

*Curriculum Vitae*

**Professor Dr. Ibrahim Ismael HAMARASH**  
*(PhD. MSc. BSc. Eng. ICT Cert.)*

Professor of Electrical and Computer Engineering  
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**PERSONAL**

Birth Date: July 1, 1967

Family Status: Married, Two Daughters; Shan & Lala

Permanent Address: English Village 328,

Erbil, Kurdistan, Iraq

Languages: English, Spoken and written (Excellent)

Arabic, Spoken and written (Fluent)

Kurdish (Mother tongue)

**EDUCATION**

Ph.D. Electrical Engineering (Major: Control Systems Engineering), 1999,  
University of Technology-Baghdad, Dept. of Electrical & Electronics Eng.

Thesis Title:

"Damping of Low Frequency Oscillations in Large Electrical Power Systems  
using Selected Modes Pole Assignment Controller".

MRes Computer Science, Thesis Title: "A Path Planning Algorithm Based on a  
New Obstacle Avoidance Method: A Case Study of Flocking Rules for  
Autonomous Multi-Mobile Robots, Staffordshire University, UK.

M.Sc. Electrical Engineering (Major: Control Systems), University of Mosul,  
Mosul, Iraq. Thesis Title: "A Numerical Method For Pole Assignment  
Synthesis of Linear Time Invariant Control Systems Using State Feedback"

B.Sc. Electrical Engineering (Major: Electronics and Communications  
Engineering), 1988, Salahaddin University-Erbil, Kurdistan, Iraq.

Postdoctoral Research (one-year visiting researcher), 2007, Monash University,  
Melbourne, VIC, Australia.

ICT Management Certificate, UCSD, USA, 2005

## **ACADEMIC CERTIFICATES, HONORS & AWARDS**

- Academic Leadership, Leadership Foundation for Higher Education, 2011, UK.
- Endeavour Executive Award, 2015, Melbourne, Australia.
- Endeavour Award, 2007, Dept. of Education, Employment and Workplace Relations, Australia.
- Project Management Certificate, 2005, Beyster Institute, Rady School of Management, University of California in San Diego, CA, USA.

## **EMPLOYMENT HISTORY**

- 2020-present Professor at Salahaddin University-Erbil (Full time)
- 2017- 2018 Interim Dean of Engineering, Salahaddin University-Erbil, Kurdistan, Iraq.
- 2010- 2017 Vice President for Scientific Affairs and Postgraduate Studies, Salahaddin University-Erbil, Erbil, Kurdistan, Federal Republic of Iraq.
- 2008- 2010 Head of the Electrical Engineering Dept, College of Eng, Salahaddin University-Erbil, Erbil, Kurdistan, Iraq.
- 2007-2008 Head of Computer License Test Committee, Salahaddin University, Erbil. Kurdistan.
- 2007-2007 Academic Visitor, Monash University, Melbourne, Victoria, Australia.
- 2005-2007 Assist. Professor at the Dept. of Electrical Eng, College of Engineering, University of Salahaddin-Erbil.
- 2000-2004 Founder and Head of the Department of Software Engineering, College of Engineering., University of Salahaddin-Erbil, Kurdistan, Iraq.
- 1999-2000 Computer Center Manager, College of Engineering, Salahaddin University-Erbil , Erbil, Kurdistan, IRAQ.
- 1999-2005 Lecturer, Department of Electrical Engineering, College of Engineering, Salahaddin University-Erbil.
- 1994-1998 Founder and Owner, Zanco for Computers Ltd., Erbil, Kurdistan, Iraq.
- 1993-1999 Assistant Lecturer, Department of Electrical Engineering, College of Engineering, University of Salahaddin-Erbil.
- 1988-1991 Electrical Engineer, Trudbinik Ltd. (A Yugoslavian Company, Project 1101 in Iraq), Baghdad, Iraq.

## **RESEARCH INTERESTS**

Computer and Control Systems, Robotics and AI, Information Systems, System Modelling and Simulation, and Nonlinearities.

## **INDUSTRY EXPERIENCE**

- 2010 Design and building of a Mobile Education Center for Regenerative Energy and Automation, with the University of Applied Science-Karlsruhe, Germany.
- 2006 Project Manager, e-Parliament, with B-Plan Information Systems Ltd.(UK based Company) for Kurdistan Parliament.

