

## **Dr. Osama Omari**

### **Assistant Professor in Electrical Engineering**

#### **PERSONAL**

Name	Osama Adam Omari
Date of Birth	08. Sep. 1969
Place of Birth	Faqou'a, Jenin, Palestine
Marital Status	Married (5 Children)
Nationality	Palestinian

#### **ADDRESSES**

##### **Work:**

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#### **Recent Activities in Evaluating publications and theses:**

- 1. Evaluating researches submitted to “Journal of the Arab American University”, International Refereed Scientific Journal in 2018 and 2020.*
- 2. Evaluation of a “Diploma Degree in Solar Energy Technology” submitted to the Ministry of Education & Higher Education, Accreditation and Quality Assurance Commission (AQAC), 2018*
- 3. Evaluation of a “Diploma Degree in Smart Systems in Buildings” submitted to the Ministry of Education & Higher Education, 2019*
- 4. Evaluation of a “Diploma Degree in Solar Energy Technology” submitted to the Ministry of Education & Higher Education, 2019*
- 5. Evaluating a research submitted to “Palestine Technical University-Kadoorie, Journal of PTUK”, 2020*
- 6. Evaluating 4 researches submitted to “International German-Palestinian cooperation (PALGER 2015)”, 2020*

7. *Evaluating researches submitted to “Eng. Zuhair Hijawi Award for Scientific Research 2018”.*
8. *Evaluating researches submitted to “Eng. Zuhair Hijawi Award for Scientific Research 2019”.*

**Master theses co-supervision:**

1. *Classification and Prediction Model of Renewable Energy Depending on Weather Factors Using Artificial Intelligence Techniques, Master Thesis, Co-supervisor, AAUP, 2019*
2. *Spatial Decision-Support System for Electrical Distribution Grids, Master Thesis, Co-supervisor, AAUP, 2020*

**Running Projects Membership:**

*Project Member: Development of TVET Pedagogical Competences and Qualification in Palestinian Universities / TVETCQ - Photovoltaic Solar Systems Installing and configuration of the on-grid inverters, 2021*

**Activities in the field of Energy:**

1. *Delivering a presentation entitled “A Technical Study for the cost of De-Centrally Produced Grid-Tied PV Energy” within the context of the International DAAD Alumni Seminar 2015 “Development of a renewable energy technology market in developing countries Knowledge and technology transfer for utilization of solar energy” which took place in Brandenburg University of Technology Cottbus-Senftenberg in Germany between 2nd and 13th June 2015.*
2. *Participating as an organization committee member for the Energy Conference of the Palestine Polytechnic University / Hebron, Palestine that will take place in November 2015.*
3. *Participating as an organization committee member and a scientific committee member for the 5<sup>th</sup> International Energy Conference organized by the Palestinian Engineers Association which took place in Ramallah in Jan. 2015.*
4. *Preparing a study for the construction of a renewable energy center (REC) at the AAUJ in cooperation with the German Hanns Seidel Foundation, April 2014.*
5. *Preparing a Bachelor degree program proposal of Electrical Engineering with Renewable energy to be applied at the Faculty of Engineering at the AAUJ, March 2014.*
6. *Preparing a study for implementing a 1 MWp PV system at the AAUJ through a proposed Campus - Greening Project, October 2013.*

## **EDUCATION**

Dec. 01 - Feb. 05    PhD, Electrical Engineering, University of Bolton (England) in collaboration with the University of Applied Sciences South Westphalia / Soest (Germany).

Title of the thesis:

Conceptual Development of a General Supply Philosophy for Isolated Electrical Power Systems.

Oct. 99 - May 01    M.Sc., Electronic Systems and Engineering Management, Bolton Institute (England) and Paderborn University (Germany).

Thesis Title:

Simulation study of integrating photovoltaic systems into conventional electric power networks for the purpose of peak-load shaving.

Oct. 87 - Feb. 95    B.Sc., Electrical Engineering, Birzeit University, (Palestine).

