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Department	Electrical Engineering Techniques	
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Qualifications: الشهادات العلمية

B.Sc. Middlesex University/ London, Uk
M.Sc. Technical University, Baghdad, Iraq
Ph.D. University Malaysia Perlis, Perlis, Malaysia

Fields of Interest: مجالات الاهتمام (توضع علامة نجمة للمجال الأكثر عملاً واهتماماً)

Analoge and digital electronics
Wireless communication
Antennas
Digital signal processing

Recent Publications:

آخر البحوث المنشورة

1# IEEE International Conference on Power and Engineering (PECon 2010), Malaysia
2# International Conference on Control, Robotics and Cybernetics (ICRC 2011), India
3# Third Malaysian – Ireland Joint Symposium on Engineering, Science and Business, 11-13 June 2013, Ireland.
4# IEEE international RF and Microwave Conference on 9-11 Dec. 2013, Penang, Malaysia.
5# 11th IEEE International Conference on Communication, 26-28 Nov. 2013, Kuala Lumpur, Malaysia
6# 3rd International Conference and Exhibition on Sustainable Energy and Advanced Materials (ICE-SEAM 30-31 Oct. 2013, Melaka, Malaysia
7# International Conference on Signal Processing and, Communication, and Networking, (ICSPCN 16-17 Dec. 2013, Penang, Malaysia.
8# IEEE International Conference on Control System, Computing and Engineering, ICCSCE 29 Nov. – 1st Dec. 2013, Penang, Malaysia.
9# IEEE International Conference on Power and Energy, PECon 29 Nov. -1st Dec. 2010, Selangor, Malaysia.
10# IEEE International Conference on Computer, Communication and Control Technology (I4CT), 2nd-4th Sep. 2014, Perlis, Malaysia.

MIDDLE TECHNICAL UNIVERSITY - IRAQ

- 11#** International Conference on Mathematics, Engineering and Industrial Applications, 28-30 May 2014, Perlis, Malaysia
- 12#** International Postgraduate Conference on Engineering and Management, IPCEM 25-26 Jan. 2014. Perlis, Malaysia
- 13#** 1st International Conference on Engineering Research, 1-2 March 2016, Middle Technical University, Baghdad.
- 14#** Workshop on Iraqi Diplomatic and Human Right Watch, 27/3 / 2017. Baghdad, Iraq.
- 15#** 3rd International Conference on Engineering Science, 16-17 December, Diyala, Iraq.
- 16#** International Conference on Engineering Research, ICER 2-3 March 2017, Ministry of Higher Education & Scientific Research, Middle Technical. University, Baghdad, Iraq
- 17#** International Conference on Modern Communication, Feb. 2015, Ministry of Communication, Baghdad, Iraq.
- 18#** 2nd Engineering Conference for Graduate Research, 2017, Middle Technical University, Electrical Engineering Technical College, Baghdad, Iraq.
- 19#** International Conference PIERS Proceedings, 25-28 August 2014, Guangzhou, China.
- 20#** International Conference on Applied Electromagnetic International conference (APPEIC 16-17 Dec. 2014), Indonesia.
- 21#** Producing Seminar in proving of Electrical Power Syllabus for four stages, 2016, Al-Maamon College, Baghdad, Iraq .
- 22#** Producing Seminar in design of printed antennas using CST software, 2015, Middle Technical University, Iraq.
- 23#** Introducing Electrical Power Engineering Department in Bilad Al-Rafidian College, 2016, Dyiala, Iraq.
- 24#** 2018 International Conference on Advances in Sustainable Engineering and Applications (ICASEA), Wasit University, Kut, Iraq
- 25#** 2018 International Conference on Advanced Science and Engineering, ICOASE 2018 – Duhok, Kurdistan Region – Iraq
- 26# 2015-** Applied Mechanics and Materials. Performance Evaluation of Adaptive Indoor Matched Rake Receiver Using Multiple-Combining Techniques. Trans Tech Publications, Switzerland. Vol. 699 (2015), pp. 921-930
- 27# 2014-** Socket-Shaped Patch Antenna for Wireless Ultra-Wideband Applications, International Journal of Digital Content Technology and its Applications (JDCTA). Volume 8, Number 5, October 2014
- 28# 2014-** Pulse Sign Separation Technique for the Received Bits in Wireless Ultra-Wideband Combination Approach, Hindawi Publishing Corporation Mathematical Problems in Engineering Volume 2014, Article ID 919681, 10 pages
- 29# 2014-** Enhancement of a Three Combining Techniques Rake Receiver Using Adaptive Filter of M-Max Partial Update RLS Algorithm for DS-UWB Systems, Journal of Next Generation Information Technology (JNIT), Volume 5, Number 4, November

2014.