- 2005 Localization of Operation Manuals (in Kurdish) for A newly Installed Water Station in Erbil (Kurdistan, IRAQ) for Goulds Pumps(USA) and Agenew(USA).
- 2005 System Analysis, Software architecture and design, Localization, Database Design, Implementation, Manual Development and Training for PERIS: HR and Payroll System, with B-Plan IS Ltd(UK), B-Plan Ukraine and the Ministry of Education, Erbil, Kurdistan, Iraq.
- 2004 Project Manager, ICT infrastructure development and installation for the Ministry of Education, Kurdistan, Iraq, with B-Plan IS Ltd (UK Company),2004-2005.
- 2002 Project Manager, Three Months IT Converting Course for 600 High School Teachers in Kurdistan Region, for UNESCO and The Ministry of Education, KRG, Erbil, Kurdistan.
- 2001 Control Site Design of Azmir-Sulaimani Substation, Zozik Ltd. and UNDP, Erbil.
- 2001 Control & Wiring Design of Chambarakat-Duhok Water Station (with Dr. Kamal Haj Nabi), UNICIEF, Erbil.
- 2000 Erbil 29 MW Power Station Project, Data Analyst, Engineering Bureau and UNDP, College of Engineering, Erbil.

## **GRANTS**

- 2019 Research Fund from GIZ (Germany) to establish a Data Centre at the University of Kurdistan Hewler for storing and public sharing of data collected by UKH student and staff , together with a pilot-study about IT job market in Kurdistan Region, research team: (A team from the University of Kurdistan-Hewler), Grant amount: 40,000 US\$.
- 2017 Research Fund from KRG for a research project with University of Florida (USA), the project title is: Sensor based intelligent control of robotic systems , research team (Prof. Ibrahim Hamarash, Proff. Carl Crane III, Ph.D. student, Mustafa Atrushi), in progress, (34,000 US\$).
- 2013 Research Fund from KRG for a research project with University of Florida (USA), the project title was: Inclination estimation of links of a serial manipulator, research team (Proff. Ibrahim Hamarash, Proff. Carl Crane III, Ph.D. student Dler Salih Hasan), completed in 2017, (50,000 US\$).
- 2013 IRIS (USA) to design the curriculum for a new module (Critical thinking and Academic Debate), a core for for all new students, with Appalachian University, 2013.
- 2011 DelPHE (UK) to establish quality assurance at Salahaddin University-Erbil, with Coventry University, 2011.
- 2009 DAAD academic visitor for 10 days, Germany, all costs for a visit to Karlsruhe University for Applied Science to design and build a mobile renewable energy training centre, 2010.
- 2007 Endeavour Research Fellowship, Dept. of Education, Science and Training, Australia, (25,000 A\$)
- 2004 NSF(USA), all registration fees, flights, accommodation and live expenses for participation in IEEE-Artificial Intelligence and MED04 conferences, Istanbul,Turkey.
- 2000 UNESCO, Kurdistan Office, Grant, Supporting a Research Titled "PC Based Relay Test Systems", Total amount of the grant: \$1700.

## **COURSES ATTENDED**

- 2019 Modern Robotics, the foundation of robot motion, (online), Northwestern University, USA.
- 2015 Endeavour Executive Fellow, four months short courses in higher education leadership, Monash University, Australia.
- 2011 Higher Education Leadership and Management in Iraq, Leadership Foundation for Higher Education, British Council and BIS, Nottingham, UK.
- 2005 MEPI, Middle East Entrepreneur Training in the United States (MEET U.S.), funded by the Bureau of Near Eastern Affairs, Office of the Middle East Partnership Initiative, U.S. Department of State, and administered by FED.”, San Deigo, USA.
- 2001 Election Processes Observation, Organized by Electoral Reform Society in London and OSCE, Erbil, Kurdistan, Iraq.

## **SELECTED CONFERENCES (as a Keynote Speaker or paper presenter)**

1. IEEE ICCMA 2019 conference, Amsterdam, Netherland, 6-8 Nov.2019.
2. 11<sup>th</sup> Asian University Presidents Forum, 2012, Bussan, Korea.
3. UK-KRG Higher Education Partnership, London, 2012, UK.
4. Middle East Entrepreneur Training (MEET) Alumni Conference, US dept of State, Istanbul, August 4-5, 2009 , Turkey.
5. International Congress on Engineering, WCE2008, 2-4 July 2008, London, UK.
6. Middle East Entrepreneur Training (MEET) and Legal and Business Fellowship Program (LBFP) Joint Alumni Conference, Middle East Partnership Initiative (MEPI) at the U.S. Department of State 9-11 June 2008, Dead Sea, Jordan.
7. Kurdistan Contracting Engineering Organizations (K-CEDO), 27-29 May 2008, Erbil, Kurdistan, Iraq.
8. International Control Conference-ICC2006, 30 Aug-1 Sept 2006 Strathclyde University, Glasgow, UK.
5. MEET US Alumni Conference, US Dept of State, 16-17 Nov.,2005, Manama, Bahrain.
6. 35<sup>th</sup> International Conference on Computer& Industry Eng.,19-22 June, 2005, Istanbul, Turkey.
7. The 2<sup>nd</sup> International OECD of Ministries responsible for Small and Medium Size Enterprises (SMEs), 3-5<sup>th</sup> June 2004,Istanbul, Turkey.
8. The IEEE International Conference on Mechatronics(ICM'04), 3-5<sup>th</sup> June 2004, Istanbul, Turkey.
9. The 12<sup>th</sup> IEEE Mediterranean Conference on Control & Automation, June,6-9, 2004,Izmir, Turkey
10. A Workshop in Cooperation between the university of Duhok and Baylor University (USA) for Developing Engineering and Computer Science Syllabi, 17-19<sup>th</sup> Dec.2003, Duhok.
11. International Conference on Control Applications, Istanbul, Turkey, 23-25<sup>th</sup> June,2003.
12. The 1<sup>st</sup> Program and Syllabi Conference of The University of Salahaddin, April, 2001, Erbil, Iraq(Editorial Board).

