

# Ahmad M. Abu-Elrub, PhD.

Department of Electrical Engineering  
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## Objective

As an educator I stride to enhance my students' knowledge, curiosity and interest in the discipline of electrical engineering. As a researcher, I aim to advance the state of the art in renewable energy and power system research by performing quality research, and collaborating with others in the field. As an engineer I employ my expertise, knowledge and work ethics to produce and manage optimal engineering solutions

## Education

- |   |                              |
|---|------------------------------|
| Texas A&M University, College Station, TX   | January 2012 – December 2016 |
| – PhD in Electrical Engineering             |                              |
| Jordan University of Science and Technology | August 2005-January 2010     |
| – Bachelor degree in Electrical Engineering |                              |

## Professional Memberships

- |   |               |
|---|---------------|
| Member of the Institute of Electrical & Electronic Engineers (IEEE) | 2013- Present |
| Member of the Jordan Engineers Association                          | 2010- Present |
| Member of the Honor Society at Texas A&M                            | 2013- Present |

## Research Experience

### Jordan University of Science and Technology

#### Assistant professor

- |                                     |                       |
|-------------------------------------|-----------------------|
| – Renewable energy integration      | January 2017- Present |
| – Power system reliability analysis |                       |
| – Renewable energy planning         |                       |

### Texas A&M Power systems Group

#### Student Researcher

- |   |                            |
|---|----------------------------|
| – Power system reliability                          | January 2012-December 2016 |
| – Stochastic optimization for hybrid energy systems |                            |
| – Renewable energy system planning                  |                            |

### Jordan University of Science and Technology

#### Student Researcher

- |   |                        |
|---|------------------------|
| – Design of Optical Mark reader as a graduation project | June 2009-January 2010 |
|---|------------------------|

## Work Experience

### **Jordan University of Science and Technology**

#### **Assistant professor**

January 2017- Present

- Duties include teaching undergraduate and graduate classes, supervising undergraduate and graduate research projects, engaging in research projects, and evaluating some of the teaching laboratory needs.
- On several departmental committees, including curriculum committee, graduate studies committee and senior design committee.

### **Texas A&M Department of Electrical and Computer Engineering**

#### **Power system Course Grader**

January 2013- December 2016

- Grading class work for undergraduate power system faults and protection course
- Grader and peer teacher for ECEN 215 class for two semesters.

### **Jordan University of Science and Technology**

#### **Teaching Assistant**

January 2010-August 2011

- Teaching undergraduate students labs ( Electrical circuits, Electrical machines and Electronics)

#### **Tutoring**

January 2010-August 2011

- Tutored undergrad courses ( Electrical circuits, Electrical machines, Electronics, Signals & Systems, and control )

## Languages

Fluent speaker of both Arabic & English. Excellent writing skills in both languages.

## Awards & Honors

- Ranked first of 2010 class in Electrical Engineering from Jordan University of Science and Technology.
- Princes Basma Scholarship for excellent students.
- Ranked best 0.5% in national secondary examination in Jordan.

## Engineering Projects

- JUST 20 MW PV system: Prepared the ToR documents, member of proposal technical and financial evaluation committee.
- JUST 33/11 kV substation upgrade: prepared RFP documents.
- National Electric Power Company, Jordan: Industry/Academy Steering Committee

## Teaching experience

Circuits I & II; Power System Analysis; Power System Protection; Power System Distribution and Transmission; Power System Operation; Power System Reliability; Advanced Power System Analysis; Power System Economics, Power System Control; Electrical Power Generation, Transmission & Distribution; Special Topics in Renewable Energy Systems; Circuits Lab; Electrical engineering Lab

## Software Skills

- C,C++
- LABVIEW Measurement System
- MATLAB
- ETAB
- Multisim and PSPICE Simulators
- PowerWorld simulator
- PSS simulator
- PSIM

## Publications

- 1) **Abuelrub, Ahmad**, Osama Saadeh, and Hussein MK Al-Masri. "Scenario Aggregation-Based Grid-Connected Photovoltaic Plant Design." *Sustainability* 10.4 (2018): 1275.
- 2) O. Saadeh, Z. Dalalah, F. Nessir Zghoul, **A. Abuelrub** and M. Saadeh, "A 500 kHz Silicon Carbide (SiC) Single Switch Class-E Inverter" *International Journal of Electrical and Electronic Engineering & Telecommunications*, Vol. 7, July 2018, pp. 103-107.
- 3) Hussein MK Al-Masri, **Ahmad AbuElrub**, and Mehrdad Ehsani "Optimization and Layout of a Wind Farm Connected to a Power Distribution System" *IEEE International Conference on Industrial Technology (ICIT)*, 2018, Lyon, France.
- 4) **A. Abuelrub** and C. Singh, "Sizing of lead acid storage system in an energy buffer connected to a wind farm," 2016 *IEEE International Conference on Power System Technology (POWERCON)*, Wollongong, NSW, 2016, pp. 1-6.
- 5) **A. AbuElrub** and C. Singh, "Long term energy storage capacity optimization in energy buffer system," 2014 *IEEE PES General Meeting | Conference & Exposition*, National Harbor, MD, 2014, pp. 1-5.
- 6) A. M. I. Aldaoudeyeh, F. K. Amoura, H. M. Al-Masri and **A. Abuelrub**, "New configuration constraints to reduce unbalance in hexagonal double-circuit transmission lines," 2015 *North American Power Symposium (NAPS)*, Charlotte, NC, 2015, pp. 1-6.
- 7) **A. Abu-Elrub**, A. Bashaireh, H. Al-Masri and C. Singh, "Sizing of an energy storage connected to a wind farm in an energy market," 2015 *North American Power Symposium (NAPS)*, Charlotte, NC, 2015, pp. 1-6.
- 8) H. M. Al-Masri, **A. Abu-Errub**, W. R. Ayyad and M. Ehsani, "On the PV module characteristics," 2016 *International Symposium on Power Electronics, Electrical Drives, Automation and Motion (SPEEDAM)*, Anacapri, 2016, pp. 901-905.