30#2014- Small Design for Wireless Antenna Used by Ultra-wideband Systems, Progress In Electromagnetics Research Symposium Proceedings, Guangzhou, China, Aug. 25-28, pp. 1954- 1957, 2014

31#2015-Two Small Antenna Designs for Ultra-Wideband Wireless Systems, Springer International Publishing Switzerland 2015 H.A. Sulaiman et al. (eds.), Theory and Applications of Applied Electromagnetics, Lecture Notes in Electrical Engineering 344

32#2015- THREE ANTENNAS DESIGN USED BY ULTRA-WIDEBAND WIRELESS SYSTEMS, Diyala Journal of Engineering Sciences, December. 2015, pp. 585-958

33#2016- Blind Adaptive Transmitted Reference Receiver Based on Indoor Wireless Propagation, **International Journal of Wireless Communications and Networking Technologies (IJWCNT)**.

34#2016- Performance Improvement of Hybrid SCM SAC-OCDMA Networks using Multi Diagonal Code. مجلة كلية المأمون الجامعة.

35#2014- Planar Finger-Shaped Antenna Used in Ultra-Wideband

Wireless Systems, TELKOMNIKA, Vol.12, No.2, June 2014, pp. 419~428

36#2014- THE PERFORMANCE OF TWO ANTENNA DESIGN SHAPES IN ULTRA-WIDEBAND WIRELESS APPLICATIONS, ARPN Journal of Engineering and Applied Sciences, VOL. 9, NO. 1, JANUARY 2014.

37#2014- Comparison the Performance of OFDM System Based on Multiwavelet Transform with Different Modulation Schemes, IEEE 2014 International Conference on Computer, Communication, and Control Technology (I4CT 2014) Sep. 2-4 Langkawi, Malaysia.

38#2014- Design of a UWB Wireless Indoor Rake Receiver Using Continuous and Discrete Wavelet Transform Approaches, Journal of Theoretical and Applied Information Technology, 61(1), 118-127, 2014.

39#2014- MMSE Equalized Rake-Receiver Using Adaptive Filter with a Family of Partial Update Algorithms in Wireless Communication Systems, International Journal of Engineering and Technology (IJET), 5(6), 5169-5177, 2014.

40#2014- Performance Evaluation of Adaptive Indoor Matching Rake Receiver Using Multiple Combining Techniques, International Journal of Applied Mechanics and Materials.

41#2014- Wireless Rake-Receiver Using Adaptive Filter with a Family of Partial Update Algorithms in Noise Cancellation Applications, AIP Proceeding of the International Conference on Mathematics, Engineering and Industrial Applications (ICoMEIA 2014), AIP Conference Proceeding.

42#2014- Performance Enhancement of Rake Receiver Using Continuous and Discrete Wavelet Transform Analysis Through NLOS Propagation. AIP Proceeding of the International Conference on Mathematics, Engineering and Industrial Applications (ICoMEIA 2014), AIP Conference Proceeding.

43#2014- Adaptive Rake Receiver Based on the Signal Sign Separation in the Maximal Ratio Combiner for Ultra Wideband Wireless Communication Systems, Journal of IEICE TRANS. FUNDAMENTALS/COMMUN./ELECTRON./INF. & SYST.

44#2014- Multiple Antennas Effect on UWB Rake Receiver Performance, International

Journal of Wireless Communication and Networking Technology, 3(3), 61-61, 2014.

45#2014- Socket-Shaped Patch Antenna for Wireless Ultra Wideband Applications, International Journal of Digital Content Technology and its Applications (JDCTA), Vol. 8, No. 5, pp. 144-150, 2014.

46#2014- Comparison Between Spade-Shaped and Finger-Shaped Designs for Microstrip Patch Antennas Used in Ultra-Wideband Wireless Systems, IEEE International Postgraduate Conference on Engineering and Management, Malaysia, 2014.

47#2014- UWB Selective Rake Receiver Using Multiple Comparators, IEEE International Conference on Electronic Design, Malaysia, 2014.

48#2014- Small Design for Wireless Antenna Used by Ultra Wideband Systems, IEEE International Conference on Progress In Electromagnetic Research Symposium, China, 1954-1957, 2014.