13. The 3<sup>rd</sup> Education Conference of The Ministry of Education (Computer Sector), 2001, Erbil, Iraq.
14. The 3<sup>rd</sup> International Conference on Computational Aspects and Their Applications in Electrical Engineering, Philadelphia University, Jordan, 19-20<sup>th</sup> October 1999.
15. The 1<sup>st</sup> Computer Technology Conference and Exhibition (Member of Organizing Committee), Ministry of Transportation and Communication, April 1998, Erbil, Iraq.

### **SELECTED PAPERS**

1. Ibrahim Hamarash, Amala Taha, Design and Simulation of a Hybrid Wind/Solar/Diesel/Battery Off-Grid System for Rural Areas: A case Study in Al-Mahmudiyah Tribal Zone of Iraq, Zanco for Pure and Applied Sciences, 35(2), 2023. PP.9-21. DOI: <http://dx.doi.org/10.21271/zjpas>
2. Ibrahim Hamarsah, et.al, Firing patterns of Izhikevich neuron model under electric field and its synchronization patterns, The European Physical Journal Special Topics, Springer Open 1-7, 5 July 2022. <https://doi.org/10.1140/epjs/s11734-022-00636-0>
3. Ibrahim Hamarash, et.al., Investigation of the Simplest Megastable Chaotic Oscillator with Spatially Triangular Wave Damping, Int. Journal of Bifurcation and Chaos, Vol. 32, No. 7 (2022) 2230016 <https://doi.org/10.1142/S0218127422300166>
4. Ibrahim Hamarash, Nian Khidr, Justin Champion, Evaluation of Smartphone's Embedded Sensors Through Applications: A Case study of Gyroscope and Accelerometer, UKH Journal of Science and Engineering, Vol. 5, No.2, 2021.
5. Ibrahim Ismael Hamarash, et al., Various bifurcations in the development of stem cells, The European Physical Journal Special Topics, 13 Nov.2021, <https://doi.org/10.1140/epjs/s11734-021-00322-7>
6. Teeba Ismail Kh., Ibrahim I. Hamarash, "Model-Based Performance Quality Assessment for IoT Applications", International Journal of Interactive Mobile Technologies (iJIM), Vol 15, No. 12 (2021)
7. Ibrahim Hamarash, Rawan A. AlRashid Agha, Zhwan Hani Mahdi, Muhammed N. Sefer, "A ROS-Gazebo Interface for the Katana Robotic Arm Manipulation, UKH Journal for Science and Engineering, Vol.5, No.1, (2021)
8. Ibrahim Ismael Hamarash, Mohhamd S., Hasan, "A Review: On using ACO Based Hybrid Algorithms for Path Planning of Multi-Mobile Robotics", International Journal of Interactive Mobile Technologies (iJIM), Vol 14, No. 18 (2020)
9. Ibrahim Hamarash and Teeba "Model-Based Quality Assessment of Internet of Things Software Applications: A Systematic Mapping Study", International Journal of Interactive Mobile Technologies (iJIM), Vol 14, No. 09 (2020)
10. Ibrahim Hamarash, et.al., "A fractional order model for the novel coronavirus (COVID-19) outbreak", Nonlinear Dynamics, 24 June 2020.
11. Ibrahim Hamarash, Biquan Chen, et.al., "Simple megastable oscillators with different types of attractors: tori-Chaotic and hyperchaotic ones", EPJ-ST, 229, 1115-1161, 2020.

