

ASSOCIATE PROFESSOR

ELECTRICAL ENGINEERING CONSULTANT

DR. MOHAMED ABDELWAHHAB ALI

Mobile phone No. : (+2 0127) 45 777 41

E-mail: mohamed.mohamed02@feng.bu.edu.eg

Website: bu.edu.eg/staff/mohamedali3



OBJECTIVE

Personal Introduction as:

- **Associate Professor**
Electrical Engineering Dept., Faculty of Engineering at Shoubra, Benha University.
- Official **Electrical Consultant**: (0401609) Egyptian Engineering syndicate
- Vice Dean of Ameeriah Integrated Educational Cluster.
- Head of Electrical & Electronic Department at Ameeriah Integrated Cluster
Educational Development Fund-**Cabinet of Ministries, Egypt.**
- Head of Renewable Energy Department at **New Cairo Technological University**
- Authorized Technical Support for GE MULTILIN and Field Services (+10 years).
- 21 years of **Academic and industrial** experiences.

PROFESSIONAL EXPERIENCES

- **Duration** : 2020 to 2022
- **Place** : New Cairo Technological University
- **Position** : **Head of Renewable Energy Dept.**

- **Duration** : July 2014 to 2019
- **Place** : Ameeriah Integrated Cluster
Educational Development Fund-
Cabinet of Ministries, Egypt.
- **Position** : **Vice Dean of Environmental Affairs and Social Services**
Head of Electrical & Electronic Department
Educational Development Fund-
Cabinet of Ministries, Egypt.

- **Duration** : 2011 to Date
- **Place** : CCG-EGYPT
- **Position** : **Projects & Executive Manager**

- **Duration** : February 2005 to Date
- **Place** : Egypt, University of Benha,
Faculty of Engineering (Shoubra),
Department of Electrical Engineering
- **Position** : **Associate Professor (current position)**

- **Duration** : 2013
- **Place** : Higher Technological Institute
- **Position** : Assistant professor

ASSOCIATE PROFESSOR

ELECTRICAL ENGINEERING CONSULTANT

DR. MOHAMED ABDELWAHHAB ALI

Mobile phone No. : (+2 0127) 45 777 41

E-mail: mohamed.mohamed02@feng.bu.edu.eg

Website: bu.edu.eg/staff/mohamedali3



- **Duration** : 2014
Place : **Ameeria Technical Integrated Cluster**
Position : Assistant professor
- **Duration** : June 2008
Place : Training center of Treble A Shabakat company
Position : Instructor (PLCs and SCADA systems).
- **Duration** : September 2004 to January 2005
Place : Egypt, Cairo
Industrial Learning College,
Electrical Dept.
Position : Instructor
- **Duration** : September 2004 to January 2005
Place : Egypt, University of Benha,
Faculty of Engineering,
Department of Natural Science & Mathematics
Position : Instructor

COURSES FOR TEACHING

Included but NOT limited the following:

1. Smart grids.
2. Utilization of electrical energy.
3. Environmental impact of power generation.
4. Sustainable systems.
5. Renewable energy systems.
6. AI powered electric systems.
7. Basics of power system protection.
8. Advanced course in power system protection.
9. Power system analysis.
10. Advanced course in power system analysis.
11. Numerical analysis in power systems.
12. Power system modeling.
13. Automatic control systems.
14. Industrial control.
15. Programmable logic controllers.
16. Design of low/medium voltage distribution networks.
17. Basics of high voltage
18. Advanced course in high voltage.
19. High voltage testing.
20. MATLAB programming.

ASSOCIATE PROFESSOR
ELECTRICAL ENGINEERING CONSULTANT

DR. MOHAMED ABDEL WAHHAB ALI

Mobile phone No. : (+2 0127) 45 777 41

E-mail: mohamed.mohamed02@feng.bu.edu.eg

Website: bu.edu.eg/staff/mohamedali3



21. Projects management.

**SAMPLE OF
INDUSTRIAL
PROJECTS**

1. General Electric (GE), Zamudio, Spain

Technical support for all GE relays including but NOT limited the following protection relays;

Bus bar Protection: B90.