49#2014- Two Small Antenna Designs for Ultra-Wideband Wireless Systems, IEEE Applied Electromagnetic International Conference, Bandung, Indonesia, 2014.

50#2014- Reducing Transmitted Power of Moving Relay Node in Long-Term Evolution-Advanced Cellular Networks, Journal of Computer Science.10 (6): 1051-1061.

51#2014- Analyzing Mobile WIMAX Base Station Deployment Under Different Frequency Planning Strategies, AIP Proceeding of the International Conference on Mathematics, Engineering and Industrial Applications (ICoMEIA 2014), AIP Conference Proceeding.

52#2014- Performance Analysis of a Finite Radon Transform Based OFDM System Under Different Channel Conditions, AIP Proceeding of the International Conference on Mathematics, Engineering and Industrial Applications (ICoMEIA 2014), AIP Conference Proceeding.

53#2014- Increasing the Coverage Area through Relay Node Deployment in Long Term Evolution Advanced (LTE-A) Cellular Networks. AIP Proceeding of the International Conference on Mathematics, Engineering and Industrial Applications (ICoMEIA 2014), AIP Conference Proceeding.

54#2014- An Optimal Zone Selection Approach Based on User Mobility Using WiMAX 802.16e Fractional Frequency Reuse Base Station, IEEE International Postgraduate Conference on Engineering and Management Malaysia.

55#2014- Performance Enhancement of Moving Relay Node in LTE-A Cellular Networks, IEEE International Postgraduate Conference on Engineering and Management Malaysia.

56#2014- UWB Selective Rake Receiver Using Multiple Comparators, IEEE International Conference on Electronic Design, Malaysia.

57#2014- Improve the Performance of Multi-user MC-CDMA System Based on Critically-Sampling Discrete Multi-wavelets Transform over Wireless Propagation Channel, IEEE International Conference on Progress In Electromagnetic Research Symposium, China, pp. 1958-1962, 2014.

58#2014- Comparison the performance of OFDM System Based on Multi-Wavelet Transform with Different Modulation Schemes, IEEE International Conference on Computer, Communication, and Control Technology, Malaysia, pp. 403-406, 2014.

59#2017- Performance of AWGN and fading channels on wireless communication

systems using several techniques, International Journal of Wireless Communications and Network Technologies

60# 2017- Transmitted reference UWB wireless receiver based on FFT technique, International Journal of Advanced Technology and Engineering

61# 2017- Design and Implementation of Wireless Sensor Network Based on MATLAB Interfaced with Arduino, International Journal of Engineering and Technology (IJET),

62# 2017- A Small Design of Ultra-Wideband Printed Antenna with Notched and Raked Planar Patch, Engineering and Technology Journal.

63# 2017- Analytical Enhancement of Rayleigh K-Factor for Indoor Transmitted Reference Wireless Receiver, International Journal of Innovation in Science and Mathematics.

64# 2017- Performance of Combining Signals by Wireless Rake Receiver for Ultra Wideband Communication Systems, The First International Conference for Engineering Researches (ICER).

65# 2017- Driver Drowsiness Level Discrimination Based on EEG, The First International Conference for Engineering Researches (ICER)

66# 2017- Low Complexity of Transmitted reference UWB Based on FFT, Second Engineering Conference for Graduate Research

67# 2017- Performance Enhancement of Wireless Communication at High Speeds Public Transportation Vehicles, Journal of Next Generation Information Technology

68# 2017- Implementation of a Single-Hop Wireless Sensor Network Based on MATLAB Interfaced with Arduino, Second Engineering Conference for Graduate Research

69# 2017- Establishment Network by using FSO link based on MD code for hybrid SCM-SAC-OCDMA Wireless system, International Journal of Electrical and Computer Engineering (IJECE).

70# 2013- Adaptive Rake Receiver Using Matched Filter with Three Combining Techniques, Australian Journal of Basic and Applied Sciences

71# 2013- Proposed Geometric Printed Patch Shapes for Microstrip Ultra-Wideband Antennas, World Academy of Science, Engineering and Technology

72# 2013- Improved Rake Receiver Based On the Signal Sign Separation in Maximal Ratio Combining Technique for Ultra-Wideband Wireless Communication Systems, International Journal of Electrical, Robotics, Electronics and Communications Engineering

73# 2013- Spade-Shaped Patch Antenna for Ultra Wideband Wireless Communication Systems, International Journal of Advanced Computer Research

74# 2013- Finger-Shaped Antenna Design for Ultra-Wideband Applications, IEEE International RF and Microwave Conference (REM)

