



## Dr. Mohamed Ezzat Abdelrahman Abdelghani

Professor

*Electrical and Computer Engineering  
College of Engineering and Architecture  
University of Nizwa, Sultanate of Oman*

Telephone: (+968)25446200

Extension: 726

eMail: m.abdelghani@unizwa.edu.om

Office Location: 5D-44

Time at UoN: Since 2026

Marital Status: Married

Prof. Mohamed Ezzat Abdelrahman Abdelghani is a professor in Electrical Power Systems. Currently, he is the Head of Department of Electrical and Computer Engineering (DECE), College of Engineering and Architecture (CEA), University of Nizwa. His research interests are in power systems analysis, planning, protection, operation and control. Also, in renewable energy sources integration and Energy management.

### **Academic Qualifications**

Professor degree in Electrical Power systems, Ain Shams University, Egypt, 2025

Associate professor in Electrical Power Systems , Ain Shams University, Egypt , 2020

Ph.D. degree in Electrical Engineering, Ain Shams University, Egypt, 2012, Applications of Phasor Measurement Units in Power Systems Protection

M.Sc. Degree in Electrical Engineering, Ain Shams University, Egypt, 2007, Protection Strategy of Distributed Generation

B.Sc. Degree in Electrical Power Engineering, Ain Shams University, Egypt, 2001

## Teaching Activities

Electrical Circuits Analysis

Electrical transmission Systems

Power Systems Analysis

Advanced Power Systems

Planning of Electrical Systems

Power Systems Protection

Fundamentals of Photovoltaics

Advanced Photovoltaic Systems

## Research Activities

### - *Research Interests*

Power Systems planning

Operation and Control of Power Systems

Renewable Energy Resources integration

Smart grids

### - *Conference Presentations*

Effect of D-STATCOMs Optimal Installment on Voltage Stability Enhancement and Total Energy Saving Cost Considering Load Growth Factor Using WHO, 2024 IEEE International Conference on Environment and Electrical Engineering, Rome, Italy, 17/06/2024

Novel Time-Domain Modeling Approaches of Electric Arc Furnace Using Enhanced Cassie-Mayr and ARMAX Models, MEPCON 2023, Mansoura, Egypt, 19/12/2023

Protecting doubly fed induction generator`s converter using a filter based TCR, 2020 IEEE International Conference on Environment and Electrical Engineering, Madrid, Spain, 09/06/2020

Reliability Enhancement in Distribution Systems Through Distributed Generator and Capacitor Allocation Using Flower Pollination Algorithm, MEPCON 2019, Tanta, Egypt, 17/12/2019

Performance comparison of classification methods for line outage detection, MEPCON, Cairo, Egypt, 27/12/2016

Line outage detection using support vector machine (SVM) based on the phasor measurement units (PMUs) technology, 2012 IEEE General Meeting, USA, 22/07/2012

Fault location techniques for transmission lines using phasor measurement units (PMUs): A new contribution, 2011 IEEE General Meeting, USA, 26/07/2011

## **- Publications**

### **Article:**

1. 2026 [Review of Transactive Energy Market Models and Their Possible Financial Impact on The Utility](#), Ahmed M Abdulmohsen, Mohamed Ezzat, Wessam El-baz, Walid A Omran, Mohamed Abdel-Rahman
2. 2026 [Performance Enhancement of Interfacing Controllers for Grid Connected Wind Turbine](#), Mohamed Bahgat, Mohamed Ezzat, Mahmoud A Attia
3. 2026 [Enhancement of Power Quality in Industrial Distribution Systems using Photovoltaic Distributed Generation](#), Aya Medhat, Amr Magdy, Mohamed Ezzat
4. 2026 [Solid oxide fuel cell simulation model tuning using operating conditions dependent optimization techniques](#), Haya Hesham, Mohamed Abdel Rahman, Ghada Bassioni, Rania A Swief, Mohamed Ezzat, Sherif Helmy, Nourhan M Elbehairy
5. 2025 [Optimal Power Management Framework by Simultaneous Minimization of Generation Cost and Emissions Using Improved Wild Horse Optimizer](#), Mirna Fouad Ali, Eman Beshr, Almoataz Y. Abdelaziz, Mohamed Ezzat
6. 2025 [Comparative analysis of PI and fuzzy logic controller for grid connected wind turbine under normal and fault conditions](#), Mohamed Bahgat, Mohamed Ezzat, Mahmoud A Attia, SF Mekhamer, Nourhan M Elbehairy
7. 2025 [Hosting capacity maximization by optimal planning of active and reactive power compensators, voltage regulators, and energy storage units in a rural Egyptian power system](#), Ahmed M Mahmoud, Mohamed Ezzat, Shady HE Abdel Aleem, Almoataz Y Abdelaziz
8. 2025 [Integrated laboratory workflow for proton exchange membrane fuel cell fabrication and testing](#), Haya Hesham, Mohamed Abdel Rahman, Ghada Bassioni, Rania A Swief, Mohamed Ezzat, Sherif Helmy, Nourhan M Elbehairy
9. 2024 [Hybrid Siting and sizing of distributed generators and shunt capacitors with system reconfiguration using wild horse optimizer](#), Mirna Fouad Ali, Eman Beshr, Almoataz Y Abdelaziz, Mohamed Ezzat
10. 2024 [Comparative Analysis of PI and Fuzzy Logic Controller for Grid Connected Wind](#)

