Mohamed Adel Ahmed

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Electrical Engineering Department – College of Engineering – Jouf University, KSA
Electrical Engineering Department – College of Engineering – Benha University, Egypt

EDUCATION

- **Ph.D., Electrical Engineering,** Cairo University, Egypt, 2011.
  Thesis titled: "Design and Implementation of a Simplified APF with Improved Performance"
- **M.Sc., Electrical Engineering,** Benha University, 2006.
  Thesis titled: "Design and Implementation of Microcontroller Based PWM Rectifier"
- **B.Sc.,** Electrical Engineering, Benha University, 2000.
  Ranked *first* in class of 28 students.

SCHOLARSHIPS AND AWARDS

- **Departmental** Graduate Scholarship, Electrical Engineering Department, Cairo University, Egypt, 2007 – 2011.
- **Departmental Graduate Scholarship,** Electrical Engineering Department, Benha University, Egypt, 2003 – 2006.
- **The Egyptian Government Award of Excellence in Undergraduate Studies,** Benha University, Egypt, 1995 – 2000.

OCCUPATION

- **Assistant Professor,** Department of Electrical Engineering, Jouf University, Saudi Arabia, 2014 – present.
- **Assistant Professor,** Department of Electrical Engineering, Banha University, Egypt, 2011 – 2014.
- **Automation Engineer,** Elsewedy Automation Company, Egypt, 2013– 2014.
- **Lecturer,** Department of Electrical Engineering, Banha University, Egypt, 2002 – 2010
- **Electrical Engineer,** Ministry of Electricity & Energy, Egypt, 2000-2002.

SERVICE AS REVIEWER

Reviewer for the following journals:

- The Journal of Engineering Research, 2014
- International Transactions on Electrical Energy Systems, 2017 – 2018.

AREAS OF INTEREST

- Power Quality Problems and Solutions.
- Electrical Drives, Electrical Machines and Applications.
- Microcontroller and DSP Implementation for real time workshop (RTW) control.

- Industrial Power Electronics.
- PLC Programmer (Editing-Modifying-Creating new program)
- Field Service Engineer and Technical Instructor Especially in ***Allen-Bradley PLCs*** (PLC5 - MicroLogix - SLC500 -Logix5000 family).

UNIVERSITY TEACHING EXPERIENCE

Assistant Professor, Department of Electrical Engineering, Jouf University, Saudi Arabia, 2014 -2018

- EE202- Circuit Analysis.
- EE335- Electrical Machines I
- EE442- Utilization of Electrical Power.
- EE444- Power System Planning.
- EE999- Field Training.
- EE337- Electrical Machines Lab.
- EE356- Control System Lab.

Assistant Professor, Department of Electrical Engineering, Benha University, Egypt, 2011 -2014

- EL111- Electrical Engineering & Circuit Analysis.
- EL113- Electrical Engineering Applications
- EL252- Electrical Machines (1).
- EL364- Power Electronics.
- EL351- Electrical Machines (2).
- EL371- Control Engineering.

Assistant Professor, Department of Mechanical Engineering, Higher Technological Institute Tenth of Ramadan City, Egypt, 2010 – 2012.

- EE 20103- Electrical Machines and Control.

UNDERGRADUATE SUPERVISION

Jouf University, Saudi Arabia, 2014 – 2019.

- 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.

- 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.

PROJECTS

- **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, 2003 – 2006.
- **Bsc Project,** "Micro-controller Based Speed Control of DC Motors Using DC-Drives", Benha University, 2003 – 2006.
- **Automation Field Projects,** PLC 2 System Upgrade to Controllogix5000; ALBA Co., Bahrain

ACADEMIC SURVICE

JOUF UNIVERSITY, Saudi Arabia, 2014 -2018

Questionnaire Committee – Electrical Engineering Department.
New Faculty Screening Committee – Electrical Engineering Department.
Community Service Committee – College of Engineering.
Community Development Committee – Electrical Engineering Department.
Field Training Committee – Electrical Engineering Department.
Courses Dossiers Committee – Electrical Engineering Department.
Innovation Committee – College of Engineering.
Examination Committee – College of Engineering.
Committee of laboratories and graduation projects – Electrical Engineering Department.
Academic Accreditation Committee – Electrical Engineering Department.
Strategic Planning Committee – Electrical Engineering Department.
Committee of tables – Electrical Engineering Department.

TRAINING EXPERINCE

- *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.

PUBLICATIONS

[1] Azab, Mohamed & M. Adel, "Implementation of Microcontroller Based Single-Phase PWM Boost Rectifiers," Scientific Bulletin of the Faculty of Engineering, Ain Shams University, 41. 681-693, 2006.

[2] M. A. Ahmed, S. A. Zaid, O. A. Mahgoub, "Implementation of Supply Voltage Sensorless Microcontroller-Based Three Phase PWM Rectifier", ASJEE, Ain Shams Univ, Faculty of Engineering, Egypt, Vol.1, No.1, 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, Egypt, Vol. 2, pp. 305-311, 2009.

[4] M. A. Ahmed, S. A. Zaid, O. A. Mahgoub, “Implementation of Microcontroller-Based Three Phase PWM Rectifier without Measuring the Supply Voltage”, JEE, Journal of Electrical Engineering, Vol. 10, No. 3, pp. 139-143, 2010.

[5] 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”, JEE, Journal of Electrical Engineering, accepted, 2010.

[6] M. A. Ahmed, S. A. Zaid, O. A. Mahgoub, “An Improved Performance for Three Phase Active Power Filter Based on Indirect Current Control Strategy”, JPE, Journal of Power Electronics, Vol.6, no.19, pp. 931-937, 2011.

[7] M. A. Ahmed “Active AC/DC Voltage Source Converter with Function of Reactive Power Compensation for Neighboring Inductive Loads”, IRJET, International Research Journal of Engineering and Technology, Volume: 02 Issue: 07, Oct-2015.

[8] M. A. Ahmed, “Simulation and Experimental Verification of Single-Phase PWM Boost - Rectifier with Controlled Power factor,” IRJET, International Research Journal of Engineering and Technology, Vol. 4, no. 3, 2017.

[9] T. Kandil, Osama EI-baksawi, M. Adel, “Hybrid Passive Relay Suitable for Micro Grids Protection in the Presence of Nonlinear Loads” Jouf University Science and Engineering Journal (AUSEJ), Vol. 5, no. 1, 2018.

[10] O. M. Elbaksawi, 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.

[11] M. A. Ahmed, “Point of Common Coupling Power Factor Conditioning of Connected Loads with PWM Rectifier”, WSEAS Transactions on Power Systems, ISSN/E-ISSN: 1790-5060/2224-350X, Vol. 14, no. 3, pp. 24-32, 2019.

[12] Tarek Kandil and M. Adel “Design and Control of a Dynamic Power Quality Compensator for Micro-Grid System” International Journal of Advanced Science and Technology, vol.29, no. 3, March 2020.

[13] 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, DOI: 10.2174/2352096513999200710143353.

[14] 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