Distance Protection: D90 PLUS, D60.

Line Differential Protection: L90.

Generator protection: G60, SR489, G650, DGP.

Transformer Protection: T60, SR345, DTP.

Feeder Protection: F650, MIF, MIFII, SMOR, SR 750, SR 350.

Motor Protection: M60, SR 469, SR 369, SR 269.

Load Shedding: MIVII, SSF.

2. Sarayat El-Qatamya Residential Compuond 2021

Comprehensive design, supervision of erections, and specifications including full engineering drawings equipment selection, Bill of Quantities (BOQ), complete tender package, tender technical evaluation, response to vendor inquiries, and approval of samples (where applicable).

3. Sokhna S.S 500kV

Testing & Commissioning (FAT & SAT) of bus bar protection system (B90), distance protection, breaker failure protection, auto-reclosure, synchro-check, GIB differential protection, and DFR. Including all required logic configurations.

4. Benha East Substation 220/66/11kV

Testing & Commissioning of 220/66/11kV protection panels for SAT including distance, transformer differential, line differential, and over current relays which including the following GE MULTILIN relays (D60, D90P, T60, L90, F650, MIFII, MIVII).

5. Suez Steel Co.

Testing & Commissioning of bus bar protection system (B90).

6. Tourah Substation 220/66/11kV

Testing & Commissioning of 220/66/11kV protection panels for FAT & SAT including distance, transformer differential, line differential, and over current relays which including the following GE MULTILIN relays (D60, D90P, T60, L90, F650, MIFII, MIVII).

7. North Cairo Electricity Co., Egypt

1. Testing & Training for F650, MIFII, DTP, and SMOR-B GE protection relays for several sites.

2. Setting & Logic configuration editing.

ASSOCIATE PROFESSOR
ELECTRICAL ENGINEERING CONSULTANT

DR. MOHAMED ABDELWAHHAB ALI

Mobile phone No. : (+2 0127) 45 777 41

E-mail: mohamed.mohamed02@feng.bu.edu.eg

Website: bu.edu.eg/staff/mohamedali3



8. South Cairo Electricity Co., Egypt

1. Testing & Training for F650, MIFII, DTP, and SMOR-B GE protection relays for several sites.
2. Setting & Logic configuration editing.

9. West Delta Electricity Co., Egypt

1. Testing & Training for MIFII, GE protection relays.
2. Setting & Logic configuration editing.

10. Tourah Substation 220/66/11kV

Testing & Commissioning of 220/66kV bus bar protection system (B90) for FAT.

11. 81 Military Factory Substation 66/11kV

Testing & Commissioning of 66/11kV protection panels for FAT including distance, transformer differential, line differential, and over current relays which including the following GE MULTILIN relays (D60, D90P, T60, L90, F650, MIFII, MIVII).

12. 90 Military Factory Substation 66/11kV

Testing & Commissioning of 66/11kV protection panels for FAT and SAT including distance, transformer differential, line differential, bus bar, and over current relays which including the following GE MULTILIN relays (D60, D90P, T60, L90, F650, MIFII, MIVII).

13. Sokhna Substation (MV Level)

Testing & Commissioning of distributor protection panels for FAT including over current and motor protection relays which include the following GE MULTILIN relays (SR 750, SR 469).

14. El Fenon Substation 66/11kV

Testing & Commissioning of 66/11kV protection panels for SAT including distance, transformer differential, and over current relays, which including the following GE MULTILIN relays (D60, T60, F650). Also, contributing in bus bar protection testing (B90).

15. GTFT Tabenkort, Algeria

1. Testing & Commissioning for F650, and M60 GE protection relays.
2. Setting & Logic configuration editing.

16. North Delta Electricity Co., Egypt

1. Testing & Commissioning for F650 GE protection relays for several sites.
2. Setting & Logic configuration editing.

17. TEPCO, Egypt

1. Testing, Commissioning & Training for DTP, and F650 GE protection relays.
2. Logic configuration editing.

18. Upper Egypt Electricity Co., Egypt

1. Testing & Training for F650 GE protection relay.

ASSOCIATE PROFESSOR

ELECTRICAL ENGINEERING CONSULTANT

DR. MOHAMED ABDEL WAHHAB ALI

Mobile phone No. : (+2 0127) 45 777 41

E-mail: mohamed.mohamed02@feng.bu.edu.eg

Website: bu.edu.eg/staff/mohamedali3



2. Relay & Logic configuration editing.

19. El-Nozha Substation, Egypt

PLC control for power factor correction capacitor banks, which including the following items.