75# 2013- Improving the Capacity of Channels for Multi-Path Indoor Ultra-Wideband Wireless Systems, IEEE MICC International Conference

76# 2013- Design of Ultra-Wideband Rectangular Microstrip Notched Patch Antenna, IEEE ICCSCE International Conference on Control System, Computing and Engineering

77# 2013- Proposed Geometric Printed Patch Shapes for Microstrip Ultra-Wideband Antennas, International Journal of Electrical, Robotics, Electronics and Communications

Engineering

78#2013- Development of a New Approach for High-Quality Quadrupling Frequency Optical Millimeter-Wave Signal Generation Without Optical Filter, Progress In Electromagnetics Research

79#2013- Generation of a New Hybrid Subcarrier Multiplexing–SAC-OCDMA System Based on FSO, Journal of Theoretical and Applied Information Technology

80#2013- Enhancing link quality in a multi-hop relay in LTE-A employing directional antenna, IEEE International RF and Microwave Conference

81#2011- Speed Control of DC Motor by Thyrister, Foundation of Technical Education, Foundation of Technical Education, 12th Scientific Conference, 28-29 March 2011.

82#2010- Smart Charger for Sealed-Lead Acid Batteries Based on Parallel Port PC Interfacing, IEEE International Conference on Power and Energy (PECon), Nov 29- Dec 1, 2010.

83#2019- Non-Invasive Blood Glucose Measurement Depending on the Blood Dielectric Properties by using One Ultra-Wideband Transceiver, International Research Journal of Engineering and Technology (IRJET), Volume: 06 Issue: 07 | July 2019.

84#2019- Microstrip wireless antenna used by capsule for stomach

internal photography Journal of Techniques, Vol. 1, No. 1, December 31, 2019, Pages 30-38.

85#2019- Design and implementation of smart electronic solar tracker based on Arduino, TELKOMNIKA, Vol.17, No.5, October 2019, pp.2486~2496.

86#2019- Design and implementation a prototype system for fusion image by using SWT-PCA algorithm with FPGA technique, International Journal of Electrical and Computer Engineering (IJECE), Vol. 10, No. 1, February 2020, pp. 757~766.

87#2019- Improving of Scm-Sac-Ocdma System by Using Optical Amplifier Based on Md Code, IOP Conf. Series: Materials Science and Engineering 518 (2019) 052004.

88#2019- Implementation of New Combiner for Indoor UWB Wireless Rake Receiver, IOP Conf. Series: Materials Science and Engineering 518 (2019) 052012.

89#2020- UWB Transceiver for Non-Invasive Glucose Concentration Measurement in Blood: Review, TRKU Journal, Volume 62, Issue 04, April, 2020.

90#2020- Measurement of Non-Invasive Blood Glucose Level by UWB Transceiver in Diabetic Patient, The Fifth Scientific Conference for Engineering and Postgraduate Research (PEC2020), Baghdad, Iraq, 21 -22 December, 2020.

91#2020- Ultra-wideband Radar for Angiography, IOP Conference Series: Materials Science and Engineering, IOP Conf. Series: Materials Science and Engineering 745 (2020) 012086.

92#2020- Medical Healthcare System Based on Wireless Body Area Networks: The Importance of Anomaly Detection, International Journal of Engineering and Advanced Technology (IJEAT)

ISSN: 2249 – 8958, Volume-9 Issue-3, February, 2020.

93 # 2020-Implementation of wireless sensor network for medical applications, The Fourth Postgraduate Engineering Conference, IOP Conf. Series: Materials Science and Engineering 745 (2020).

94 # 2020- Wavelet Packet VS Backpropagation for localization and Classification PCG Signals, IOP Conf. Series: Materials Science and Engineering 881 (2020) 012104.

95 # 2021-Respiratory Temperature Measurement to Monitor Acute Respiratory Distress Syndrome for Covid 19 Patients, Turkish Online Journal of Qualitative Inquiry (TOJQI), Volume 12, Issue 8, July 2021: 646-654

96 # 2022- Electroencephalogram Based Stress Detection Using Extreme Learning Machine, Nano BiomedEng, Nano Biomed. Eng., 2022, Vol. 14, Iss. 3, pp. 208-215.