[Turbine](#), Mohamed Bahgat, Mohamed Ezzat, Mahmoud A Attia, SF Mekhamer, Nourhan M Elbehairy

11. 2024 [Multiagent based transactive energy market model](#), Ahmed M Abdulmohsen, Walid A Omran, Wessam El-baz, Mohamed Abdel-Rahman, Mohamed Ezzat

12. 2024 [Effect of D-STATCOMs Optimal Installment on Voltage Stability Enhancement and Total Energy Saving Cost Considering Load Growth Factor Using WHO](#), Mirna Fouad Ali, Eman Beshr, Almoataz Y Abdelaziz, Mohamed Ezzat

13. 2024 [EVCS Allocation and DG Penetration with System Reconfiguration from Reliability Point of View](#), IA Sultan, Rania A Swief, M Ezzat, TS Abdel-Salam

14. 2024 [Simulation of Solid-Oxide Fuel Cell Connected to Three-Phase Electrical Power System](#), Haya Hesham, Mohamed Abdel Rahman, Ghada Bassioni, Rania A Swief, Sherif Helmy, Mohamed Ezzat

15. 2023 [Manta ray foraging optimization algorithm-based load frequency control for hybrid modern power systems](#), Mohamed A Sobhy, Hany M Hasaniien, Almoataz Y Abdelaziz, Mohamed Ezzat

16. 2023 [Adaptive Protection Scheme for Overcurrent and Directional Overcurrent Relays In Distribution Networks with Distributed Generation](#), Mona K Elmahgoub, Mohamed Ezzat, Amr Magdy

17. 2023 [Industrial demand adaptation to renewable resources](#), Ahmed M Abdulmohsen, Walid A Omran, Wessam El-Baz, Mohamed Abdel-Rahman, Mohamed Ezzat

18. 2023 [Enhancing Power System Frequency Stability Considering High RESs Penetration Using Virtual Inertia](#), Sara Hossam Eldeen Mostafa, Rania Swief, Mohamed Ezzat

19. 2023 [Novel Time-Domain Modeling Approaches of Electric Arc Furnace Using Enhanced Cassie-Mayr and ARMAX Models](#), Hazem Hani, Mohamed A Abdel-Rahman, M Ezzat, Mohamed Zakaria Kamh

20. 2022 [Time domain analysis and parameter tuning of electric arc furnace using cassie-mayr model](#), Hazem Hani, Mohamed A Abdel-Rahman, M Ezzat, Mohamed Zakaria Kamh

### **Faculty Administrative Experience**

2026 - Present: Head of Department - Department of Electrical and Computer Engineering, University of Nizwa

2018 - 2026: Program Coordinator - Electrical Power Department, Faculty of Engineering, Ain Shams University

### **Consultancy Activities**

Electrical and light current consultant, Engineering Consultancy Center, Faculty of Engineering - Ain Shams University, 2016- 2026

---

### **Membership in Professional Bodies**

2001-Present: Egyptian Engineering Syndicate

---

..

Ref.: <https://www.unizwa.edu.om/staff/cea/m.abdelghani>