1. Site survey.
2. The participation for online operation of all capacitor banks.
3. PLC programming.
4. Power factor regulator adjustment.
5. PLC program modifications to change the old control sequence.
6. Comprehensive report about the capacitor bank units and its PLC control sequence which including all inputs, outputs, timers, and control sequence for both manual mode and automatic mode.

20. Central Protection Sector, Egypt

1. Comprehensive Technical report about Auto-transformers differential protection schemes.
2. Distance protection: GE MULTILIN, D60 Testing.
3. Distance protection: GE MULTILIN, D90 PLUS testing.
4. Feeder protection: GE MULTILIN SR 350, MIFII,
5. Load shedding: MIVII.

21. Procter and Gamble, Egypt (Cairo Plant)

Power system studies for the whole network which comprise but NOT limited the following items:

1. Updating the single line diagram according to a given as built.
2. Building up the site single line diagram using SKM module version 6.0 including specifications of all system components and SKM library modifications if required.
3. Short circuit analysis according to IEC 60909.
4. Protective devices coordination using time-over-current characteristics.
5. Arc flash hazards studies according to IEEE1584.

22. Procter and Gamble, Egypt

Power system studies for JOA3 which comprise but NOT limited the following items:

6. Updating the single line diagram according to a given as built.
7. Building up the site single line diagram using SKM module version 6.0 including specifications of all system components and SKM library modifications if required.
8. Short circuit analysis according to IEC 60909.
9. Protective devices coordination using time-over-current characteristics.
10. Arc flash hazards studies according to IEEE1584.

23. Procter and Gamble, Nigeria Ltd., Ibadan HC-site

ASSOCIATE PROFESSOR

ELECTRICAL ENGINEERING CONSULTANT

DR. MOHAMED ABDELWAHHAB ALI

Mobile phone No. : (+2 0127) 45 777 41

E-mail: mohamed.mohamed02@feng.bu.edu.eg

Website: bu.edu.eg/staff/mohamedali3



Power system studies comprising but NOT limited the following items:

1. Building up the site single line diagram using SKM module version 6.5 including specifications of all system components and SKM library modifications if required.
2. Short circuit analysis according to IEC 60909.
3. Protective devices coordination using time-over-current characteristics.
4. Arc flash hazards studies according to IEEE1584.

24. Modern Products Company, Saudi Arabia, Jeddah

Power system studies comprising but NOT limited the following items:

1. Building up the site single line diagram using SKM module version 6.5 including specifications of all system components and SKM library modifications if required.
2. Short circuit analysis according to IEC 60909.
3. Protective devices coordination using time-over-current characteristics.
4. Arc flash hazards studies according to IEEE1584.
5. Direct contact with the staff of Modern Products Company.

25. Procter and Gamble, Egypt

Radial-Exhaust Fan Motor Re-rating Issue including a detailed technical report.

26. Modern Products Company, Saudi Arabia, Dammam

Power system studies for M.V &L.V comprising but NOT limited the following items:

Building up the site single line diagram using SKM module version 6.5 including specifications of all system components and SKM library.

1. Modifications if required.
2. Short circuit analysis according to IEC 60909.
3. Protective devices coordination using time-over-current characteristics.
4. Arc flash hazards studies according to IEEE1584.

27. CSI-Egypt

Electrical predictive maintenance Infrared-based (IR) scanning for all electrical distribution and sub-distribution boards.

**28. Continental for Touristic Investments and Hotels,
Reef Oasis, Sharm El Sheikh, Egypt**

Complete design and specifications including full engineering drawings (NOT Shop or Working Drawings), equipment selection, Bill of Quantities (BOQ), complete tender package, tender technical evaluation, response to vendor inquiries, and approval of samples (where applicable).

