

# Mohammed Abo-Zahhad

## List of Publications by Citations

**Source:** <https://exaly.com/author-pdf/6188479/mohammed-abo-zahhad-publications-by-citations.pdf>

**Version:** 2024-04-23

This document has been generated based on the publications and citations recorded by exaly.com. For the latest version of this publication list, visit the link given above.

The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

90  
papers

1,305  
citations

21  
h-index

33  
g-index

107  
ext. papers

1,782  
ext. citations

2.5  
avg, IF

5.12  
L-index

| #  | Paper   | IF   | Citations |
|----|---|------|-----------|
| 90 | . <i>IEEE Sensors Journal</i> , <b>2015</b> , 15, 4576-4586   | 4    | 121       |
| 89 | A Comprehensive Survey on Hierarchical-Based Routing Protocols for Mobile Wireless Sensor Networks: Review, Taxonomy, and Future Directions. <i>Wireless Communications and Mobile Computing</i> , <b>2017</b> , 2017, 1-23                                 | 1.9  | 66        |
| 88 | A novel compression algorithm for electrocardiogram signals based on the linear prediction of the wavelet coefficients <b>2003</b> , 13, 604-622  |      | 64        |
| 87 | A centralized immune-Voronoi deployment algorithm for coverage maximization and energy conservation in mobile wireless sensor networks. <i>Information Fusion</i> , <b>2016</b> , 30, 36-51   | 16.7 | 63        |
| 86 | Biometric authentication based on PCG and ECG signals: present status and future directions. <i>Signal, Image and Video Processing</i> , <b>2014</b> , 8, 739-751   | 1.6  | 55        |
| 85 | A new multi-level approach to EEG based human authentication using eye blinking. <i>Pattern Recognition Letters</i> , <b>2016</b> , 82, 216-225   | 4.7  | 50        |
| 84 | State-of-the-art methods and future perspectives for personal recognition based on electroencephalogram signals. <i>IET Biometrics</i> , <b>2015</b> , 4, 179-190   | 2.9  | 49        |
| 83 | An Unequal Multi-hop Balanced Immune Clustering protocol for wireless sensor networks. <i>Applied Soft Computing Journal</i> , <b>2016</b> , 43, 372-389  | 7.5  | 49        |
| 82 | ECG data compression using optimal non-orthogonal wavelet transform. <i>Medical Engineering and Physics</i> , <b>2000</b> , 22, 39-46   | 2.4  | 45        |
| 81 | A wireless emergency telemedicine system for patients monitoring and diagnosis. <i>International Journal of Telemedicine and Applications</i> , <b>2014</b> , 2014, 380787  | 2.6  | 44        |
| 80 | A new algorithm for the compression of ECG signals based on mother wavelet parameterization and best-threshold levels selection <b>2013</b> , 23, 1002-1011   |      | 43        |
| 79 | A Novel Biometric Approach for Human Identification and Verification Using Eye Blinking Signal. <i>IEEE Signal Processing Letters</i> , <b>2015</b> , 22, 876-880   | 3.2  | 42        |
| 78 | Recent advances in image processing techniques for automated leaf pest and disease recognition □ A review. <i>Information Processing in Agriculture</i> , <b>2021</b> , 8, 27-51  | 4.2  | 42        |
| 77 | A new hybrid algorithm for ECG signal compression based on the wavelet transformation of the linearly predicted error. <i>Medical Engineering and Physics</i> , <b>2001</b> , 23, 117-26  | 2.4  | 36        |
| 76 | An effective coding technique for the compression of one-dimensional signals using wavelet transforms. <i>Medical Engineering and Physics</i> , <b>2002</b> , 24, 185-99  | 2.4  | 31        |
| 75 | A New Energy-Efficient Adaptive Clustering Protocol Based on Genetic Algorithm for Improving the Lifetime and the Stable Period of Wireless Sensor Networks. <i>International Journal of Energy Information and Communications</i> , <b>2014</b> , 5, 47-72 | 2    | 26        |
| 74 | Genomic Analysis and Classification of Exon and Intron Sequences Using DNA Numerical Mapping Techniques. <i>International Journal of Information Technology and Computer Science</i> , <b>2012</b> , 4, 22-36   | 1.4  | 25        |

