

# Academic Curriculum Vitae



## Personal Information:

Full Name: Dr. Fadhil Toufick Aula  
Academic Title: Assistant Professor  
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Mobile: 0750 477 2975



## Education:

- B.Sc. Department of Electrical Engineering, College of Engineering, Salahaddin University – Erbil, Iraq, June 1992
- M.Sc. Department of Electrical Engineering, College of Engineering, Salahaddin University – Erbil, Iraq, April 2002
- Ph.D. School of Electrical and Computer Engineering, College of Engineering, The University of Oklahoma, Oklahoma, USA, August 2013

## Employment:

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|--|----------------|
| - Senior Engineer at Electrical Machines Lab     | 1993 – 2002    |
| - Coordinator of Electrical Engineering Dept     | 2002 – 2005    |
| - Supervisor of Computer Lab                     | 2002 – 2009    |
| - Supervisor of Renewable Energies Lab           | 2013 – Present |
| - Head of Department of Electrical Engineering   | 2017 – 2021    |
| - Consultant at Engineering Consult Bureau       | 2019 – 2021    |
| - Scientific and Postgraduate Directorate Affair | 2023 - Current |

## Qualifications

- IT Essentials: PC Hardware and Software, Cisco System, Inc., November, 2008

## Teaching experience:

- Undergraduate Course
  - Control Engineering
  - Smart Grids
  - Servo Systems
  - Digital Design
  - Renewable Energy and Smart Grids
  - Numerical Analysis
  - Automata and Computation Theories
  - Electrical Distribution and Lighting
  - Supervising Final Projects
- Graduate Course
  - Robust Control (Ph.D.)
  - Design of Feedback Control Systems (M.Sc.)
  - Computer Hardware Design (M.Sc.)

## **Postgraduate Supervising**

- Master of Science
  1. Real-Time Estimation of Kalman Filter Parameters using the Genetic Algorithm for Optimum Balancing Controller of Two-Wheel Robotic System, Department of Electrical Engineering, College of Engineering, Salahaddin University – Erbil, Iraq, 2016
  2. Design and Analysis of the Performance of the Optimum Tracking Controller for Solar Thermal Concentrator under Different Environment Conditions in City of Erbil Aera, Department of Electrical Engineering, College of Engineering, Salahaddin University – Erbil, Iraq, 2023
- Doctor of Philosophy
  1. Wound Rotor Induction Motor Drive System Harmonic Estimation and Performance Analysis with Distorted Main Source, Department of Electrical Engineering, College of Engineering, Salahaddin University – Erbil, Iraq, 2023
  2. A Novel Approach in the Finite-Time Controller for Speed and Direction Control in the Four-Wheel Drive System, Department of Electrical Engineering, College of Engineering, Salahaddin University – Erbil, Iraq, In progress

## **Research and publications**

1. Fadhil T. Aula, "Interface Implementation of Parallel Port of PC for Testing Overcurrent Relays," Zanco Journal of Pure and Applied Sciences/ Salahaddin University, Vol. 14 , No. 2, 2002