ASSOCIATE PROFESSOR

ELECTRICAL ENGINEERING CONSULTANT

DR. MOHAMED ABDELWAHHAB ALI

Mobile phone No. : (+2 0127) 45 777 41

E-mail: mohamed.mohamed02@feng.bu.edu.eg

Website: bu.edu.eg/staff/mohamedali3



COMPUTER SKILLS

- Software for short circuit calculations and coordination and selectivity of protective devices which are; SKM, Power Plot, and Arc Flash.
- C, C++, BASIC, Visual Basic 6.0.
- AI tools e.g. DRL, ANFIS, DNN, ...etc
- Power World, and ETAP for power system analysis.
- MATLAB, MATLAB/SIMULINK.
- MATLAB's PS Toolbox (Power Systems Analysis Toolbox).
- MATLAB's NEURAL NETWORK Toolbox.
- MATLAB's Fuzzy and ANFIS Toolbox.
- Microsoft's Excel, Word, Power Point, Access. ICDL (EGY2008974).
- HTML, Front page, and AutoCAD.

COURSES AND EXAMINATIONS

- Quality Assurance for education training course by international British corporation (PEARSON BTEC/Edexcel), 2014.
- Training at KINGSINE, Schenzhen, China about protection relay test set (K511, K68, K68i, K3063, and K3063i) March 2011. The training covers differential, distance, feeder protection schemes. Also, the training covers the power metering and control unit PMC200.
- Testing & commissioning for protection relays regarding the generator, transformer, Motor and feeder protection schemes training course, GE, Zamudio, Spain May 2009. The training includes the following relays: G60, T60, F650, M-family.
- Testing & commissioning for protection relays regarding the bus bar, and distance protection schemes training course, GE, Zamudio, Spain May 2010. The training includes the following relays: B90, D60,
- Electrical safety training course, IBEC, Cairo, Egypt, Jan 2009.
- Industrial control training course using PLCs, SCADA systems, and Touch Screens in Industrial Systems Co. (10th Ramadan City), January 2007.
- Certificate of completion Basics of PLCs from Siemens Energy& Automation, Inc. August 14, 2006.
- TOEFL examination.
- International Computer Driving License (ICDL EGY2008974), January 2008.
- Faculty of Education Enhancement Project courses in Benha University, Egypt, June 2006.
- Communication skills, and presentation techniques training course, Benha University.

PROFESSIONAL SKILLS

- Testing and commissioning for all GE protection relays.
- Testing and commissioning for all protection relays.

ASSOCIATE PROFESSOR

ELECTRICAL ENGINEERING CONSULTANT

DR. MOHAMED ABDEL WAHHAB ALI

Mobile phone No. : (+2 0127) 45 777 41

E-mail: mohamed.mohamed02@feng.bu.edu.eg

Website: bu.edu.eg/staff/mohamedali3



- Power systems protection using all protective schemes.
- Design & installation of conventional control schemes for power distribution equipment.
- Design & installation of PLCs control schemes for power equipment & industrial processes.
- SCADA systems design and software programming.
- Design & installation of low voltage distribution systems.
- Design of medium voltage distribution systems.
- Power system design and analysis.
- Design, upgrade, reconfiguration of electrical power distribution systems.
- Power factor improvement, energy management & energy efficiency solutions.
- Power quality and harmonic studies.
- Training programs for electrical engineers, technicians, and engineering students.
- Short circuit, coordination and selectivity studies.
- Earthing systems design.
- IR scanning in predictive electrical maintenance.
- Failure diagnosis and troubleshooting of electrical systems and equipment.
- Electrical reliability studies.
- Electrical load studies.
- Electrical Shop drawing.
- Design of electrical utilities for buildings, including lighting design.
- Development of technical specifications for electrical equipment & systems.
- Feasibility study for engineering projects.
- Engineering economy.

LANGUAGES

Mother: Arabic

2nd Language: English

3rd Language: French

EXTRA ACTIVITIES

- Sports: Foot Ball, Table Tennis.
- Reading about: Sports, Cars, Electric Power Technology.
- ***Industry 4.0 and Industry 5.0 technologies.***
- Traveling.
- Compiling Technical Books, Handbooks, and scientific papers.
- Computer Programming.

