

**MOHAMMED AHMED HAJ-AHMED**  
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Nationality: Jordanian  
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Electrical Engineering Department  
University of Jordan  
Amman, Jordan

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## EDUCATION:

### Ohio State University Sep 2011- Aug 2015 Electrical and Computer Engineering Department

Research interests include power system stability and protection, adaptive relaying algorithms for high and low voltage networks, power electronics devices fault characteristics, and multi-agent control of systems.

#### *Research Gate statics:*

RG score: 9.06  
Publication views: 344  
Publication downloads: 34  
Citations: 1

#### *Dissertation title:*

“Protection and Automation of Microgrids for Flexible Distribution of Energy and Storage Resources”

#### *Selected publications:*

Haj-ahmed, M.A.; Illindala, M.S., "The Influence of Inverter-Based DGs and Their Controllers on Distribution Network Protection," *Industry Applications, IEEE Transactions on* , vol.50, no.4, pp.2928,2937, 2014.

Haj-ahmed, M.A.; Illindala, M., "Investigation of Protection Schemes for Flexible Distribution of Energy and Storage Resources in an Industrial Microgrid," *Industry Applications, IEEE Transactions on* , vol.51, no.3, pp. 2071,2080, 2015.

Haj-ahmed, M.A.; Illindala, M.S., “Intelligent coordinated adaptive distance relaying,” *Electric Power Systems Research*, vol. 110, pp. 163-171, 2014.

Yuan, C.; Haj-ahmed, M.; Illindala, M., "Protection Strategies for Medium Voltage Direct Current Microgrid at a Remote Area Mine Site," *Industry Applications, IEEE Transactions on* , vol. 51, no.4, pp. 2846,2853, 2015.

Haj-ahmed, M.A.; Illindala, M.S., "The influence of inverter-based DGs and their controllers on distribution network protection," *Industry Applications Society Annual Meeting*, 2013.

Haj-ahmed, M.A.; Illindala, M.S., "Investigation of protection schemes for flexible distribution of Energy and Storage resources in an industrial microgrid," *Industrial & Commercial Power Systems Technical Conference (I&CPS)*, 2014.

Haj-Ahmed, M.A.; Campbell, Z.P.; Illindala, M.S., "Substation automation for replacing faulted CTs in distribution feeders," *Power Electronics, Drives and Energy Systems (PEDES), 2014 IEEE International Conference on*,

Haj-Ahmed, M.A.; Khasawneh, H.J.; Illindala, M.S., "Autonomous cooperative agent based flexible distribution of Energy and Storage resources," *Power Electronics, Drives and Energy Systems (PEDES), 2014 IEEE International Conference on*,

### The University of Jordan ([www.ju.edu.jo](http://www.ju.edu.jo)) 2002-2009 The faculty of Engineering & Technology

- MS Degree in Communication Engineering, with an **excellent** average (**Top class student**). Thesis title: "Design of a Multi-band loop antenna for wireless communications". Part of this Thesis was published as a paper in **KSU** journal, an **Elsevier** journal (volume 23, 2011)
- B.Sc. Degree in Engineering with a major in Electrical Engineering, with a **Very Good** average.
- Scored 87/100 in ETS qualification exam for Electrical Engineering (Rank 2 overall Jordan).

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## EXPERIENCE:

### Aug/2015 – Now The University of Jordan

Teaching power system protection and power electronics courses, and power systems labs.

### May/2014 – August/2014 Argonne National Laboratories

I worked as a research aide with Prof. Jianhui Wang in a scoping study for the department of energy about DC microgrids protection and control.

### December/2009 – September/2011 The University of Jordan

I worked as a teacher and research assistant, I taught electrical circuit's courses and electrical circuits & power systems labs. Research interest areas include microgrid protection and the effect of EM radiations on human head.

### August/2006 - December/2009 National Electrical Power Company (NEPCO [www.nepco.com.jo](http://www.nepco.com.jo))

I worked as a power system protection engineer, I was responsible for all protection and control devices commissioning in the new high voltage substations (400 kV and 132 kV). I was able to do the following:

- Short circuit calculations, CT's and VT's testing and calculations.
- Relays secondary injection: main and backup relays (AREVA, SIEMENS, ABB, SEL).
- Primary injection, busbar stability and sensitivity, and transformers Diff. and REF tests.
- Scheme check for tele-protection and Inter-tripping schemes.
- Fault recorders programming and commissioning.
- Power transformers testing and circuit breaker testing.
- Setting calculations for all relays at the new substations.

### July/2005-Sep./2005: Engineering Practice in the Royal Scientific Society (RSS)

- Design & implementation of electrical systems & equipments, testing of electrical devices, and calibration of electrical meters against universal standards. Design & implementation of **PCB** (printed circuit boards).

## COURSES & PARTICIPATIONS:

- **OMICRON** (Relay Test Unit) course and an introduction to Distance and differential Protection by **OMICRON Company** in Aug, 2006.
- Course in advanced protection by **Schweitzer Engineering Laboratories (SEL)** in Dec, 2007.
- Course in advanced protection in **Siemens** Company in Spain, Madrid in Dec, 2008.
- **Global System for Mobile (GSM)** course.
- **VB.NET** course of 24 hours.
- Courses of **Successful Skills** and **Leadership Skills** in **INJAZ** university of Jordan branch.
- IEEE student member since 2005.
- Wide background in fields related to **PIC** programming & **PCB** Design during practice in the **RSS (The Royal scientific Society)**.
- Actual experience in many programming languages such as C++, Java, Visual Basic, Matlab, VB.net and many others. Also experienced in many MS programs such as Word, Access, and Excel.