&nbsp;...,, 2013 | 2013 | Cited: 1*
76. **Performance enhancement of adaptive acoustic echo canceller using a new time varying step size LMS algorithm (NVSSLMS)**  
*International Journal of Advancements in Computing Technology (IJACT), Korea&nbsp;...,, 2013 | 2013 | Cited: 7*

77. **Application of Fast Euclidean Direction Search (FEDS) method for smart antennas in mobile communications systems**  
*IET Intelligent Signal Processing Conference 2013 (ISP 2013), 1-6, 2013 | 2013 | Cited: 6*
78. **Absolute Mean Error Based Adaptive Step Size Affine Projection Algorithm for Adaptive Filtering Systems**  
*International Journal of Information and Electronics Engineering 3 (1), 113, 2013 | 2013 | Cited: 6*
79. **FPGA Based Neural Wireless Sensor Network**  
*International Arab Conference on Information Technology, 1-7, 2012 | 2012 | Cited: 2*
80. **Implementation of a sigmoid activation function for neural network using FPGA**  
*13th Scientific Conference of Al-Ma'moon University College 13, 2012 | 2012 | Cited: 56*
81. **Simple variable step size LMS algorithm for adaptive identification of IIR filtering system**  
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82. **Implementation of Adaptive Neural Equalizer Using FPGA**  
*2011 Global Congress on Communications, Signals and Coding (GC-CSC 2011) 4&nbsp;..., 2011 | 2011*
83. **Absolute Average Error-Based Adjusted Step Size LMS Algorithm for Adaptive Noise Canceller**  
*Mosharaka International Conference on Wireless Communications and Mobile&nbsp;..., 2011 | 2011 | Cited: 2*
84. **Performance Improvements of Adaptive Noise Canceller Using New Adajusted Step Size LMS Algorithm**  
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85. **Performance Evaluation of Vertical Bell Labs Layered Space Time (Vblast) Algorithms For Mimo System**  
*Al-Nahrain Journal for Engineering Sciences 13 (2), 158-166, 2010 | 2010 | Cited: 3*
86. **COMBINED ADJUSTED STEP SIZE LMS ALGORITHM AND ACTIVE TAP DETECTION TECHNIQUE FOR ADAPTIVE NOISE CANCELLATION**  
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87. **SUB BAND ADAPTIVE NOISE CANCELLATION WITH MULTIRATE TECHNIQUE**  
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88. **Bandwidth Efficiency Enhancement for OFDM System Using Hybrid Equalization Techniques**  
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89. **MOIDIFIED VERSION OF ADJUSTED STEP SIZE LMS ALGORITHM (MASSLMS) FOR ADAPTIVE LINEAR FIR EQUALIZER**  
*Journal of Engineering 15 (03), 3907-3918, 2009 | 2009*
90. **Design and Simulation of Base Band Direct Sequence Spread Spectrum (DS/SS) System Using Matlab Simulink**  
*Scientific Conference of Technical College, 2009 | 2009 | Cited: 2*
91. **Implementation of FFT algorithm using FPGA technique**  
*Jordanian International Electrical & Electronics Engineering Conference JIEEEEC, 2006 | 2006 | Cited: 2*
92. **PERFORMANCE EVALUATION OF SPECTRAL EFFICIENCY IN LINEAR REGIME FOR HIGH RATE WDM SYSTEM**  
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93. **FPGA Based Adaptive Neural Equalizer**  
*uotechnology. edu. iq, 0 | 0*
94. **Performance Enhancement of Conjugate Gradient Method (CGM) for Mobile Communications System**  
*0*
95. **DISTRIBUTED STEP SIZE LMS ALGORITHM FOR ADAPTIVE FIR EQUALIZER**  
*0*
96. **A Hybrid Variable Step-Size MCMA Blind Equalizer Algorithm for QAM Signals**  
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97. **REAL TIME IMPLEMENTATION OF ADJUSTED STEP SIZE LMS ALGORITHM FOR ADAPTIVE NOISE CANCELLATION USING TMS32025 MICROPROCESSOR**  
*0*

98. **Evaluating the Impact of Static Human Obstacles on the Performance of Visible Light Communication**  
*2025 IEEE 22nd International Multi-Conference on Systems, Signals & Devices&nbsp;..., 0 | 0 | Cited: 2*
99. **Design and Implementation of PC-Based 12 Lead ECG Acquisition Systems**  
*0*
100. **b) and Haydar M**  
*Al-Tamimi c) Communication Engineering Department, University of Technology&nbsp;..., 0 | 0*
101. **A New Fast Adjusted Step Size Affine Projection Algorithm Designed for Adaptive Filtering System**  
*0*
102. **Combined adjusted step size LMS algorithm and active tap detection technique for adaptive noise cance**  
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