12. Ibrahim Hamarash, Lianyu Chen, et.al., "A novel chaotic system in the spherical coordinates". EPJ-ST, 229,1257-1263, 2020.
13. Ibrahim Hamarash, Gervais Dolvis Leutcho, Sajad Jafari, Jacques Kengne, Zeric Tabekoueng Njitacke, Iqtadar Hussain, "A new megastable nonlinear oscillator with infinite attractors", Chaos, Solitons & Fractals, 134 (2020) 109703.
14. Ibrahim Hamarash, Mustaha M, Mustafa, Carl D Crane III, "Adaptive-Sliding Mode Trajectory Control of Robot Manipulators with Uncertainties", Zanco for Pure and Applied Sciences, The scientific Journal of Salahaddin University-Erbil, 2020.
15. Ibrahim Hamarash, Zhen Wang, F. Parastesh, K. Rajagopal, Iqtadar Hussain, "Delay-induced synchronization in two coupled chaotic memristive Hopfield neural networks", Chaos, Solitons & Fractals, Vol.134, 109702, 2020. <https://doi.org/10.1016/j.chaos.2020.109702>
16. Ibrahim Hamarash, Mustafa M. Mustafa, Carl D. Crane III, "Dedicated Nonlinear Control of Robot Manipulators in the Presence of External Vibration and Uncertain Payload", Robotics **2020**, 9(1), 2; <https://doi.org/10.3390/robotics9010002> (registering DOI).
17. Ibrahim Hamarash, Zhen Wang, Sajad Jafari, "A New Mega-stable Oscillator with Rational and Irrational Parameters, Int. Journal of Bifurcation and Chaos, 29(13) 1950176(2019), [doi.org/10.1142/S0218127419501761](https://doi.org/10.1142/S0218127419501761).
18. Ibrahim Hamarash, Chao-Yang Chen, Karthikeyan Rajagopal, Fahimeh Nazarimehr, Fawaz E. Alsaadi and Tasawar Hayat, Antimonotonicity and multistability in a fractional order memristive chaotic oscillator, Eur. Phys. J. Special Topics **228**, 1969-1981 (2019).
19. Ibrahim Hamarash , Mustafa Mustafa, and Carl Crane , Equilibrium Formulation of a 3-DOF Compliant Mechanism Using Sylvester's Dyalytic Method of Elimination, IEEE ICCMA conference, Amsterdam, 6-8 Nov.2019. Available online in IEEEExplore.
20. Ibrahim Hamarash, Carl Crane III, Dler Salih,Using Inertia Sensors for Orientation Estimation of Robot Manipulators, Zanko Journal for Pure and Applied Sciences, 31 (S3), 2019, pp. 318-323.
21. Ibrahim Hamarash and Mustafa Mustafa, A Microcontroller-Based Motion Control for DC Motor Driven Robot Link, IEEE ACEMP conference, Istanbul, 2019. Available online in IEEEExplore.
22. Ibrahim Hamarash, Muhammed Ibrahim Diari Sulaiman, The Complete Switching Circuit Design for CPU Joint Body Biasing and Supply Voltage Scaling, Zanko Journal for Pure and Applied Sciences, 31(S3), 2019, pp 20-25
23. Ibrahim Hamarash, Diari Sulaiman and Muhammed Ibrahim, Using DTVS Technique for Microprocessor's Power and Thermal Management, Journal of Electrical and Electronics Engineering (jeee), University of Oradea, Romania, Vol. 11, No. 1, May 2018.
24. Ibrahim Hamarash, Diari Sulaiman and Muhammed Ibrahim, Microprocessors optimal power dissipation using combined threshold hopping and voltage scaling, IEICE electronic express, December 2017. DOI 10.1587/elex.14.20171046
25. Ibrahim Hamarash, Diari Sulaiman and Muhammed Ibrahim, Adaptive Supply and Body Voltage Control for Ultra-Low Power Microprocessors, IEICE electronic express, Vol. 14, No. 12, 2017, DOI: 10.1587/elex.14.20170306.
26. Ibrahim Hamarash and Dlesr Hasan, Real time data acquire from multiple accelerometers and IMU to calculate 3-direction angles and relative

