Assoc. Prof. **Moien A. Omar**

Electrical Engineering Department, An-Najah National University, Nablus, Palestine
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CURRENT POSITION

- Programs Coordinator (Electrical Engineering, Networks and Intelligent Systems Engineering, Communications Engineering), September 2022 – Present.

- Associate Professor, Electrical Engineering Department, An- Najah National University, October 2020– Present.

EDUCATION

- PhD. Energy Engineering, Catania University, Italy, November 2012 – February 2015. "Power Converters and Control for Grid Connected Microgrids under Unbalanced Operating Conditions."

- Clean Energy and Energy Conservation Engineering, An-Najah National University, Palestine 2006 –2008.
  "Computer Aided Design and Performance Evaluation of PV-Diesel Hybrid System."

- BSc. Electrical Engineering, An-Najah National University, Palestine, 1998 – 2002.

WORK EXPERIENCE (Academic and non-academic)

Associate Professor, Electrical Engineering Department, An-Najah National University, Nablus, West Bank, Palestine. October 2020 - Present.

Assistant Professor, Electrical Engineering Department, An-Najah National University, Nablus, West Bank, Palestine. August 2015 - 2020.

Electrical Engineer, Energy Research Center, An-Najah National University, Nablus, West Bank, Palestine. February 2004 – October 2012.

SELECTED REFERENCE PROJECTS

- Tempus Project , 2004 to 2007 :Worked in Tempus Joint European Project
  N: JEP -31144 – 2003 as a research and administration assistant.

- PV-Electrification of Atouf Village Project 2005 to 2007, Member of project team for electrification of "Atouf" village using solar hybrid micro grid. The project is sponsored by the Spanish Agency for International Cooperation
  (AECI), Spain.

- Energy Audit and efficiency improvement -2012 energy audit in WestBank municipality (building, street lighting, pumping system polite project for four municipalities in WestBank, MDLF, funded by world bank.

- PV-Electrification of Emanzil 2008 to 2009 Member of project team for Rural Electrification with micro grids with Solar Hybrid Generation in the community of Emnazil 12 kW installed Capacity.

- Wind Atlas project 2009–2012 Metrological station installation and programming, data assessment and evaluation using WAsP software.

- PV –Micro-grid Electrification Project -Saied Area 2011-2012 Member of project team for electrification of areas using solar hybrid micro grid. The project is sponsored by the Spanish Agency for International Cooperation (AECI), Spain.

CERTIFICATIONS OR PROFESSIONAL REGISTRATIONS

AC Microgrid Course, Aalburg University 2013.

COMPUTER SKILLS

• MS Office 2010 including (Visio 2007).
• Matlab/Simulink.
• PLECS Power electronics software.

HONORS AND AWARDS

- Full doctoral scholarship award at Catania University, Italy, PhD 2012- 2015, cooperation project with industry ST Microelectronics Ambition power project.

- Partial scholarship award, MSc. Clean energy and energy conservation engineering 2008.

COURSES TAUGHT:

BACHELOR COURSES:

- Power electronics.
- Electrical Machines for mechanical and mechatronics engineering departments.
- Electrical Machines-I for electrical engineering department.
- Electrical machines-II for electrical engineering department.
- Special topics for power engineering.
- Laboratory of electrical machines.
- Laboratory of power system.

Graduate courses, "Master of power systems"

- Economics of electrical power systems.
- Smart grids and distributed generation.
- Special topics for power engineering (power quality).
- Computer aided design of electrical energy systems

PUBLICATIONS

1. **Moien Omar**, Marwan Mahmoud, "Grid connected PV- home systems in Palestine: a review on technical performance, effects and economic feasibility" Renewable and Sustainable Energy Reviews, 2017.
2. **Moien Omar**, Marwan Mahmoud,"Economic evaluation of residential grid connected PV systems based on Net- Metering and Feed-in-Tariff schemes in Palestine" INTERNATIONAL JOURNAL of RENEWABLE ENERGY RESEARCH 8.4 (2018).
3. **Moien Omar**, and Marwan M. Mahmoud. "Design and simulation of a PV system operating in grid-connected and stand-alone modes for areas of daily grid blackouts." International Journal of Photoenergy 2019 (2019).
4. **Moien Omar** and Marwan M. Mahmoud. "Temperature impacts on the performance parameters of grid-connected PV systems based on field measurements in Palestine." IET Renewable Power Generation 13.14 (2019): 2541-2548.
5. **Moien Omar**, and Marwan M. Mahmoud. "Design and Simulation of DC/DC Boost Converter with Maximum Power Point Tracking for Grid Connected PV Inverter Considering the Nonlinearity of the PV Generator." International Journal on Energy Conversion (IRECON) 7 (6) (2019)
6. **Moien Omar**. "Control Scheme of Photovoltaic Inverter for Voltage Improvement in Isolated AC Microgrids." International Review of Electrical Engineering (IREE) 15 (3) (2020)
7. **Moien Omar**, and Marwan M. Mahmoud. " Control of power converter used for electric vehicle DC charging station with the capability of balancing distribution currents and reactive power compensation." international journal of applied power engineering (10) (2020)
8. **Moien Omar**, and Marwan M. Mahmoud. " Improvement Approach for Matching PV-array and Inverter of Grid Connected PV Systems Verified by a Case Study." Int. Journal of Renewable Energy Development (2021)
9. Ghazzawi, N. **Moien Omar**, M., & Mahmoud, M. (2023). Control approach for photovoltaic inverters enhancing the primary grid using the virtual synchronous generator concept. An-Najah University Journal for Research-A (Natural Sciences), 38(1), 60-66.
10. **Moien Omar**. (2023). The Significance of Considering Battery Service-Lifetime for Correctly Sizing Hybrid PV–Diesel Energy Systems. Energies, 17(1), 103.
11. **Moien Omar**., & Hamdan, A. (2024). Control strategy of battery inverter for voltage profile improvement in low voltage networks with high PV penetration level. International Journal of Power and Energy Conversion, 15(1), 25-41.
12. Omar, M. A. (2024). Green mechanism: Opportunities for corporate investment in PV/battery/diesel hybrid systems with techno-economic and environmental analysis. Energy Exploration & Exploitation, 01445987241269009.
13. Omar, Moien A. "Design and Economic Evaluation of Grid-Connected PV Water Pumping Systems for Various Head Locations." Energy Engineering 122.2 (2025).
14. Omar, Moien A. "Techno-economic analysis of PV/diesel/battery hybrid system for rural community electrification: A case study in the Northern West Bank." Energy (2025): 134770.
15. Omar, M. A. (2025). Assessing the Economic Impacts of Net Metering on Residential Solar Photovoltaic Adoption: A Palestinian Case Study. International Journal of Energy Research, 2025(1), 1370101.

REFERENCES

Referees are available upon request.