97 # 2022- Principle component analysis based face recognition, AIP Conference Proceedings 2398, 050023 (2022),

98 # 2023- Design of A Patch Antenna with Three Bands for Vital Signs Monitoring Devices, *International Journal of Intelligent Engineering and Systems*, Vol.16, No. 4, 2023

99 # 2023- A Simulated Model of a Triple Band Patch Antenna Proposed for Vital Signs Monitoring Equipment, *Journal of Techniques*, ISSN: 2708-8383, Vol. 5, No. 3, 2023, Pages 73-83

100 # 2023- ANN-based Fault Location in 11 kV Power Distribution Line using MATLAB, 2023 IEEE Jordan International Joint Conference on Electrical Engineering and Information Technology (JEEIT) | 979-8-3503-2405-1/23/\$31.00 ©2023 IEEE | DOI: 10.1109/JEEIT58638.2023.10185849

101 # 2023- Design and performance analysis of a solar photovoltaic power plant for grid-tied applications: A case study in Iraq, *AIP Conf. Proc.* 2804, 050020 (2023)

102 # 2023- Real Time Practical Face Recognition System of Distorted Images Using PCA, 2022 4th International Conference on Current Research in Engineering and Science Applications (ICCRESA) | 979-8-3503-3494-4/22/\$31.00 ©2022 IEEE | DOI: 10.1109/ICCRESA57091.2022.10352496.

103 # 2023- Wireless VSMS and accelerometer sensors with hip position are used to design a fall detector with a patient monitoring, 2022 4th International Conference on Current Research in Engineering and Science Applications (ICCRESA) | 979-8-3503-3494-4/22/\$31.00 ©2022 IEEE | DOI: 10.1109/ICCRESA57091.2022.10352496

104 # 2023- Microcontroller-based vital monitoring for cardiac functions, *AIP Conf. Proc.* 2804, 040006 (2023).

Recent Prizes:

الجوائز الأخيرة

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Patents: براءات الاختراع

	⊕ (Year), Title - Patent No.
	⊕
	⊕
	⊕

Administration Position: المناصب الادارية

	⊕ (Year - Year), Administration Position , Workplace
	⊕
	⊕
	⊕

Membership in Scientific Societies: العضوية في الجمعيات العلمية

	- عضوية مؤسسة ⊕
	
	<p>19- تم الاشتراك بتأليف ونشر كتاب التطبيقات الكهرومغناطيسية في دار النشر سبرنجر Theory and Applications of Applied Electromagnetics, Vol. 344, Springer International Publishing, Switzerland, 2015.</p>
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Editor/Reviewer: محرر / مراجع

	⊕ (2017), – Reviewer of Journal IEEE Access , USA
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MIDDLE TECHNICAL UNIVERSITY - IRAQ

	#(2017), – Reviewer of Journal: Iraqi Journal for Computers and Informatics , Iraq
	# (2017), – Reviewer of Journal: Advances in Modelling and Analysis
	# (2017), – Reviewer of Journal: Journal of Engineering Science & Technology

Professional Activities: الأنشطة المهنية

	1- IEEE International Conference on Power and Engineering (PECon 2010), Malaysia
	2- International Conference on Control, Robotics and Cybernetics (ICRC 2011), India
	3- Third Malaysian – Ireland Joint Symposium on Engineering, Science and Business, 11-13 June 2013, Ireland.
	4- IEEE international RF and Microwave Conference on 9-11 Dec. 2013, Penang, Malaysia.
	5- 11th IEEE International Conference on Communication, 26-28 Nov. 2013, Kuala Lumpur, Malaysia
	6- 3rd International Conference and Exhibition on Sustainable Energy and Advanced Materials (ICE-SEAM 30-31 Oct. 2013, Melaka, Malaysia
	7- International Conference on Signal Processing and, Communication, and Networking, (ICSPCN 16-17 Dec. 2013, Penang, Malaysia.
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	17- International Conference on Modern Communication, Feb. 2015, Ministry of Communication, Baghdad, Iraq.
	18- 2nd Engineering Conference for Graduate Research, 2017, Middle Technical University, Electrical Engineering Technical College, Baghdad, Iraq.
	19- International Conference PIERS Proceedings, 25-28 August 2014, Guangzhou, China.
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	21- Producing Seminar in proving of Electrical Power Syllabus for four stages, 2016, Al-Maamon College, Baghdad, Iraq .
	22- Producing Seminar in design of printed antennas using CST software, 2015 Middle Technical University.
	23- Introducing Electrical Power Engineering Department in Bilad Al-Rafidian College, 2016, Dyiala, Iraq.

Invited lectures:	
	#(Year) – lecture Title, Enterprise, (Country)
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