|    |  |      |    |
|----|--|------|----|
| 73 | Rearrangement of mobile wireless sensor nodes for coverage maximization based on immune node deployment algorithm. <i>Computers and Electrical Engineering</i> , <b>2015</b> , 43, 76-89                                     | 4.3  | 23 |
| 72 | A New EEG Acquisition Protocol for Biometric Identification Using Eye Blinking Signals. <i>International Journal of Intelligent Systems and Applications</i> , <b>2015</b> , 7, 48-54  | 1.5  | 22 |
| 71 | Robust Vehicle Detection and Counting Algorithm Employing a Convolution Neural Network and Optical Flow. <i>Sensors</i> , <b>2019</b> , 19,  | 3.8  | 21 |
| 70 | ARBIC: An Adjustable Range Based Immune hierarchy Clustering protocol supporting mobility of Wireless Sensor Networks. <i>Pervasive and Mobile Computing</i> , <b>2018</b> , 43, 27-48                                       | 3.5  | 21 |
| 69 | Tomato leaf segmentation algorithms for mobile phone applications using deep learning. <i>Computers and Electronics in Agriculture</i> , <b>2020</b> , 178, 105788   | 6.5  | 20 |
| 68 | An Efficient Technique for Compressing ECG Signals Using QRS Detection, Estimation, and 2D DWT Coefficients Thresholding. <i>Modelling and Simulation in Engineering</i> , <b>2012</b> , 2012, 1-10                          | 1.3  | 18 |
| 67 | <b>2014</b> ,  |      | 16 |
| 66 | An energy consumption model for wireless sensor networks <b>2015</b> ,   |      | 16 |
| 65 | A hybrid ECG compression algorithm based on singular value decomposition and discrete wavelet transform. <i>Journal of Medical Engineering and Technology</i> , <b>2007</b> , 31, 54-61                                      | 1.8  | 16 |
| 64 | High-Efficiency CMOS RF-to-DC Rectifier Based on Dynamic Threshold Reduction Technique for Wireless Charging Applications. <i>IEEE Access</i> , <b>2018</b> , 6, 46826-46832   | 3.5  | 16 |
| 63 | Current state and future directions of multirate filter banks and their applications <b>2003</b> , 13, 495-518   |      | 12 |
| 62 | Physical Layer Security Enhancement for Internet of Things in the Presence of Co-Channel Interference and Multiple Eavesdroppers. <i>IEEE Internet of Things Journal</i> , <b>2019</b> , 6, 6441-6452                        | 10.7 | 11 |
| 61 | ECG signal compression using combined modified discrete cosine and discrete wavelet transforms. <i>Journal of Medical Engineering and Technology</i> , <b>2009</b> , 33, 1-8   | 1.8  | 11 |
| 60 | Dual-band Rectenna Using Voltage Doubler Rectifier and Four-Section Matching Network <b>2018</b> ,   |      | 11 |
| 59 | Biometrics from heart sounds: Evaluation of a new approach based on wavelet packet cepstral features using HSCT-11 database. <i>Computers and Electrical Engineering</i> , <b>2016</b> , 53, 346-358                         | 4.3  | 10 |
| 58 | Modeling of Wireless Sensor Networks with Minimum Energy Consumption. <i>Arabian Journal for Science and Engineering</i> , <b>2017</b> , 42, 2631-2639   | 2.5  | 10 |
| 57 | Dual Band VCO Based on a High-Quality Factor Switched Interdigital Resonator for the Ku Band Using 180-nm CMOS Technology. <i>IEEE Transactions on Circuits and Systems II: Express Briefs</i> , <b>2018</b> , 65, 1874-1878 | 3.5  | 9  |
| 56 | A comparative approach between cepstral features for human authentication using heart sounds. <i>Signal, Image and Video Processing</i> , <b>2016</b> , 10, 843-851  | 1.6  | 9  |