Thesis title:

Software/Hardware Package for the reduction of the electrical losses in the local medium-voltage distribution network by the use of non-physical capacitors.

1987                    General Secondary Education Certificate Examination.

## **Honors and awards:**

- Scholarship from the German DAAD organization to study the Master's degree and pursue the Master thesis in Germany.
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- Scholarship from University of applied sciences South Westphalia in Germany to pursue the PhD degree

## **EXPERIENCES**

Aug. 2021 – Now    Mechatronics Engineering Department Head,  
Arab American University – Palestine, West Bank, Palestine.

Sep. 2018 – Now    Electrical Engineering and Renewable Energy Department Head,  
Arab American University – Palestine, West Bank, Palestine.

- Sep. 10 – Aug. 12      Engineering and Information Technology *Faculty Dean*,  
Arab American University – Palestine, West Bank, Palestine.
- Jun. 05 – Now      Arab American University – Palestine.  
Assistant Professor – Engineering and Information Technology  
faculty, Telecommunications Engineering Department.  
Duties included:
- Teaching
  - Faculty acting dean during summer semester 2010.
  - Department chairperson for almost 4 years.
  - Responsible for the construction of Engineering Faculty.
  - Representing IT faculty in the University council for 2 years.
  - Scientific research committee member for 1 year.
  - Faculty council member for most of the time.
- Jan. 02 – Mar. 05      University of Applied Sciences South Westphalia / Campus Soest /  
Department of Power Engineering / Laboratory of Power Systems  
and Power Economics:
- Scientific Researcher in the fields of renewable energy systems, hybrid power systems, distributed power generation.
  - Supervision and co-supervision of 9 master students.
  - Teaching undergraduate students.
  - Preparing two proposals for transnational projects submitted to the European Commission.
  - Performing two research projects for the Ministry of Science and Research in North Rhine Westphalia, Germany.
- Jun. 01- Dec. 01      Paderborn University / Campus Soest / Department of Power  
Engineering / Laboratory of Power Systems and Power  
Economics:
- Scientific Researcher in the fields of renewable energy systems, hybrid power systems, distributed power generation.
  - Performing a research project for the Ministry of Science and Research in North Rhine Westphalia, Germany.
- Apr. 96 - Aug. 99      Jenin Municipality, Electricity Department.
- Feb. 95 - Oct. 95      RUST-Kennedy & Dunkin as a local counterpart engineer in the  
project: Rehabilitation of the electrical grid in the West bank and  
Gaza strip.

## **ATTENDED TRAINING COURSES**

- Oct. 98 - Jan. 99      Industrial School of Nablus, a training course in Programmable Logic Controllers (PLC) – Theory and Applications.
- Jun. 98 - Sep. 98      Jenin Municipality Technological Center, AUTOCAD Technical Drawing.
- Oct. 95 - Feb. 96      Jordan Electricity Authority (JEA), training in the fields of Installation and maintenance of transforming substations, cabling and jointing, and control panels.
- 1994                      Jordan Electricity Authority (JEA), 6 weeks training in the fields of Generation plants, power substations, transmission lines, and distribution nets.

## **PROJECTS**

- Multiskalierbares Hybridsystem für Inselnetze mit regenerativen Energiequellen (Forschungsprojekt) [Expandable hybrid system for isolated grids with renewable energy sources (Research project)], promoted by the Ministry of Science and Research of NRW in the context of the program TRAF0, June 2004.
- Peak-Load Shaving in Electrical Grids by Small PV Systems, promoted by Ministry of Science and Research of North Rhine Westphalia, January 2002.

## **FIELDS OF INTEREST**

- ✓ Electrical power systems comprising conventional and unconventional energy conversion systems and distributed power generation. Of special interest is the active integration of renewable energy systems into conventional grids.
- ✓ Control algorithms, load- and generation-management, and communication systems and their applications to power systems with considerable percentages of distributed generation.
- ✓ Power electronic inverters with droop control and load sharing between parallel inverters without special communication in between. Of particular interest is the idea of making inverters acquire a frequency behaviour similar to the that of conventional power sources with rotating parts.