- orientation, Zanko Journal of pure and applied sciences, ZJPAS, Vol. 29, No.2, 2017, PP.157-165.
27. Ibrahim Hamarash, Fanar Fareed, Nian Aziz and Tarik Rasheed, The Influence of Illumination on Facial Feature Extraction, Proceedings of Internet Technologies and Applications (ITA), Glyndwr University, UK, September 2015, PP.269-272.  
IEEE publication DOI:10.1109/ITechA.2015.7317408
  28. Ibrahim Hamarash and Polla Fatah, "Optimization of association rule mining", Proceedings of Internet Technologies and Applications (ITA), Glyndwr University, UK, September 2015, PP.273-278.  
IEEE publication DOI:10.1109/ITechA.2015.7317409
  29. Ibrahim I Hamarash, "Small Signal Stability Analysis of Kurdistan Regional Power System", Zanco, The Scientific Journal of Salahaddin University-Erbil, No.1, Vol.24, 2012.
  30. Ibrahim I Hamarash, Qaysar S Mahdi, and Jamal A Hassan, "Availability Analysis of GSM Network Systems", 978-1-4244-6908-6/10©2010 IEEE. DOI:10.1109/ISAPE.2010.5696532
  31. Ibrahim I Hamarash, "Modeling and Simulation of the Perdawd CCGS Connected to the Kurdistan Regional Power System of Iraq Using Simulink", Lecture Notes in Engineering and Computer Science, Vol 2170, Issue 1, 2008, PP 381-385.
  32. Ibrahim I. Hamarash, "Modeling and Simulation of Perdawd CCPS Connected to Kurdistan Regional Power System of Iraq", Proceedings of WCE Conference, London, UK, 2-4 July 2008.
  33. Sensitivity of Large System Parameters to Perturbations: a Data Mining Approach, Zanco, Vol. 6, No.3, 2008.
  34. Ibrahim I. Hamarash & Dlawer Maroof, "Monitoring of Power System Control Functions: A Database Approach", Proc. of ELECO2007, Bursa, Turkey, 5-9 Dec 2007.
  35. Ibrahim I. Hamarash, "Application of ANN to Low Frequency Oscillations Detection in Iraqi National Power System", International Control Conference-ICC2006, Glasgow, UK, 30 Aug-1 Sept 2006.
  36. Ibrahim I. HAMARASH, "Eigenvalues Sensitivities of Systems With State Feedback to Structured Perturbations in System Parameters", WSEAS Transactions on Applied Mathematics, Vol. No. , June 2006.
  37. Ibrahim I. HAMARASH and Diari Rauf, "Dynamic Voltage Frequency Scaling (DVFS) for Microprocessor Power & Energy Reduction", The Proc. Of 4th In. Conf. on Electrical & Electronics Engineering, 7-11 Dec.2005, Bursa, Turkey.
  38. Ibrahim Ismael Hamarash, "Application of Neural Network Method to the Small Signal Stability Analysis of Iraqi Power System", Proceedings of the 35th International Conference on Computer& Industrial Eng.,19-22 June, 2005, Istanbul, Turkey.
  39. Ibrahim Ismael Hamarash, Nian A.K, and Amin Abas, "Reliability Assessment of the Ministry of Education's ICT Infrastructure System", Proceedings of the 35th International Conference on Computer& Industry Eng.,19-22 June, 2005, Istanbul, Turkey.
  40. Ibrahim Ismael Hamarash" Small Signal Stability Analysis of Iraqi National Power System", MED'04(with IEEE) Conference, Turkey, June2004.

41. Ibrahim Ismael Hamarash” A PC Based Real Time Remote Control for a Kid’s Game Car”, The Scientific Journal of Duhok University, No.2, 2004.
42. Ibrahim Ismael Hamarash & Fadhil T. Aula” Interface Implementation of Parallel Port of PC for Testing Over current Relays”, ZANCO: Journal of Pure and Applied Science, Salahaddin-Erbil University, Vol.14, No.2, 2002, PP.5-14.
43. Ibrahim Ismael Hamarash & Kosay Abdul-Sattar” Improving The Stability of a Synchronous Generator Using Prespecified Root Controller”, Proceedings of CATAEE’99, The Third International Conference on Computational Aspects and Their Applications in Electrical Engineering”19-20, Oct.1999, Philadelphia University, PP.371-379.
44. Ibrahim Ismael Hamarash & Kosay Abdul-Sattar” Changing The Stability Mode of a Power System Using Prespecified Pole Controller”, The Scientific Journal of Tikrit University, Vol.6, No.4, 1999, PP.136-162.
45. Ibrahim Ismael Hamarash” Pole Assignment Controller Design For Multi Area Power System”, Journal of Duhok University, Vol.2, No.6, 1999, PP.823-839.
46. Ibrahim Ismael Hamarash & Ali Husain,” Sensitivity Analysis For Pole Assignment Problems”, Al-Rafidain Eng. Journal, Vol.6, No.1998, ,PP.37-45.
47. Ibrahim Ismael Hamarash & Amin Abbas,”A Computer Aided Design For Root-Locus Plotting”, Proc. of Scientific Conf., 3-4 June 1997, Erbil, PP.193-198.
48. Ibrahim Ismael Hamarash & Ali Husain,” A Flexible Algorithm For Pole Assignment Synthesis Using State Feedback Controller”, Engineering and Technology- Baghdad, Vol, No. PP. 1994.

## **TEACHING EXPERIENCE**

### **1. Undergraduate Courses**

- 2018-2023 Human Computer Interaction, Dept. of Computer Science and Engineering, University of Kurdistan-Hewler.
- 2018-2023 Signals and Systems, Dept. of Computer Science and Engineering, University of Kurdistan-Hewler.
- 2019-2020 Industrial Computer Application, Dept. of Computer Science and Engineering, University of Kurdistan-Hewler.
- 1993-2012 Control Engineering, Dept. of Electrical Eng., College of Eng., University of Salahaddin-Erbil.
- 2000-2006 Database Systems, Dept. of Software Eng., College of Eng., University of Salahaddin-Erbil.
- 2000-2005 Computer Control Systems, Dept. of Software Eng., College of Eng., University of Salahaddin-Erbil.
- 2000-2005 Computer Architecture, Dept. of Software Eng., College of Eng., University of Salahaddin-Erbil.
- 2000-2001 Computer Organization, Dept. of Computer Science, College of Education, University of Salahaddin-Erbil.
- 2000-2002 Principles of Computer Programming, Dept. of Electrical Eng., College of Eng., University of Salahaddin-Erbil.