|    |   |     |   |
|----|---|-----|---|
| 55 | Design of selective lowpass sampled-data and digital filters exhibiting equiripple amplitude and phase error characteristics. <i>International Journal of Circuit Theory and Applications</i> , <b>1995</b> , 23, 59-74 | 2   | 9 |
| 54 | Eye Blinking EOG Signals as Biometrics. <i>Signal Processing for Security Technologies</i> , <b>2017</b> , 121-140  |     | 9 |
| 53 | A New Localization Technique for Wireless Sensor Networks Using Social Network Analysis. <i>Arabian Journal for Science and Engineering</i> , <b>2017</b> , 42, 2817-2827   | 2.5 | 7 |
| 52 | Utilisation of multi-objective immune deployment algorithm for coverage area maximisation with limit mobility in wireless sensors networks. <i>IET Wireless Sensor Systems</i> , <b>2015</b> , 5, 250-261               | 1.6 | 7 |
| 51 | Efficient vehicle detection and tracking strategy in aerial videos by employing morphological operations and feature points motion analysis. <i>Multimedia Tools and Applications</i> , <b>2020</b> , 79, 26023-26043   | 2.5 | 7 |
| 50 | . <i>IEEE Access</i> , <b>2019</b> , 7, 130782-130790   | 3.5 | 6 |
| 49 | <b>2014</b> ,   |     | 6 |
| 48 | Modeling and minimization of energy consumption in wireless sensor networks <b>2015</b> ,   |     | 6 |
| 47 | Design and implementation of building energy monitoring and management system based on wireless sensor networks <b>2015</b> ,   |     | 6 |
| 46 | ECG Signal Compression Using Discrete Wavelet Transform <b>2011</b> ,   |     | 6 |
| 45 | . <i>IEEE Transactions on Circuits and Systems</i> , <b>1988</b> , 35, 1220-1229  |     | 6 |
| 44 | Real-Time Algorithm for Simultaneous Vehicle Detection and Tracking in Aerial View Videos <b>2018</b> ,   |     | 6 |
| 43 | Future location prediction of mobile subscriber over mobile network using Intra Cell Movement pattern algorithm <b>2013</b> ,   |     | 5 |
| 42 | A Survey on Protocols, Platforms and Simulation Tools for Wireless Sensor Networks. <i>International Journal of Energy Information and Communications</i> , <b>2014</b> , 5, 17-34                                      | 2   | 5 |
| 41 | A novel algorithm for the design of selective FIR filters with arbitrary amplitude and phase characteristics <b>2006</b> , 16, 211-224  |     | 5 |
| 40 | Wavelet Threshold-Based ECG Data Compression Technique Using Immune Optimization Algorithm. <i>International Journal of Signal Processing, Image Processing and Pattern Recognition</i> , <b>2015</b> , 8, 347-360      |     | 5 |
| 39 | A Comprehensive Survey of Intelligent-Based Hierarchical Routing Protocols for Wireless Sensor Networks. <i>Springer Tracts in Nature-inspired Computing</i> , <b>2020</b> , 197-257                                    | 1.8 | 5 |
| 38 | Analysis and Implementation of High-Q CT Inductor for Compact and Wide- Tuning Range Ku-Band VCO. <i>IEEE Microwave and Wireless Components Letters</i> , <b>2020</b> , 30, 802-805                                     | 2.6 | 5 |

|    |   |     |   |
|----|---|-----|---|
| 37 | Impedance-Based Algorithm for the Discrimination between Inrush and Short-Circuit Currents in Single-Phase Transformers. <i>Electric Power Components and Systems</i> , <b>2003</b> , 31, 593-604   | 1   | 4 |
| 36 | Arbitrary amplitude and linear phase approximations for non-prototype ladder and lattice wave digital filters. <i>International Journal of Circuit Theory and Applications</i> , <b>1996</b> , 24, 605-620                                  | 2   | 4 |
| 35 | A New Method for Fastening the Convergence of Immune Algorithms Using an Adaptive Mutation Approach. <i>Journal of Signal and Information Processing</i> , <b>2012</b> , 03, 86-91  | 0.6 | 4 |
| 34 | A Novel Circular Mapping Technique for Spectral Classification of Exons and Introns in Human DNA Sequences. <i>International Journal of Information Technology and Computer Science</i> , <b>2014</b> , 6, 19-29                            | 1.4 | 4 |
| 33 | Integrated Model of DNA Sequence Numerical Representation and Artificial Neural Network for Human Donor and Acceptor Sites Prediction. <i>International Journal of Information Technology and Computer Science</i> , <b>2014</b> , 6, 51-57 | 1.4 | 4 |
| 32 | Hybrid Uplink-Time Difference of Arrival and Assisted-GPS Positioning Technique. <i>International Journal of Communications, Network and System Sciences</i> , <b>2012</b> , 05, 303-312  | 0.2 | 4 |
| 31 | C20. Energy consumption and lifetime analysis for Wireless Sensor Networks <b>2015</b> ,  |     | 3 |
| 30 | <b>2014</b> ,   |     | 3 |
| 29 | On optimal filters with maximum number of constraints on amplitude and phase characteristics. <i>International Journal of Circuit Theory and Applications</i> , <b>1996</b> , 24, 165-181   | 2   | 3 |
| 28 | A Graphical-based educational simulation tool for Wireless Sensor Networks. <i>Simulation Modelling Practice and Theory</i> , <b>2016</b> , 69, 55-79   | 3.9 | 3 |
| 27 | Energy Efficient Framework for Multiuser Downlink MIMO-NOMA Systems <b>2018</b> ,   |     | 3 |
| 26 | A fast accurate method for calculating symbol error probabilities for AWGN and Rayleigh fading channels <b>2016</b> ,   |     | 2 |
| 25 | Optimization of Transmitted Power and Modulation Level for Minimizing Energy Consumption in Wireless Sensor Networks. <i>Wireless Personal Communications</i> , <b>2017</b> , 96, 4047-4062   | 1.9 | 2 |
| 24 | Synthesis of IIR digital filters exhibiting simultaneous amplitude and phase responses for VLSI implementations. <i>International Journal of Circuit Theory and Applications</i> , <b>1997</b> , 25, 1-14                                   | 2   | 2 |
| 23 | Synthesis of low-sensitivity orthogonal digital filters. <i>International Journal of Circuit Theory and Applications</i> , <b>1997</b> , 25, 503-520  | 2   | 2 |
| 22 |   |     | 2 |
| 21 | Design of two-dimensional scaled state space filters with fixed point arithmetic. <i>International Journal of Circuit Theory and Applications</i> , <b>1994</b> , 22, 467-477   | 2   | 2 |
| 20 | Design of odd-degree linear-phase sampled-data bandpass filters with equiripple amplitude response. <i>International Journal of Circuit Theory and Applications</i> , <b>1989</b> , 17, 87-101  | 2   | 2 |