- ✓ Renewable energy sources, particularly photovoltaics and wind energy converters.
- ✓ Isolated power systems for remote areas and rural electrification.

## **PUBLICATIONS**

1. **Osama Omari**, "Acceptability of Conventional Electrical Grids to Renewable Energy Sources", 4th international Energy Conference, Ramallah, Palestine, Jan. 2011.
2. Alaa Mohd, Egon Ortjohann, Danny Morton, and **Osama Omari**, "Review of control techniques for inverters' parallel operation", Electric Power Systems Research journal (2010), Volume: 80, Issue: 12, Pages: 1477-1487, ISSN: 03787796, DOI: 10.1016/j.epsr.2010.06.009
3. **Osama Omari**, Egon Ortjohann, Alaa Mohd, and Danny Morton, "An Online Control Strategy for DC Coupled Hybrid Power Systems", IEEE PES 2007 general meeting, Tampa, Florida, USA, June 24-28, 2007.
4. **Osama Omari**, Egon Ortjohann, Alaa Mohd, Danny Morton, "An Optimal Control Strategy for DC Coupled Hybrid Power Systems", 2007 IEEE International Symposium on Industrial Electronics, Vigo, Spain, June 4-7, 2007.
5. Egon Ortjohann, Alaa Mohd, Nedzad Hamsic, Danny Morton, **Osama Omari**, "Advanced Control Strategies for Three-Phase Grid Inverters with Unbalanced Loads for PV/Hybrid Power Systems", 21st European Photovoltaic Solar Energy Conference and Exhibition, Dresden, Germany, 4-9 September 2006.
6. **O. Omari**, E. Ortjohann, "*Active-Integration of PV/Hybrid Systems in Conventional Electrical Grids*", 20th European Photovoltaic Solar Energy Conference and Exhibition, Jun. 2005, Barcelone, Spain.
7. E. Ortjohann, **O. Omari**, M. Muzibur Rahman, D. Morton, "*Active & Reactive Power Dispatch in Isolated mini-Grids fed by Decentralized Power Sources*", 3rd International Conference on Electrical & Computer Engineering, Dec. 2004, Dhaka, Bangladesh.
8. E. Ortjohann, **O. Omari**, S. Adhikari, N. Hamsic, D. Morton, "*Improved Control of Inverters for Decentralised Power Systems*", International Conference on Power Systems, Challenges to Electric Utilities in the New Millennium, Nov. 2004, Kathmandu, Nepal.
9. E. Ortjohann, N. Hamsic, **O. Omari**, "*Erweiterter Abschlussbericht zum Forschungsprojekt Multiskalierbares Hybridsystem für Inselnetze mit*

*regenerativen Energiequellen*”, A report presented to the Ministry of Science and Research in NRW, Germany, June 2004.

10. E. Ortjohann, **O. Omari**, N. Hamsic, “*Getting the Values of Irradiation & Temperature from the Operation Parameters of a PV System*”, 14th International Photovoltaic Science and Engineering Conference, Jan. 2004, Bangkok, Thailand.
11. **O. Omari**, E. Ortjohann, R. Saiju, N. Hamsich, D. Morton, “*A Simulation Model For Expandable Hybrid Power Systems*”, 2nd European PV-Hybrid and Mini-Grid Conference, Sep. 2003, Kassel, Germany.
12. E. Ortjohann & **O. Omari**, “*Small PV systems for the improvement of electrical grids’ performance*”, International Conference: PV in Europe – from PV technology to Energy Solutions, Oct. 2002, Rome, Italy.
13. Egon Ortjohann & **Osama A. Omari**, “*PEAK LOAD SHAVING IN CONVENTIONAL ELECTRICAL GRIDS BY SMALL PHOTOVOLTAIC SYSTEMS IN SUNNY REGIONS*”, 29th IEEE Photovoltaic Specialists Conference, May 2002, New Orleans, USA.
14. E. Ortjohann, N. Hamsic, **O. Omari**, “*Zwischenbericht 2002 zum Forschungsprojekt Multiskalierbares Hybridsystem für Inselnetze mit regenerativen Energiequellen*”, Power Systems & Power Economics Lab. Univ. of App. Sciences SWF, Division Soest, Interim Report to the Ministry of Science and Research, NRW, Germany, 2002.
15. E. Ortjohann, **O. Omari**, “*Peak-Load Shaving in Electrical Grids by Small PV Systems*”, a Research study supported by the Ministry of Research and Science in North Rhine Westphalia, Germany, Jan. 2002.

