

Curriculum Vitae (C.V)

Personal Information:

Prof. Dr. Hadi T. Ziboon

Computer Engineering Techniques Department

Ashur University, Baghdad, Iraq

Date and place of birth: Iraq-Baghdad, 1-7-1951

Nationality: Iraqi

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Academic Qualification:

- B.Sc. in Electrical Engineering, University of Technology, 1973.
- M.Sc.in Electronic and Communication Engineering, College of Engineering, Baghdad University, 1978.
- Ph.D. in Electronic and Communication Systems, Electrical Engineering Department, University of Aston in Birmingham UK, 1984.
- Assit.Prof. in Electronic and Communication Engineering ,2010
- Prof. in Electronic and Communication Engineering ,2018

Work Space:

1. From 1984 to 2003, Research projects manager (Electronics, Communication, Radar and Control Systems) at a Research and Development Center in Iraq.
2. From 2003 to 2008 lecturer of Electronics Eng. Division at U.O.T
3. From 2008 to 2011, Head of communication Eng. Division at U.O.T
4. From 2011 t0 2017, Head of Electronics Eng. Division at U.O.T

5. From August 2017 to December 2019 lecturer of Electronics and Communication Engineering subjects(for B.Sc,M.Sc,and Ph.D.courses) and supervision of M.Sc and Ph.D. theses at Electrical Engineering Department, U.O.T
6. From December 2020 to November 2021 Head of the Computer Eng. Techniques Department in Alsalam University College.
7. From December 2021 to October 2023 Dean of Alsalam College.
8. From Nov.2023 to August 2024 Head of the Comp.Eng.Tech.Dep. At Alsalem college.
9. From August 2024 till now lecturer of Boolean Algebra and Logic circuit design at Al-Naji University.

Published Papers:

1. Data transmission by frequency hopped multilevel frequency shift keying, journal of institution of electronic and radio engineers, PP (254-248), 1986.
2. ECM techniques against hopping system, first scientific conference on radar systems and signal processing, pp (230-242), 1987.
3. A new technique for detection and high estimation of buried metal objects, IEEE-IGA RSS 87, session number TA-6-8, 1987.
4. The digital generation of frequency hopping multilevel frequency shift keying (FH_MFSK) and chirp signals for data transmission, journal of space and astronomy research, PP(65-75), 1988.
5. A very fast frequency hopping synthesizer, proceeding inter ASME, conference signals and system U.K, PP (193-204), 1988.
6. High speed frequency synthesizer for frequency hopping system, proceeding inter ASME conference signals and systems, U.K, PP (205-224), 1988.

7. Design and Simulation of Sigma - Delta Fractional - N Frequency Synthesizer for WiMAX, Eng. And Tech. J., University of Technology, Vol. 26, No.9, 2008
8. DWA Technique to Improve DAC of Sigma - Delta Fractional - N Frequency Synthesizer for WiMAX, J. of Al-Nahrain University - Science, Science, Vol. 12, No.2,2009
9. Design and Simulation of Digital Technology PLL Synchronizer for BPSK and QPSK Based on SDR, Eng. And Tech. J., University of Technology, Vol. 27, No. 10, 2009
10. Analysis, Design, Simulation and Evaluation of sigma - Delta ($\sum \Delta$) Modulator for GSM synthesizer, J. of Al-Nahrain University, 2009.
11. Design and Implementation of Adaptive Modulation Modem Based on SDR for WiMAX, Eng. And Tech. J., University of Technology, Vol. 28, No.14, 2010
12. Upgrading Tow Dimensional search Radar to Three Dimensional search Radar Based on SDR, Eng. and Tech. journal, University of Technology of Zaxo.
13. Design and Implementation of BPSK and QPSK Band pass Modems based on SDR Using HDL Simulink coder, Journal of Iraqi information Technology, Al- Mustansiriya University, 2013.
14. Design and Implementation of multilevel QAM band pass Modems (80QAM, 32 QAM and 64 QAM) for WIMAX System Based on SDR using FPGA, IJSCE, 2014.
15. Design and Implementation of Forward link channel CDMA 2000- lx system based on SDR Using FPGA, Journal of Babylon University Vol. 22 No.3, 2014.
16. Design and Implementation of Discrete Multi one Modulator for Digital Subscriber line Using FPGA, Eng. And Tech. J. University of Technology, Vol. 32 No.7, 2014.

