MOHAMED ADEL

ASSISTANT PROFESSOR

MY CONTACT

Phone
+201029044613

Email
mohamed.ibrahim@bhit.du.edu.eg
madelss2010@gmail.com

Address
Banha, Qalyobia, Egypt

DISSERTATION TOPICS

PhD Project:
Design and Implementation of Active Power Filter for harmonic and reactive power compensation", Cairo University, Egypt, 2007 – 2011

Msc Project:
Design and Implementation of PWM Rectifier for line harmonic mitigation", Benha University, Egypt, 2003 –2006

Bsc Project:
Micro-controller BasedSpeed Control of DC MotorsUsing DC-Drives", Benha University, Egypt, 2000

SKILS

- Matlab
- PSCAD
- Proteus
- Orcad
- Pspice
- PSIM
- PLC programming

ABOUT MYSELF

Focused on high performance engineering profession, would like to obtain extensive hands-on expertise in **Electrical Machines**, **Power Electronics**, **Power System**, and **Automatic Control**

EDUCATION

PhD in Electrical Power and Machines Engineering
Electrical Engineering Department, Cairo University, Egypt, 2011

MSc in Electrical Machines and Control
Electrical Engineering Department, Benha University, Egypt, 2006

BSc in Electrical Machines and Control
Electrical Engineering Department, Benha University, Egypt, 2000, Ranked *first* in class of 28 students

OCCUPATION

2011 – 2014 *2023 – till now*	***Assistant Professor,*** *Department of Electrical Engineering, Benha University, Egypt*
2014 – 2023	***Assistant Professor***, Department of Electrical Engineering, Jouf University, Saudi Arabia
2002 – 2011	***Lecturer***, Department of Electrical Engineering, Benha University, Egypt
2013– 2014 part-time	***Automation Engineer,*** Elsewedy Automation Company, Egypt

AWARDS

Appreciation certificate from the President of Jouf University, for participating the Electrical Engineering Department to **NCAAA** & **ABET** Accreditation

AREAS OF INTEREST

- Electrical Machines, Machine Drives and Applications
- Automatic Control and Industrial Electronics
- Power Electronics Converters and Applications
- Power Quality Problems and Solutions
- Renewable Energy and Technologies
- Microcontroller and DSP Implementation for real time workshop (RTW) control
- PLC Programming (Editing-Modifying-Creating new program)
- Field Service Engineer and Technical Instructor Especially in Allen-Bradley PLCs (PLC5 - MicroLogix - SLC500 -Logix5000 family).

TEACHING EXPERIENCE

Electric Circuit Analysis, Electrical Machines, Automatic Control, Power Electronics, Electromagnetic Fields, Electrical Measurements and Instrumentations, Electrical Power Systems, Power System Protection, DC and AC drives, Renewable Energy, Utilization of Electrical Power, Economics of Power System

UNDERGRADUATE SUPERVISION

Jouf University, Saudi Arabia;

2014 – 2023

- Design and Implementation of Single-Phase Inverter for Remote Areas.
- Power Saver for Industries & Commercial Establishments.
- Development and Design of Green Electricity Generation from Sea Wave.
- Design and Implementation of PV-Solar Curtains for Energy Saving in Buildings

Benha University, Egypt;

2011 – 2014
2023 – till now

- Microcontroller Based CNC Machine.
- Electrical Power Distribution System.
- Implementation of V/F Control of Induction Motor.
- Design and Implementation of a solar tracking system.
- Design and Implementation of Static VAR Compensator.
- Microcontroller Based PV Maximum Power Point Traking.
- Elevator Control System Using PLC.

ACADEMIC COMMITTEES

Jouf University, Saudi Arabia;

- Head of Standard #6 in **NCAAA** for Quality Assurance and Academic Accreditation; department level
- Member of **ABET** Accreditation Quality Assurance; department level
- Head of Academic Advising Committee; department level
- Head of Time-table Committee (***software-based***); department level
- Head of Alumni Committee; department level
- Laboratories and Graduation projects Committee; department level
- Community Development Committee; department level
- Field Training Committee; department level
- Strategic Planning Committee; department level
- Innovation Committee; department level
- Examination Committee, *college level*

FIELD EXPERINCE TRAINING

- Allen Bradley; SLC500 Fundamental, Maintenance, and Troubleshooting
- Allen Bradley; Controllogix Fundamental and Troubleshooting
- Allen Bradley; Motion Control Fundamental based on Controllogix.
- Allen Bradley; Logix5000 ETHERNET Communication Course.
- Allen Bradley; Logix5000 CONTROLNET Communication Course.

JOURNAL REVIEWER

- Journal of Engineering Research, 2014-present
- International Transactions on Electrical Energy Systems, 2017-present

RESEARCH PROJECTS

Dean of Scientific Research, Jouf University;

- ***Co-PI*** *in the research project entitled "Development and Design of Power Quality Conditioner using Dynamic Voltage Restorer", (DSR2019- 40/263), 2019*
- ***Co-PI*** *in the research project entitled "Development and Design of Power Quality Conditioner using Dynamic Voltage Restorer", (DSR2020-02-476), 2020*
- ***Principal Investigator*** *in the research project entitled "Application of Custom Power Devices for Enhancing Wind Generator Performance in Micro-Grids", (DSR2020-02-2556), 2020*
- ***Co-PI*** *in the research project entitled "Design of DC Fast Charging Station Under Multiple Output Power Using Power System, 2022*