## **2. Postgraduate Courses**

- 2020-2023 Machine Learning (MSc Course), Dept. of Computer Science and Engineering, University of Kurdistan-Hewler.
- 2019-2023 Software Architecture and Design (MSc.Course), Dept. of Computer Science and Engineering, University of Kurdistan-Hewler.
- 2018-2023 Robotics (MSc. Course), Dept. of Computer Science and Engineering, University of Kurdistan-Hewler.
- 2018-2023 ITSM (MSc. Course), Dept. of Computer Science and Engineering, University of Kurdistan-Hewler.
- 2020-2021 Robotics (PhD. Course), Dept. of Electrical Engineering, Salahaddin University-Erbil.
- 2017-2018 Advanced Topics in Control Theory (PhD. course), Dept. of Mechanical Engineering, Salahaddin University, Erbil, Kurdistan, Iraq.
- 2008-2009 Information System Integration, (MSc, Dept of Software Eng, College of Engineering and Dept of Computer Science, College of Education, Salahaddin University-Erbil).
- 2007-2008 Computer Organization, (MSc Electronics and Communication Eng, Univ. of Salahaddin-Erbil).
- 2005-2006 Advance Control Systems, (PhD. in Mechanical Engineering), Dept. of Mechanical Eng., University of Salahaddin-Erbil, Kurdistan, Iraq
- 2005-2006 Computer Architecture and Parallel Processing, (MSc. In ICT), Dept. of Electrical Eng., University of Salahaddin-Erbil, Kurdistan, Iraq
- 2005-2006 Data Modeling, (MSc in ICT.), Dept. of Electrical Eng., University of Salahaddin-Erbil, Kurdistan, Iraq.
- 2005-2006 Control Theory, (MSc in Power Engineering), Dept. of Electrical Eng., University of Salahaddin-Erbil, Kurdistan, Iraq.
- 2004 -2005 Dynamic Systems (MSc in Power Ssystems), Dept. of Elect. Eng., University of Sulaimani, Sulaimani, Kurdistan, Iraq
- 2003-2004 Computer Architecture,(Higher Diploma in IT) Dept. of Software Eng., College of Eng., University of Salahaddin-Erbil.
- 2003-2004 Data Modeling and Database Systems,(Higher Diploma in IT) Dept. of Software Eng., College of Eng., University of Salahaddin-Erbil.
- 2002-2003 Data Modeling, (Ph.D. in Statistics) Dept. of Statistics, College of Administration and Economic, University of Salahaddin-Erbil.
- 2001-2004 Modern Control Engineering,(MSc in Power Systems.) Dept. of Electrical Eng., College of Eng., University of Sulaimani, Sulaimani. And College of Engineering, Salahaddin University-Erbil, Erbil.

## **3. Crash Courses**

- 2022 Learn Robotics with Ibrahim Hamarash (using MyCobot 280 M5 Manipulator), UKH, Erbil, Kurdistan, Iraq.
- 2005 Human Recourses (HR) Systems, Ministry of Education, Kurdistan, Iraq
- 2003 Data Modeling and Database Systems, College of Engineering and UNESCO, Erbil, Kurdistan, Iraq.
- 2002 Developing Computer Skills for the Administration Staff (Deans and President) of the University of Salahaddin/Hawler, UNESCO.
- 2002 Establishment of a Computer Program Syllabus for 3 months Converting Course for the Secondary School Mathematics and Physics Teachers to teach Computers, UNESCO, Erbil and Duhok,(head of the committee).

- 2002 Database Systems, Technical Institute of Erbil and UNESCO, Erbil, Kurdistan, Iraq.
- 2000 Computer Maintenance and Repair, UNESCO and the University of Salahaddin/Hawler, Erbil, Kurdistan, Iraq
- 2000 Computer Applications, UNESCO and the Ministry of Education, Erbil, Kurdistan, Iraq

#### **4. Selected Seminars outside the university**

- 2019 Kurdish Language in the era of IT, Kurdish Academy, Erbil, Kurdistan, Iraq.
- 2009 Modeling and Simulation of the Electrical Energy System of Kurdistan Region, Ministry of Electricity, KRG, Kurdistan.
- 2005 Kurdistan: the other Iraq, Grand Hyatt, San Diego, USA.
- 2005 Healthcare Information Systems, Ministry of Health, Sulaimani, Kurdistan, Iraq.
- 2002 Internet Based Dictionaries, Kurdish Writer's Union, Erbil, Kurdistan, Iraq.
- 1998 Embedded Systems, Ministry of Transportation and Communication, First Computer Exhibition, Erbil, Kurdistan, Iraq.