17. Analysis of the capacity, Spectral Efficiency and Probability Of outage of Adaptive Mobile channel for WIMAX, Eng. And Tech. J. University of Technology, Vol. 32 No.9, 2014.
18. Design of Compact Bandpass Filters Based on Fractal Defected Ground Structure (DGS) Resonators, Indiana journal of Science and Technology, Vol. 9(39), 2016.
19. Digital Image Encryption by Random Pixel Selecting Using Chaotic Sequence, Al- Ma'moon University Collage, vol.26, 2015.
20. Improving Probability of Detection Using CFAR and Adaptive Threshold for Cognitive Radio, IJEAT, Volume 4, Issue 5, 2015
21. Design and Implementation of OFDM System for Real Signal Transmission and Reception for DSL Based on SDR Using FPGA, International Journal of Scientific and Engineering Research, Vol.7, issue 4, April 2016.
22. Design and Implementation of Bandpass QPSK Modem for WIMAX System Based On SDR Using FPGA, Conference of Bilad Alrafidain University College, 2017.
23. A new Adaptive two Stage Spectrum Sensing Technique in Cognitive Radio System for Different Modulation Scheme, Research Journal of Applied Science, Engineering and Technology, Maxwell Scientific Publication Corp.2016
24. Anew proposed adaptive cognitive radio detection system based on statistical feature for different modulation schemes, International Conference on changes, Innovation, Informative and Destructive Technology ICCIIDT 16, London-UK, October 2016
25. New Image Scrambling Algorithm Depending Transformation Using Chaotic Flow Sequence, CRC Press Taylor and Francis, USA, 2016.
26. High Speed Non-Equal Dimension Color Image Scrambling. Using Chaotic Flow Sequence, International Conference on Change ,

Innovative and Descriptive Technology, IEEE, London, UK, 2016

27. Miniaturized SIW Wideband BPF Based on Folded Ring and Meander Line Slot for Wireless Application, 2nd-AIC-MITC, 2017

28. Robust Encryption System Based on Novel Chaotic Sequence, Research Journal of Applied Science, Engineering and Technology, Maxwell Scientific Publication Corp.2017

29.Compact Dual-Band Bandpass Filters Based on Fractal Sub loaded Resonator Progress in Electromagnetics Research Symposium, PIERS, Russia, 2017.

30.Compact quad-band BPF design with fractal stepped impedance ring resonator, ARPN journal of Engineering and Applied Sciences, 2017

31. A new propsed adaptive Cognitive Radio detection system based on MLP neural network for different modulation schemes. ARPN journal of Engineering and Applied Sciences, 2017

32. Analysis and Theoretical Evaluation of Iraqi High Voltage Power Transmission Line, Iraqi Journal of Computer, Communications, Control &Systems Engineering (IJCCE) Vol.18, No.2, SEP.2018

33. Digital Image Scrambling Using Chaotic Systems Based on FPGA, 2018 Third Scientific Conference of Electrical Engineering (SCEE), University of Technology-Iraq

34.A multiband Printed Slot Antenna Loaded with Trapezoidal for WLAN and WiMAX Applications, Eng. and Technology .J. ,University of Technology, 2018

35.Design of a triple band fractal based BPF with asymmetrical SLR structures, journal of Engineering and Applied Sciences,2018

36.Performance evaluation of OFDM systems under PLC fading channel over Iraqi grid for variable PSK modulation index, journal of Engineering and Applied Sciences,2018,

37. Minkowski fractal geometry : An attractive choice Of compact antenna and filter design, ARPN journal of Engineering and Applied, 2018

38.Wuderlich curve fractal dipole antenna for dual band wearable RFID applications, journal of Engineering and Applied Sciences, 2019

39.Comparitive Study of Pulse Shaping Filters in FBMC, Iraqi Journal of Computer, Communications, Control &Systems Engineering (IJCCE) Vol-19, No.2, April 2019

40. Design and Implementation of a New Detection System Based on Statistical Features for Different Noisy Channels, ICICT 19, April (15-16) 2019

41.Human gait recognition by shoulder movements Doppler signature using SVM classifier AIP conference procedure processing 2290, December 2020

42. Blind source separation based on random mixing coefficient,3rd International conference on Eng.Technology and its applications ICETA 2020.

43. Modified speech separation deep learning network based on Hamming Window.2nd International Conference Eng. Science 2020

44.Comparitive study of pulse shaping filters in FBMC Iraqi Journal of Computers, Communications, Control and Systems Eng.(IJCCCE), Vol.19, No.2 ,April 2019

45. Cyclostationary Feature Detection Scheme for FBMC and OFDM Cognitive Radio Systems ,International Eng.and Systems June 2020

46. Joint carrier frequency and symbol Timing Synchronization Sequence For FBMC based system, Physical Communication 42(2020) 10165

47. Performance enhancement of cognitive radio using double threshold

Eigenvalues detection, International journal of intellhgent Eng. and Systems, January 2020

48. Improvement of the Two Adaptive Thresholds based on Covariance Absolute Value (ITATCAV),4th International Conference on Current Research Eng. And Science Applications (ICCRESA 2022), Alsalam University College Baghdad Iraq.

49. Enhancing the Spectrum Sensing Technique Based on Covariance Absolute Value Using Double Adaptive Thresholds, 2th International Conference on Advanced in Eng. And Science and Technology 2022(AEST-2022) University of Babylon, Iraq.

