

Curriculum Vitae

Contact Information

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Education

Doctor of Philosophy in Electrical and Computer Engineering	April 27, 2019
Western Michigan University Kalamazoo, MI	
Master of Science in Electromechanical Engineering	
University of Technology Bagdad, Iraq	March, 2008
Bachelor of Science in Electromechanical Engineering	
University of Technology Bagdad, Iraq	July, 2004

Experiences

Professional experience in Engineering:

1- Director of Information Technology Center	December 2019 - Present
University of Technology	Bagdad-Iraq
2- Lecturer, Power System analysis	September-2019- Present
University of Technology	Bagdad-Iraq
3- Teaching Assistance, Electrical circuit (2110)	August-2018 - Spring-2019
Western Michigan University	MI-USA
4- Computer Aided Engineering	September 2017- April 2019
Western Michigan University	MI-USA
5- Research Assistance	May 2018 - August 2018

	Western Michigan University	MI-USA
6-	Research Assistance	May 2016- February 2017
	Western Michigan University	MI-USA
7-	Manager for Department of Affairs Dormitories	September 2011 - December 2012
	University of Technology	Bagdad-Iraq
8-	Member of staff	March 2009 - December 2012
	University of Technology	Bagdad-Iraq
9-	Teaching Assistance, Electrical Machine& Power System	April-2008 - August-2010
	University of Technology	Bagdad-Iraq
10-	Position Title: Electrical Engineer	May-2006 - March-2008
	University of Technology	Bagdad-Iraq

Related experience:

- 1- Reseach Assistance August 2016 - February 2017
Electrical and Computer Engineering Department\ City of Kalamazoo project
- 2- Research Assistance May 2016 - September 2016
Electrical and Computer Engineering Department\ Western Michigan University
- 3- Position title: Conversation circle leader Fall 2014
CELCIS office\ Western Michigan University

Computer skills

- Computer application, Microsoft office, Microsoft Publisher, VHDL, Photoshop, EMTP, ATP, PSCAD, ETAP, Easy Power, COMSOL Simulink, and MATLAB both coding and Simulink.

Another skill

- Leadership skills training from USA.

Members and volunteers

- Graduate Financial Allocation Committee (GFAC) member at WMU
- GSA member
- ISU The Executive Counselor and currently the President of ISU
- Public relation chair of Arab Students association
- Oman Students association member
- Summer and Fall 2013 new student's orientation volunteer
- Leaderships conference participation
- IEEE member
- IEEE PES Task Force on Frequency Domain Methods for Electromagnetic Transient Studies

HONORS/AWARDS:

- Ministry of Higher Education and Scientific Research\ Office of the ministry Sept./2021
- University of Technology\ Office of the President May/2021
- Ministry of Higher Education and Scientific Research\ Office of the ministry March /2021
- University of Technology\ Office of the President September/2020
- Ministry of Higher Education and Scientific Research\ Office of the ministry Aug. /2020
- Ministry of Higher Education and Scientific Research\ Office of the ministry May /2020
- High Commission for Human Rights in Iraq\ Office of the President May /2020
- Celebration of Participation\ Huawei May/2020
- Ministry of Higher Education and Scientific Research\ Office of the ministry April /2020
- University of Technology\ Office of the President February /2020
- University of Technology\ Office of the President December /2019
- Celebration of Excellence April/2019
- Graduate students awarded research and travel October/2018
- The Graduate Financial Allocation Committee (GFAC) Award April/2018
- GSA at WMU -2017 Graduate Students Make a Difference Award April/2017
- ISU at WMU -2017 Certificate of Appreciation January/2017
- Graduate students awarded research Electrical and computer Department Jan./2017
- Graduate students awarded research and travel grants Dec/2016
- NFPA 70E - 2015 Arc Flash Training\City of Kalamazoo September/2016
- RJ Deering Electrical Training Certificate\City of Kalamazoo September/2016
- GSA at WMU -2016 Graduate Students Make a Difference Award April/2016
- CELCIS at WMU- CELCIS Honor Roll August/2013
- CELCIS at WMU- Certificate of Appreciation May/2013
- CELCIS at WMU- Attended Certificate August/2013
- University of Technology\ Office of the President December /2012
- University of Technology\ Office of the President October/2012