#### **POSTGRADUATE STUDENTS**

1. Amal Taha, MSc in Control and Computer Engineering, Research Title: Design and implementation of a wind/solar/diesel based hybrid microgrid system, Salahaddin University-Erbil, 2023.
2. Karwan Mawlood, MSc in Power Systems Engineering, Research Title: Performance evaluation of the automatic control system for hybrid wind/solar/diesel remote areas electrification, Salahaddin University-Erbil, in Progress.
3. Aveen Kakamen Mustafa, MSc in Computer Science, Research Title: A machine learning model for predicting long COVID-19 syndromes, in progress.
4. Sanarya Serwan Sherzad, MSc in Computer Engineering, Research Title: An Obstacle Avoidance Algorithm For An Autonomous Robot In An Unknown Environment With Testbed, UKH, in Progress.
5. Dastan Kamal, MSc in Computer Engineering, Research Title:, Research Title: "Wheelchair Fall detection Through Wearable Sensors and Machine Learning", 2023.
6. Hangaw Qadir, MSc in Computer Science, Research Title: "Analyzing ECG Signals With Machine Learning For Diagnosing Abnormalities in Heart Activities", UKH, 2022.
7. Rawaz Rahim, MSc in ITM, Research Title: "Design and Implementation of Voice Message in ITSM", UKH, 2021.
8. Sivan Salar, MSc. in Computer Engineering, Research Title: "Design and Implementation of PLC based PID Controller", UKH, 2021.
9. Srwa Fage Muhammad, MSc. in ITM, Research Title:" Performance Analysis of Social Media Marketing: The Case of Erbil", UKH, 2021.
10. Teba Muhamed, PhD in Computer Engineering, Joint project with Czech Technical University in Prague (Czech Republic), Co-supervisors: Asst. Proff. Dr. Miroslav Bures, Asst. Proff. Bestun S. Ahmed, Research Title: "Assessing

the Quality of Internet of Things (IoT) applications through Soft Computing Methods”, 2022.

11. Mustafa Atrushi, PhD in Control and Computer Engineering, Joint Research with the University of Florida(USA), Co-supervisor: Proff. Carl Crane III), Research title: ”Sensor based intelligent control of robotic systems, 2020.
12. Sara Azad Ahmed, MSc. in Computer Engineering, “ Path planning for robotic autonomeous luggage trolley collection at airports”, University of Kurdistan Hewle, 2020.
13. Haneen Khalid Ibrahim, “ Proposing processes in ITIL to develop ITSM on private educational sector in Kurdistan Region”, MSc in ITM, University of Kurdistan Hewler, 2020.
14. Harem Mohamed Hasan, MSc. in ITM, Thesis Title: “Adoption of the ITIL framework in Kurdistan Region Small and Medium size Enterprises (SMEs), University of Kurdistan Hewler, 2020.
15. Diari R. Sulaiman, PhD student, Research title: “Energy Dissipation in General Purpose Microprocessors”, 2019.
16. Dler Salih, PhD student, Joint Research with the University of Florida(USA), Theses Title: " Design and Implementing of a Tensigrity Mechanism”, 2017.
17. Arazw Saed, Thesis Title: Availability Analysis of MoH/KRG’s ICT Infrastructure, College of Education, Dept of Computer Science, Salahaddin University-Erbil, March 2011.
18. MSc Student: Huda AbdulJabar, Thesis title: Modeling and Simulation of Chamchamal Gas Power Station Using SIMULINK, College of Engineering, Salahaddin University-Erbil, July 2010.
19. MSc Student: Jamal Abdulla, Thesis title: Survivability Assessment of Networked Control Systems, College of Engineering, Salahaddin University-Erbil, Expected to be completed on July 2010.
20. MSc Student: Pola Abd-Alhameed, Thesis Title: Design and Implementation of a DataBot", College of Engineering, University of Salahaddin-Erbil, June 2008.
21. MSc Student: Ari Arif, Thesis Title: Application of Data Mining in Power System Small Signal Stability Analysis", College of Engineering, University of Salahaddin-Erbil, May 2008.
22. MSc. Student: Diari Raouf Othman, Thesis Title:” Energy Dissipation Analysis of General Purpose Microprocessors”, College of Engineering, University of Salahaddin-Erbil, July 2005.
23. MSc. Student Dlawer Raouf, Thesis Title:” Monitoring of Power System Control Functions: A Database Approach”, College of Engineering, University of Salahaddin-Erbil, Nov 2005.
24. MSc. Student: Fadhil Tawfiq Aula, Thesis Title: “Interface Implementation of Parallel Port of PC for Testing Over current Relays ", College of Eng, University of Salahaddin-Erbil, Aug.2002.