## **ATTENDED CONFERENCES**

1. The 20th European Photovoltaic Solar Energy Conference and Exhibition, 6 – 10 June 2005, Barcelona, Spain.
2. The 19th European Photovoltaic Solar Energy Conference and Exhibition, 7 – 11 June 2004, Paris, France.
3. 1. Forschungsforum TRAFO (1st Research Forum TRAFO), 10 May 2004, University of Applied Sciences Düsseldorf, Düsseldorf, Germany.
4. The 14<sup>th</sup> International Photovoltaic Science and Engineering Conference, 26 – 30 Jan. 2004, Bangkok, Thailand.
5. The 2nd European PV-Hybrid and Mini-Grid Conference, 25 – 26 Sep. 2003, Kassel, Germany.

6. 2nd international Symposium, New Energy for the South, 1 – 2 Apr. 2003, Wissenschaftspark Gelsenkirchen, Germany.
7. PV in Europe – from PV technology to Energy Solutions, 7 – 11 Oct. 2002, Rome, Italy.
8. The 17th European Photovoltaic Solar Energy Conference and Exhibition, 22 – 26 Oct. 2001, Munich, Germany.

### **PRESENTATIONS IN INTERNATIONAL CONFERENCES**

1. Active-Integration of PV/Hybrid Systems in Conventional Electrical Grids, in the 20th European Photovoltaic Solar Energy Conference and Exhibition, Jun. 2005, Barcelone, Spain.
2. Getting the Values of Irradiation & Temperature from the Operation Parameters of a PV System, in the 14th international Photovoltaic Science and Engineering Conference, Chulalongkorn University, Bangkok, Thailand, Jan. 29, 2004.
3. A Simulation Model For Expandable Hybrid Power Systems, in the 2nd PV-Hybrid and Mini-Grid Conference, University of Kassel, Germany, Sep. 26, 2003.
4. Small PV Systems for the Improvement of Electrical Grids' Performance, in the International Conference: PV in Europe – from PV technology to Energy Solutions, Palazzo dei Congressi, Rome, Italy, Oct. 10, 2002.

### **OTHER SCIENTIFIC CONTRIBUTIONS**

1. Participation in the International DAAD Alumni Seminar 2015 “Development of a renewable energy technology market in developing countries - Knowledge and technology transfer for utilization of solar energy” which took place in Brandenburg University of Technology Cottbus-Senftenberg and visit to Intersolar Europe international Fair in Munich Germany between 2nd and 13th June 2015.
2. Organization committee member for the Energy Conference of the Palestine Polytechnic University / Hebron, Palestine that will take place in April 2016.
3. Member of the Organization committee and the scientific committee for the 5th international Energy conference in Palestine organized by the Palestinian Engineers Association which took place in Ramallah in Jan. 2015.

4. Member of the Organization committee and the scientific committee for the 4th international Energy conference in Palestine organized by the Palestinian Engineers Association which took place in Ramallah in Jan. 2011.
5. Selection committee member for the German Academic Exchange Service (DAAD) in Palestine.
6. External Examiner for a PhD thesis at Bolton university-England, Jan. 2010.
7. External Examiner for Master theses in local universities.

## **REFERENCES**

1. Dr. Muayad Abu Saa'  
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