PUBLICATIONS

1. S. G. Ramadan, M. A. Azab, K. A. Nabawi, **M. A. Ahmed** “Implementation of Microcontroller Based Single-Phase PWM Boost Rectifier,” Scientific Bulletin of Faculty of Engineering, Ain Shams University, Vol. 41. No. 3, pp. 681-693, 2006.
2. **M. A. Ahmed**, S. A. Zaid, O. A. Mahgoub, “Implementation of Supply Voltage Sensorless Microcontroller-Based Three Phase PWM Rectifier,” Ain Shams Journal of Electrical Engineering (ASJEE), Vol. 2. pp. 85-91, ISSN: 1687-8582, 2008.
3. **M. A. Ahmed**, S. A. Zaid, O. A. Mahgoub, “Analysis and Implementation of Supply Voltage Sensorless Microcontroller-Based Three Phase Active Power Filter,” ASJEE, Ain Shams Univ, Faculty of Engineering, Vol. 2, pp. 305-311, ISSN: 1687-8582, 2009.
4. **M. A. Ahmed**, S. A. Zaid, O. A. Mahgoub, “A Simplified Control Strategy for the Shunt Active Power Filter for Harmonic and Reactive Power Compensation,” Journal of Electrical Engineering, JEE, Vol. 11, No. 2, ISSN: 1582-4594, 2011.
5. **M. A. Ahmed**, S. A. Zaid, O. A. Mahgoub, “An Improved Performance for Three Phase Active Power Filter Based on Indirect Current Control Strategy,” Journal of Power Electronics, JPE, Vol.6, No.19, pp.931-937, 2011. https://doi.org/10.6113/JPE.2011.11.6.931
6. **M. A. Ahmed**, “Active AC/DC Voltage Source Converter with Function of Reactive Power Compensation for Neighboring Inductive Loads”, International Research Journal of Engineering and Technology, IRJET, ISSN: 2395-0072, Vol. 02, Issue: 07, Oct-2015.
7. **M. A. Ahmed**, “Simulation and Experimental Verification of Single-Phase PWM Boost - Rectifier with Controlled Power factor,” International Research Journal of Engineering and Technology, IRJET, ISSN: 2395-0072, Vol. 4, no. 3, 2017.
8. T. Kandil, Osama El-baksawi, **M. Adel**, “Hybrid Passive Relay Suitable for Micro Grids Protection in the Presence of Nonlinear Loads” Jouf University Science and Engineering Journal (AUSEJ), ISSN:1658-6670, Vol. 5, no. 1, 2018.
9. Osama El-baksawi, T. Kandil, **M. A. Ahmed,** "Direct Active and Reactive Power Control for DFIG using Instantaneous Rotor Current Control," WSEAS Transactions on Power Systems, vol. 13, pp. 227-234, 2018. https://wseas.com/journals/articles.php?id=2676
10. **Mohamed A. Ahmed**, "Point of Common Coupling Power Factor Conditioning of Connected Loads with PWM Rectifier," WSEAS Transactions on Power Systems, vol. 14, pp. 24-32, 2019. https://wseas.com/journals/articles.php?id=1996.
11. **M. Adel** and Tarek Kandil, “Assessment of Direct and Indirect Current Control Techniques Applied to Active Power Filters”, Recent Advances in Electrical &Electronic Engineering, Vol. 13, July 2020.
12. Emad M. Ahmed, **Mohamed A. Ahmed**, Ziad M. Ali, Imran Khan, “Disturbance Evaluation in Power System Based on Machine Learning,” Computers, Materials and Continua, ISSN 1546-2218, Vol. 71, No. 1, pp. 231-254, 2021, https://doi.org/10.32604/cmc.2022.022005
13. Tarek Kandil and **M. Adel**, “Control and Operation of Dynamic Voltage Restorer with Online Regulated DC-Link Capacitor in Micro-Grid System”, Canadian Journal of Electrical and Computer Engineering, 2020, DOI: 10.1109/CJECE.2020.3002855.

PUBLICATIONS

14 • Anwaar M. Damerdash, Doaa Abdelhameed, Mokhtar Aly, Emad M. Ahmed, **Mohamed A. Ahmed**, “Energy efficiency assessment of power electronic drivers and LED lamps in Li-Fi communication systems, Energy Reports, Volume 7, 2021, Pages 7648-7662, ISSN 2352-4847, https://doi.org/10.1016/j.egyr.2021.10.112. Ahmed,

15 • E. M., **Ahmed, M. A.**, Ali, Z. M., Khan, I. “Disturbance Evaluation in Power System Based on Machine Learning”. CMC-Computers, Materials & Continua, 71(1), 231–254. 2022. doi:10.32604/cmc.2022.022005.

16 • **Ahmed, M.A**.; Kandil, T.; Ahmed, E.M., “Enhancing Doubly Fed Induction Generator Low-Voltage Ride-through Capability Using Dynamic Voltage Restorer with Adaptive Noise Cancellation Technique”, Sustainability 2022, 14, 859. doi.org/10.3390/su14020859.

17 • **Ahmed M.A**, Abbas G, Jumani TA, Rashid N, Bhutto AA and Eldin SM, “Techno-economic optimal planning of an industrial microgrid considering integrated energy resources”, Front. Energy Res. 11:1145888. doi: 10.3389/fenrg.2023.1145888.

18 • **Mohamed A. Ahmed**, Mona A. Bayoumi, "A novel deep learning-based control for voltage sag prediction and DVR–LVRT coordination in grid-connected wind turbine systems", Ain Shams Engineering Journal, Volume 17, Issue 1, 2026, 103882, ISSN 2090-4479, https://doi.org/10.1016/j.asej.2025.103882.