### **PUBLISHED BOOKS**

1. Media Control (Written By Noam Chomsky, Translation from English into Kurdish), MaliWafaye Publisher, 2018.
2. Reforming Higher Education in Kurdistan Region, Salahaddin University Press, Erbil, 2013.
3. Computers, Text Books, Book-1 and Book-2(in Kurdish)), for 1<sup>st</sup> and 2<sup>nd</sup> Years Secondary Schools(13&14 years students) in Kurdistan Region, Ministry of Education, Erbil, 2004 and 2005 respectively.

4. Rembrandt and Other Essays (in Kurdish), Shvan Press, Sulaimani, 2002.
5. Microsoft Word 2000: An Introduction(in Kurdish), 1<sup>st</sup> Edition: Mardin Press, Erbil,2000, 2<sup>nd</sup> Edition, Shvan Press, Sulaimani,2002.
6. Computer Dictionary: English-Kurdish, MEDIA Publishers, Erbil,1999. Included in a Step by Step English learning Series, Lebanese Cultural Centre, Lebanon, 2011.

### **BOOK'S REVIEW**

2000-2005 All Computer and Mathematics text Books for the Ministry of Education (for example: Introduction to Pascal (Arabic and Kurdish versions), Introduction to MS-Word, Introduction to Computer Systems, Programming in GWBasic,..etc.) , Kurdistan Region, Erbil, Iraq.

### **AFFILIATIONS**

1. IEEE (Institute of Electrical and Electronics Engineering, USA), since 2009. Senior Member.
2. Iraqi Engineers Union, Consultant Engineer, since 1988.
3. Kurdistan Engineers Union, Consultant Engineer, since 1991.
4. Interaction Design Foundation, since 2020.

### **OTHER ACADEMIC ACTIVITIES**

1. Plenary speaker, The Third Al-Noor International Exhibition for Science and Technology (3ANEST2023), FLU, Erbil, Kurdistan,Iraq. Feb. 28, 2023.
2. Panelist, GIZ Didar event, Erbil, Kurdistan,Iraq.May 25,2022.
3. Panelist, HITEX21.Erbil, Kurdistan,Iraq.June 16,2021.
4. Conference Chair of the first International Conference on Nations under Genocide, Peter Pazmany Catholic University, Budapest, Hungary, April 19-20, 2017.
5. Panelist, The 3rd International Engineering Conference on Developments in Civil and Computer Engineering Applications (IEC2017), Tishk International University & Erbil Polytechnic University, Erbil, Kurdistan Regional Government (KRG) of Iraq, 26 to 27 February 2017.
6. Conference Chair of the first International Conference on Engineering and Innovative Technology, Salahaddin University-Erbil, April 12-14, 2016.
7. Establishment of Erbil Centre for Sustainable Development (With members from Massachusetts University, Oslo School for Architecture, Canadian University in Dubai, Welperhampton University), 2013.
8. Plenary speaker at the 11th Asian University President's Forum (AUPF), Dongseo University, Busan, Korea, October 28-31, 2012.
9. Plenary speaker, Kurdistan Region - UK Higher Education Conference: Bridging the Knowledge Gap, UK Trade and Investment, 30-31 January 2012, London.
10. Conference chair of the 4<sup>th</sup> international scientific conference of Salahaddin University-Erbil, 18-20 October 2011.
11. Conference chair of the 1<sup>st</sup> International conference on Kurds and Kurdistan in history: Ottoman Empire Era (joint conference with Mardin Urtuklu Unicversity), 16-18 April 2013.

### **REFERENCES**

1. Carl D. Crane (Professor), Dept. of Mechanical Engineering & Aerospace Eng., University of Florida, (USA) e-mail: <[ccrane@ufl.edu](mailto:ccrane@ufl.edu)>.
2. Dillshad Khidr(PhD), Ex-Head of Software Eng. Dept., University of Salahaddin/Hawler, Kurdistan, Iraq. E-mail:<[dillshad.amen@eng-usalah.org](mailto:dillshad.amen@eng-usalah.org)>, mobile no: 00964-750 4486419.
3. Shawnim Jalal (PhD), ex-Dean of the Engineering College, University of Salahaddin-Erbil, Kurdistan, Iraq. e-mail [shawnim100@yahoo.com](mailto:shawnim100@yahoo.com).
4. Dr. Ahmed A Dzayee(PhD), President of the Salahadin University-Erbil, Erbil, Kurdistan, Iraq, email:[ahmed.dezaye@su.edu.krd](mailto:ahmed.dezaye@su.edu.krd), mobile number: 009647504481025.
5. All ex-ministers of the Higher Education and Scientific Research, KRG.
6. All Presidents of public universities in Kurdistan Region

*Last Updated: January 2023*