PUBLICATIONS

[1] **M. A. ALI**, "Resilient GreenEdge Fusion: Lightweight AI for Real-Time Crop-Energy Optimization and Self-Healing Smart Grids on IoT-Edge Devices," 2025 7th *Novel Intelligence and leading Emerging Sciences International Conference (NILES2025)*, 2025, pp. 332-335, doi:

ASSOCIATE PROFESSOR

ELECTRICAL ENGINEERING CONSULTANT

DR. MOHAMED ABDELWAHHAB ALI

Mobile phone No. : (+2 0127) 45 777 41

E-mail: mohamed.mohamed02@feng.bu.edu.eg

Website: bu.edu.eg/staff/mohamedali3



10.1109/NILES68063.2025.11232415.

[2] **M. A. ALI**, "DRL-Driven Pilot Schemes for Optimized Distance Protection in Power Systems Incorporating IEC 61850 Communication Protocol", *Engineering Research Journal*, 184, 4, 2025, 37-55. ISSN: 1110-5615 doi: 10.21608/erj.2025.341833.1152.

[3] **M. A. ALI**, "Smart Grid Evolution: Deep Reinforcement Learning for Carbon-Free Based AI-Driven Energy Management," *Engineering Research Journal (Shoubra)*, 2025, doi: 10.21608/erjsh.2025.394317.1430.

[4] **M. A. ALI** and H. H. Ali, "Enhancement of Dynamic Voltage Response in UPF Mode of DFIG Wind Turbine During Grid Disturbances Using STATCOM and SAPF," *Journal of Electrical Engineering*, vol. 22, no. 1, pp. 77–93, 2022, ISSN: 1582-4594.

[5] **M. A. ALI**, "Hybrid Technique for Testing IEC 61850 Based IEDs of Distance Protection," in *Proceedings of the Nineteenth International Middle East Power Systems Conference (MEPCON)*, 2017, pp. 353–358, doi: 10.1109/MEPCON.2017.8301205.

[6] **M. A. ALI**, "Novel Testing Algorithm for Busbar Protection Systems Using IEC 61850 and Artificial Intelligence Technique," *International Electrical Engineering Journal*, vol. 7, no. 8, 2017.

[7] **M. A. ALI**, N. Shawky, and W. M. Mansour, "IEC 61850 Aided Parallelized New Total Energy Function for Modern Smart Grids," *International Electrical Engineering Journal*, vol. 7, no. 7, 2016.

[8] **M. A. ALI**, S. A. Ward, and M. S. Elkhalfy, "Smart Busbar Protection Based ANFIS Technique for Substations and Power Plants," *International Electrical Engineering Journal*, vol. 7, no. 8, pp. 2331–2338, 2016.

[9] W. M. Mansour, **M. A. ALI**, and N. Sh. Abd-El Hakeem, "Online Modern Philosophy for Stability Detection Based on Critical Energy of Individual Machines," *International Journal of Scientific Research Engineering Technology*, vol. 1, no. 4, pp. 50–57, 2015.

[10] W. M. Mansour, **M. A. ALI**, and N. Sh. Abd-El Hakeem, "Combinational Protection Algorithm Embedded With Smart Relays," *Journal of Electrical Engineering*, vol. 15, no. 2, pp. 83–89, 2015.

[11] W. M. Mansour, **M. A. ALI**, and N. Sh. Abd-El Hakeem, "A Novel Technique to Determine the Controlling Unstable Equilibrium Point in Power Systems," *International Journal of Scientific Research Engineering Technology*, vol. 1, no. 5, pp. 82–89, 2015.

[12] **M. A. ALI** and W. M. Mansour, "Modern Protection Philosophy for Smart Grids," *Journal of Electrical Engineering*, vol. 15, no. 4, article 34, 2015.