- Mechanical Engineering Department at UOT August/2012
- University of Technology\ Office of the President July/2012
- Department of Materials Engineering at UOT July /2012
- Department of Electromechanical Engineering at UOT July/2012
- Department of Petroleum Technology Department at UOT July/2012
- University of Technology\ Office of the President June/2012
- Department of Electrical Engineering at UOT June/2012
- Department of Laser and optoelectronics Engineering at UOT June/2012
- University of Technology \ Office of the President May/2012
- University of Technology\ Office of the President April/2012
- Promotions Lecturer Assistance to the Lecturer\ UOT-UAPC February/2012
- University of Technology\ Office of the President January/2012
- Department of Electromechanical Engineering at UOT November/2011
- University of Technology\ Office of the President October/2011
- University of Technology\ Office of the President June/2011
- University of Technology\ Office of the President June/2010

The courses in MSc. Studying:

- Electrical Machines
- Numerical Analysis
- Power Systems
- Evaluation Models
- Communication
- Computer Learning Techniques
- Advanced Power Systems

Address Thesis Scientific:

- MSc. Thesis:
“Design an Instructional Program for Economic Dispatch of Operation Power System “
- The Degree of MSc. Thesis: Excellent

The courses in PhD. Studying:

- Electric Power System
- Feedback Systems
- Application Specific Design
- Power Electronics
- Foundation of Neural Networks
- Modern Control System
- Transmission Image processing

- Digital signal processing

Address Thesis Scientific:

- PhD Topic Thesis:
“Network equivalents applied to transient analysis of large distribution systems”

Research Interest:

- Renewable energy
- Power System
- Electromagnetic Fields
- Control Systems
- Micro-Grids Networks
- Power Systems Stability
- Smart grid optimal power flow.

Current MSc Students

- **Omayma Mutaz**, MS, 2022
Topic: " Experimental Study on a Mixed Mode PV/T System for Power and Heat Generation"
- **Marwan Raed Abed**, MS, 2022
Topic: "Analysis and Design of a Modified Impedance-Source DC Circuit Breaker for Flexible DC Distribution Networks"
- **Alyaa Mohammed Fadil**, MS, 2022
Topic: "Experimental and Numerical Investigation Double Slop Triangular Solar Collector"

FORMER MSc Students

- **Sura Hamdi Hassan Albairam**, MS, 2021
- Topic: "Experimental Validation of a Smart Greenhouse Powered by Solar Energy System"

Published Papers:

- Tamara Mutaz, Abdullateef A. Jadallah, **Ghassan A. Bilal**, Omayma M. Abdulmajeed, Wafaa Alkufi “Evaluating Residential Apartment Building Performance Using BIM Analysis BIM of Building Integrated PV/T System”, The **2nd** Al-Muthanna International Conference on Engineering Science and Technology (MICEST -2022) Al-Muthanna University, Samawah, Iraq, March 16-17, 2022. <https://miceest.org/>.
- Sura H. Hassan, Abdullateef A. Jadallah, **Ghassan Bilal** “ Optimal Thermal performance of Solar Heater using Particle Swarm Optimization ”, The **1st** International Conference on Electrical-Electronics and Computer Engineering (ICEECE-2021) Avrasya University, Trabzon, Turkey, July 24-25, **2021** <https://iceece2021.avrasya.edu.tr>.
- Sura H. Hassan, Abdullateef A. Jadallah, **Ghassan Bilal** “Smart Greenhouse Powered by Solar Energy: A Review”, Solid State Technology, Volume: 64 Issue: 2, **2021**.
- Ahmed Jalil Al-Bayati, **Ghassan Bilal**, " Evaluating OSHA’s Fatality and Catastrophe Investigation Summaries: Arc Flash Focus", safety journal , April **2021**.
- **Ghassan Bilal**, Abduljaleel Alhasnawi, Ghaidaa Alsultani, " Exploiting scientific collaboration network for enhanced academic event recommendation ", *Journal of Engineering Science and Technology*, April **2021**.
- Sura H. Hassan, Abdullateef A. Jadallah, **Ghassan Bilal** “Design and Performance Evaluation of Small-scale Greenhouse Powered By Tracked Solar System in Iraq Climate”, The **2nd** International Conference on Electromechanical Engineering and its Applications (ICEMEA-2021),The University of Technology, Baghdad, Iraq, March 15th, **2021**.
- Saadi T. Kurdi, **Ghassan Bilal** “Enhancement of Aircraft Flight Data Recording System (Black box) using A New Digital System”, The **2nd** International Conference on Electromechanical Engineering and its Applications (ICEMEA-2021),The University of Technology, Baghdad, Iraq, March 15th, **2021**.
- Yaser Ali Enaya, Mohammed Jawad Mohammed , **Ghassan A. Bilal**, "Password-free Authentication for Smartphone Touchscreen Based on Finger Size Pattern", *International Journal of Interactive Mobile Technologies (iJIM)*, Vol 14, September **2020**, Pages 163-179.
- **Ghassan Bilal**, P. Gomez, R. Salcedo, J. M. Villanueva-Ramirez " Electromagnetic transient studies of large distribution systems using frequency domain modeling methods and network reduction techniques", *ELSEVIER Int. Journal of Electrical Power & Energy Systems*, Vol 110, September **2019**, Pages 11-20.
- **Ghassan Bilal**, Haider Hashim, Pablo Gomez, Ikhlas Abdel-Qader, Ahmed Jalil Al-Bayati, "Arc Flash Assessment: Two-Case Study of Public Service Facilities in Kalamazoo, Michigan ", IEEE International Conference on Electro Information

Technology (EIT 2018) at the Oakland University, Rochester, Michigan, USA, May 3-5, **2018**.

- **Ghassan Bilal**, Juan M. Villanueva-Ramirez, Pablo Gomez “, Frequency Domain Transformer Model for Electromagnetic Transient Analysis of Networks”, IEEE International Conference on North American Power Symposium (NAPS 2017), West Virginia, USA, September 17-19, **2017**.
- **G. Bilal**, J. M. Villanueva-Ramirez, M. K. Hussain, P. Gómez, “Network reduction for frequency domain transient analysis of power components”, IEEE International Conference on Electro Information Technology (EIT 2017), Lincoln, Nebraska, USA, May 14-17, **2017**.
- H. J. Hasan, **G. Bilal**, P. Gómez, “A general code to simulate the effect of indirect lightning on overhead lines using EMTP-type programs”, IEEE International Conference on Electro Information Technology (EIT 2017), Lincoln, Nebraska, USA, May 14-17, **2017**.
- Salam Waley, **Ghassan Bilal**, Rashid Hameed,” Reliability Assessment of AC Power Supply of a Nuclear Reactor Model”, Journal of Babylon University, **2012**.
- **Ghassan Bilal** " Analyze the load flow in the electrical power system by using fuzzy logic” Journal of Al-Qadisiya for Engineering Sciences, 05-24-**2011**.
- **Ghassan A. Bilal** “simulation model of three-phase induction motor by using fuzzy logic to detect and diagnosis for 3 phase induction motor”, Journal of Babylon University, 06-22-**2010**.

References

- 1- Dr. Pablo Gomez, Associate Professor in the Electrical and Computer Engineering Department WMU, Email: pablo.gomez@wmich.edu (Advisor)
- 2- Dr. Ikhlas Abdel-Qader, PE Professor and Director Electrical and Computer Engineering Department WMU, Email: ikhlas.abdelqader@wmich.edu
- 3- Dr. Johnson Asumadu, PE Professor in the Electrical and Computer Engineering WMU, Email: johnson.asumadu@wmich.edu
- 4- Dr. Akram Bati, Associate Professor in the Power Engineering Centre, School of Energy, Environment and Agrifood, Cranfield University, UK
Email address: a.bati@cranfield.ac.uk