|    |  |     |   |
|----|--|-----|---|
| 19 | A Multiband VCO Using a Switched Series Resonance for Fine Frequency Tuning Sensitivity and Phase Noise Improvement. <i>IEEE Transactions on Very Large Scale Integration (VLSI) Systems</i> , <b>2021</b> , 29, 2163-2171 | 2.6 | 2 |
| 18 | Spectrum Sensing Performance Analysis for Mobile Primary and Secondary Users in Cognitive Radio Networks <b>2019</b> ,   |     | 1 |
| 17 | A new biometric authentication system using heart sounds based on wavelet packet features <b>2015</b> ,  |     | 1 |
| 16 | Modeling and optimization of energy consumption in Wireless Sensor Networks <b>2015</b> ,  |     | 1 |
| 15 | <b>2011</b> ,  |     | 1 |
| 14 | An ECG signal compressor based on the selection of optimal threshold levels of discrete wavelet transform coefficients. <i>Journal of Medical Engineering and Technology</i> , <b>2008</b> , 32, 425-33                    | 1.8 | 1 |
| 13 | High-quality low-complexity wavelet-based compression algorithm for audio signals. <i>Electrical Engineering</i> , <b>2003</b> , -1, 1-1   | 1.5 | 1 |
| 12 | Design of selective M-channel perfect reconstruction FIR filter banks. <i>Electronics Letters</i> , <b>1999</b> , 35, 1223   | 1.1 | 1 |
| 11 | Odd-degree selective bandpass digital filters interpolating linear phase and constant group delay. <i>International Journal of Circuit Theory and Applications</i> , <b>1991</b> , 19, 375-387                             | 2   | 1 |
| 10 | 70 % Improvement in Q-Factor of Spiral Inductor and its Application in Switched K-Band VCO Using 0.18 $\mu$ m CMOS Technology <b>2018</b> ,  |     | 1 |
| 9  | Convex Lenses Horn Antenna Microwave Hyperthermia Scheme <b>2018</b> ,   |     | 1 |
| 8  | Efficient Node Deployment Based on Immune-Inspired Computing Algorithm for Wireless Sensor Networks. <i>Springer Tracts in Nature-inspired Computing</i> , <b>2021</b> , 105-141   | 1.8 | 1 |
| 7  | Faster CNN-based vehicle detection and counting strategy for fixed camera scenes. <i>Multimedia Tools and Applications</i> ,1  | 2.5 | 1 |
| 6  | Ku-Band Low Phase Noise VCO Using High-Quality Factor Transformer in 0.18- $\mu$ m CMOS Technology. <i>IEEE Microwave and Wireless Components Letters</i> , <b>2022</b> , 1-4  | 2.6 | 1 |
| 5  | Chebyshev Response of Thin Film Optical Filters. <i>Optical Review</i> , <b>2000</b> , 7, 341-347  | 0.9 | 0 |
| 4  | Enhancing microwave breast cancer hyperthermia therapy efficiency utilizing fat grafting with horn antenna. <i>International Journal of RF and Microwave Computer-Aided Engineering</i> , <b>2021</b> , 31, e22651         | 1.5 | 0 |
| 3  | Frequency-reconfigurable dielectric resonator antenna using metasurface. <i>International Journal of Microwave and Wireless Technologies</i> ,1-7  | 0.8 | 0 |
| 2  | Comments on Simultaneous amplitude and phase approximation for lumped and sampled filters. <i>International Journal of Circuit Theory and Applications</i> , <b>1993</b> , 21, 559-561                                     | 2   |   |

- 1 A wideband dielectric resonator antenna with switchable diversity patterns. *International Journal of Microwave and Wireless Technologies*, **2020**, 12, 339-344 0.8