[13] **M. A. ALI** and W. M. Mansour, "Adaptive Stability Detection Algorithm for Modern Protection Relays," in *Proceedings of the 16th International Middle East Power Systems*

ASSOCIATE PROFESSOR

ELECTRICAL ENGINEERING CONSULTANT

DR. MOHAMED ABDEL WAHHAB ALI

Mobile phone No. : (+2 0127) 45 777 41

E-mail: mohamed.mohamed02@feng.bu.edu.eg

Website: bu.edu.eg/staff/mohamedali3



Conference (MEPCON), Cairo, Egypt, 2014.

[14] **M. A. ALI** and W. M. Mansour, "Modern Protection Relays Equipped with PMUs for Out of Stability," in *Proceedings of the 16th International Middle East Power Systems Conference (MEPCON)*, Cairo, Egypt, 2014.

[15] **M. A. ALI** and F. M. Bendary, "Design of Prototype Non-Directional Overcurrent Relay Micro-Controller-Based," in *Proceedings of the CIRED Conference*, 2013, IEEE Xplore.

[16] **M. A. ALI**, W. R. Anis, W. M. Mansour, and F. M. Bendary, "Novel Real-Time Stability Assessment Algorithm Based on Synchro-Phasors Measurement and Parallel Algorithms for Multi-Machine Networks," *International Journal of Emerging Electric Power Systems*, vol. 13, no. 3, article 7, 2012.

[17] **M. A. ALI** and W. M. Mansour, "Real-Time Transient Stability Analysis/Assessment Based Proposed Parallel Algorithms," *International Journal of Electrical and Power Engineering*, vol. 6, no. 4, pp. 124–131, 2012.

[18] **M. A. ALI**, W. R. Anis, W. M. Mansour, and F. M. Bendary, "Phasor Measurements-Based Online Auto Detection Out-of-Stability Algorithm," *American Journal of Applied Science*, 2011.

[19] **M. A. ALI**, W. R. Anis, W. M. Mansour, and F. M. Bendary, "ANFIS Based Synchro-Phasors Measurements for Real-Time Estimation of Critical Clearing Time," in *Proceedings of the Fourteenth International Middle East Power Systems Conference (MEPCON)*, Cairo, Egypt, 2010, pp. 422–427.

[20] **M. A. ALI**, W. R. Anis, W. M. Mansour, and F. M. Bendary, "ANFIS Based Synchro-Phasors Measurements for Real-Time Estimation of Critical Clearing Time," *Journal of Materials Science and Engineering*, 2011.

[21] **M. A. ALI**, W. R. Anis, W. M. Mansour, and F. M. Bendary, "Novel Real-Time Stability Assessment Algorithm Based on Synchro-Phasors Measurement and Parallel Algorithms for Multi-Machine Networks," *International Journal of Computer Science and Network Security*, vol. 11, no. 12, 2011.

[22] **M. A. ALI**, W. R. Anis, W. M. Mansour, and F. M. Bendary, "Novel Real-Time Stability Assessment Algorithm Based on Synchro-Phasors Measurement and Parallel Algorithms for Multi-Machine Networks," in *Proceedings of the 8th ICEENG Conference*, paper EE119, 2012.

[23] **M. A. ALI** and W. M. Mansour, "Real-Time Transient Stability Analysis/Assessment Based Proposed Parallel Algorithms," *International Journal of Computer Science and Network Security*, vol. 12, no. 5, 2012.

[24] **M. A. ALI** and W. M. Mansour, "Proposed Approach for Online Transient Stability of Multimachine Power Systems Using Parallel Microprocessors," in *Proceedings of the ICEENG Conference*, EE149, 2008, pp. 901–910.

ASSOCIATE PROFESSOR

ELECTRICAL ENGINEERING CONSULTANT

DR. MOHAMED ABDELWAHHAB ALI

Mobile phone No. : **(+2 0127) 45 777 41**

E-mail: mohamed.mohamed02@feng.bu.edu.eg

Website: bu.edu.eg/staff/mohamedali3



[25] E. M. Saied, S. Ibrahim, M. A. Mandor, and **M. A. ALI**, “Transient Stability Improvement Using Static VAR Compensators (SVCs),” in *Proceedings of the ElAzhar University Conference*, 2009.

REFERENCES | Available on request