Published Books:

1. Analysis and Performance of DWPT-OFDM and Sliding Window Technique, LAMBERT Academic Publishing, 2012.
2. Wireless communication modems based on SDR Using FPGA, LAMBERT Academic Publishing, 2013.
3. Adaptive channel for mobile communication on based SDR, LAMBERT Academic Publishing, 2013.
4. Design and implementation of Discrete Multi-tone Modulator Using FPGA, LAMBERT Academic Publishing, 2013.
5. Design and Implementation DMT Demodulation for ADSL Using FPGA, LAMBERT Academic Publishing, 2017.
6. Design and Simulation of Adaptive Cognitive Radio Based on Software Defined Radio (SDR) Using Higher Order Moments and Cumulates, shaping the Future of ICT: Trends in Informatics Technology, Communications Engineering and Managements, chapter 17, 2017, CRC press.
7. New Image Scrambling Algorithm Depending on Image Dimension Transformation Using Chaotic Flow Sequences, shaping the Future of

ICT: Trends in Informatics Technology, Communications Engineering and Managements, chapter 17, 2017, CRC press.

8. Fractal geometry: An attractive Choice for Miniaturized Planar Microwave Filter Design, Fractal Analysis, Chapter 3,2019

Supervision of Ph.D. Theses

1. *Analysis and performance Evaluation of OFDM Based on DWPT and Sliding Window Techniques (2012)*
2. *Design And Implementation Of Adaptive Cognitive Radio Based On SDR(2016)*
3. *FPGA Based Image Encryption Using Chaotic System(2016)*
4. *Design and Implementation of Compact Bandpass Filters Based on Minkoski Fractal Stub Loaded Resonator and Defected Ground Structure (2018)*
5. *5.Narrowband Data Transmission Over Iraqi Power Line Grid ,(2018)*
6. *Filter Bank Multicarrier Modulation for 5G Mobile Communication And Cognitive Radio Based on SDR(2020)*
7. *Implementation and Performance Evaluation of Beamforming MU-MIMO Based on SDR,(2022).*

Supervision of M.Sc Theses

1. *1.High Speed of Frequency Synthesizer for Frequency Hopping System.(1988)*
2. *Fast Synchronization Technique for Frequency Hopping System.(1989)*
3. *Design And Performance Evaluation Of Sigma-Delta Modulater Fractional-N Frequency Synthesizer .(2007)*
4. *Design And Implantation Of PLL Synchronigen Based N Software Defined Radio.(2008)*

5. *Design And Analysis Of Sigma –Delta Modulator For Gsm Application.(2008)*
6. *Design And Implementation Of Cdma2000 Processor Based On SDR Using FPGA.(2008)*
7. *Design And Implememementation Of Selectable Modems For Wimax System Using FPGA.(2013)*
8. *Design And Implementation Of Adaptive Channel For M-Ary Mobile Communication System Using FPGA.(2013)*
9. *Design And Implementation Of Discrete Multi tone Modulator Using FPGA.(2013)*
10. *Design And Implementation A Discrete Multi one Demodulator For Asymmetrical Digital Subscriber Line Using FPGA.(2016)*
11. *7. Performance Enhancement of Cognitive Radio Using Subspace Methods,(2020)*
12. *Design Double Threshold Covariance Matrix Algorithm for Spectrum Sensing Cognitive Radio Based on SDR , (2022)*

Achieved and Rehabilitated Projects:

1. Design and implementation of Radom for airborne early warning radar.
2. Design and implementation of direction finder for frequency hopping and very fast transmission.
3. Development of ground radar to airborne early warning radar.
4. Analysis and measurement of ground clutter for airborne radar.
5. Design and implementation of speed compensation for airborne radar.
6. Design and implementation of signal processing unit to increase the improvement factor of a radar.
7. Change the directivity of the antenna for Misan Broadcast station.
8. Design and implementation of an automatic system for fault designation of radio communication system.
9. Design and implementation of three channel microwave receiver.

10. Design and implementation of 30 line exchange.
11. Design of electronic scanning antenna for-surveillance civilian airport radars.
12. Design and implementation of radar network for aircraft control system at airports.
13. Design and implementation of C4I [command, control, communication, computer and intelligence system].
14. Design and implementation of a simulator for navy navigation.
15. Design and implementation an intelligent display for radar.
16. Analysis of the superducting phenomena in the south of Iraq for communication links.
17. Development of two dimensional radar to three dimensional radar.
18. Design and implementation and testing of a Comfluage material to absorb radar signal.
19. Design and implementation of the burst transmission for VHF radio.
20. Design and implementation of field multiplexer for cable transmission.
21. Design and implementation of HF power amplifier (40 w).
22. Design and implementation of the expert system to test and evaluate the IR system.
23. Design and implementation of navigation system by using (GPS).
24. Rehabilitation of national communication network system.
25. Rehabilitation of control units for refineries.
26. Rehabilitation of control units for broadcasting station.
27. Rehabilitation of control units for electrical power station.
28. Rehabilitation of navigation radar for airports.
29. Rehabilitation of broadcasting high power tubes (250-500 kW).
30. Rehabilitation of microwave high power tubes (70 kW).