2. Fadhil T. Aula, "Using SMS in Mobile Phone for Home Appliances Controlling Through PC Parallel Port Interfacing," ELECO 2005, 4th International Conference on Electrical and Electronics Engineering, Bursa, Turkey, ELECO 2005, page 311-315, 2005
3. Fadhil T. Aula, "An Integrated PC System for Smart – Home Control of Appliances Based on Kurdish Speech Recognition, " Zanco Journal of Pure and Applied Sciences/ Salahaddin University, Vol. 18, No. 2, 2006
4. Fadhil T. Aula," Implementation of SMS Service in Cellular Phone for Feedback Control System," Zanco Journal of Pure and Applied Sciences/ Salahaddin University, Vol. 20, No. 5, 2008
5. F. T. Aula and S. C. Lee, "Weather Adaptive Renewable Energy Based Self Correctional Dynamic Power System for 2020 and Beyond," 2011 21st International Conference on Systems Engineering, 2011, pp. 19-21, doi: 10.1109/ICSEng.2011.101.
6. F. Aula and S. Lee, "Grid Power Optimization Based on Adapting Load Forecasting and Weather Forecasting for System Which Involves Wind Power Systems," Smart Grid and Renewable Energy, Vol. 3 No. 2, 2012, pp. 112-118. doi: 10.4236/sgre.2012.32016.
7. Fadhil T. Aula and Samuel C. Lee "Power fluctuation reduction methodology for the grid-connected renewable power systems", Proc. SPIE 8688, Active and Passive Smart Structures and Integrated Systems 2013, 86881W (10 April 2013) <https://doi.org/10.1117/12.2012111>
8. Fadhil T. Aula and Samuel C. Lee, "An operational power management method for the grid containing renewable power systems utilizing short-term weather and load forecasting data", Proc. SPIE 8692, Sensors and Smart Structures Technologies for Civil, Mechanical, and Aerospace Systems 2013, 86924O (19 April 2013) <https://doi.org/10.1117/12.2012127>
9. Samuel C. Lee, Loyd Hook IV, and Fadhil T. Aula, "Logic design of word-level 3D, 2-dot QCA nanolCs", Proc. SPIE 8691, Nanosensors, Biosensors, and Info-Tech Sensors and Systems 2013, 86910F (9 April 2013) ,<https://doi.org/10.1117/12.2009531>
10. Samuel C. Lee and Fadhil Aula, "Fault detection in word-level nanolCs using vector Boolean derivatives", Proc. SPIE 8691, Nanosensors, Biosensors, and Info-Tech Sensors and Systems 2013, 86910E (9 April 2013) <https://doi.org/10.1117/12.200952>
11. Fadhil T. Aula, "Load Frequency Control of the Grid-Connected DFIG-Based Wind Energy Conversion System under Varying Wind Speed Condition" (2014) Zanco Journal of Pure and Applied Sciences, 27(1), pp. 1-12. doi: 10.21271/zjpas.v27i1.136.
12. Fadhil T. Aula, "Optimal Control Scheme for Flicker Mitigation in Large-Scale PMSG based Wind Energy Conversion Systems" (2016) Zanco Journal of Pure and Applied Sciences, 28(3), pp. 55-66. doi: 10.21271/zjpas.v28i3.908.
13. Lina N. Tofiq, Fadhil T. Aula, "Real Time Estimation of Kalman Filter Parameters using the Genetic Algorithm for Optimum Balancing Controller of Two-Wheel Robotic System" (2016) Zanco Journal of Pure and Applied Sciences, 28(2). doi: 10.21271/zjpas.v28i2.866.
14. Ameen, H. and Aula, F. (2020) "Performance Analysis of WRIM Drive System Operating under Distorted and Unbalanced Supply: A Survey", Zanco Journal of Pure and Applied Sciences, 32(6), pp. 197-216. doi: 10.21271/ZJPAS.32.6.20.
15. Ameen, Hilmi and Aula, Fadhil. (2021)," Performance Analysis of the Slip Power Recovery Induction Motor Drive System Under Unbalance Supply Voltages," Advances in Electrical and Electronic Engineering, doi:19.10.15598/aeee.v19i3.4050

16. Hilmi, Ameen; Fadhil, Aula," Performance Analysis and Modeling of SRRCCIM under the Impact of Unbalance Supply Voltage," Journal of Electrical and Electronics Engineering; Oradea Vol. 14, Iss. 1, (May 2021): 5-10.
17. M Shareef, S., & Aula, F. (2021, December 28), "A Finite-Time Speed and Direction Control for Four-Wheel Drive System." UKH Journal of Science and Engineering, 5(2), 47-55.  
<https://doi.org/10.25079/ukhjse.v5n2y2021.pp47-55>
18. Fadhil Aula, "Design a Reactive Power Compensator in Smart Home under Variation of Supply Voltage of Low-Level Distributed Power System," Zanco Journal of Pure and Applied Sciences,34(4), 2022, 74-82, DOI: <https://doi.org/10.21271/ZJPAS.34.4.8>
19. Ramyar Ahmed Othman, Fadhil T. Aula, "Design and Analysis of the Dual Axis Tracking System for Solar Thermal Concentrator in Erbil City using Arduino Controller," Zanco Journal of Pure and Applied Sciences, , Accepted 4/12/2022

## Conferences and courses attended

### Courses

- Computer Science / SML Language and Principle of Linux System (2 Months , July 2002), College of Science / University of Salahaddin – Erbil/Iraq
- Networking System (2 Weeks , July 2003), College of Engineering / University of Salahaddin - Erbil/Iraq
- NT Server (2 Weeks , April 2004), College of Engineering / University of Salahaddin - Erbil/Iraq
- MATLAB (April, 2010),School of Electrical and Computer Engineering/ University of Oklahoma – Norman, OK/ USA
- OPT/CPT workshopsFebruary (23 , 2010), School of Electrical and Computer Engineering/ University of Oklahoma – Norman, OK/ USA
- International Teaching Assistance Training (August 8-12, 2010),Learning and Teaching Program, The University of Oklahoma, Norman, OK/ USA
- Solar Energy supervised by FMDV and UNDP (October 25 – 27, 2022), College of Engineering. Salahaddin University-Erbil

### Conferences

- 1<sup>st</sup> International Conference on Engineering and Innovative Technology, SU-ICEIT 2016, Salahaddin University – Erbil, April 12 -14, 2016

## Funding and academic awards

- Ministry of Higher Education and Scientific Researches, Research Programs, PhD studies in USA, 2009 - 2013

## Professional memberships

- Kurdistan Engineering Union
- Iraqi Engineering Union
- Eta Kappa Nu, HKN, the National Electrical and Computer Engineering Honor Society – USA
- Kurdistan Teachers Union

## **Professional Social Network Accounts:**

- [Google Scholar](#)
- [ResearchGate](#)