

Ahmad Abdullah

12531 W HWY 71 Apt 4302

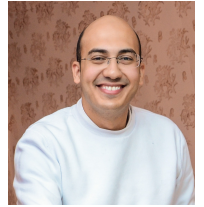
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"But ye will not, except as God wills; for God is full of Knowledge and Wisdom"

Education

- Sep 2012–
Current **Doctor of Philosophy**, *Texas A&M University*, College Station, USA.
Department of Electrical and Computer Engineering
- Sep 2009–
May 2011 **Master of Science**, *Cairo University*, Cairo, Egypt.
Department of Electrical Power and Machines, Faculty of Engineering
- Sep 2004–
May 2009 **Bachelor of Science**, *Cairo University*, Cairo, Egypt.
Department of Electrical Power and Machines, Faculty of Engineering

PhD Dissertation

- Title New Solutions for Improving Security of Transmission Line Distance Protection During System Wide Cascading Failures
- Supervisors Prof. Karen Butler-Purry
- Description Dissertation proposed a new single-ended relaying principle for transmission line protection, a method to detect lightning faults and an algorithm to detect line opening operation remotely without communication links.

MSc Thesis

- Title *A New Method for Assessment of Distributed Generation Impact on Distribution System Reliability*
- Supervisors Prof. Hussein Attia
- Description A thesis on fast calculation of distribution system reliability indices after the integration of distributed generation in the distribution network without the need to run Monte Carlo simulations.

Technical Skills

- Programming C, C++, C#, Java, SQL, Visual Studio, Eclipse
- Software Aspen One Liner, AutoCAD, ETAP, PowerWorld, PSS®E, SEL acSELerator, ATP/EMTP, PSCAD, Calculux, DIALux, Matlab, Simulink, SimPowerSystems, Octave, Electronics Workbench, P-Spice, ETRAN

Work Experience

- Oct 2015–
Current **Power System Design Engineer**, *Electric Power Engineers, Inc.*, Austin, TX, USA.
- Wrote Design Specification document for a substation expansion
 - Performed specialized studies such as transformer failure analysis, transient over voltage (TOV) studies, ferroresonance, and snubber circuit analysis & design

- Conducted electrical system design and interconnection studies for distributed and renewable (wind and solar) projects and provide recommendations to meet the applicable codes and standards as well as the transmission provider's requirements. These studies include load flow, short circuit, reactive power support, harmonics analysis, frequency scan analysis, protection coordination and arc flash hazard analysis
 - Wrote testing plan for capacitor switching for post generation harmonics analysis according to IEEE 519-1992 std
- Sep 2012–
Aug 2014
- Research Assistant**, *Electrical and Computer Engineering Department, Texas A&M University, College Station, TX, USA.*
- Working on Robust Adaptive Topology Control (RATC) with two different teams
 - Created cascading scenarios and fault cases, and wrote algorithm for detection of cascading events with Cascading Detection team
 - Wrote software and specification for data integration among RATC component with the Data Layer team
 - Created IEEE 73 and IEEE 118 bus ATP/EMTP models for cascading and fault studies
 - Created lab setup to simulate relays. Setup included high voltage and low voltage amplifiers, SEL and GE relays, simulation software, GPS clocks, communication links, data concentrator and a PC
 - Calibration of amplifiers using Megger and troubleshooting communication errors
 - Wrote a Comtrade file reader and PSS/E file format converter (OOP) in Java to support other activities in RATC, software is complete with JUnit tests and Javadoc
 - Wrote an Open Source Short Circuit Analysis package to be used with MATPOWER (Matlab.)
- Sep 2014–
Sep 2015
- Teaching Assistant**, *Electrical and Computer Engineering Department, Texas A&M University, College Station, TX, USA.*
- Teaching and grading labs for both ECEN214 and ECEN 215 with four different professors
 - Holding office hours and troubleshooting lab equipment and hardware
- Sep 2009–
Aug 2012
- Instructor and Fellow**, *Department of Electrical Power & Machines, Cairo University, Cairo, Egypt.*
- Teach assigned labs and lectures (Mainly power systems and high voltage)
 - Grade midterms and quizzes (power system analysis, circuit theory)
 - Research on reliability of distribution systems with DG penetration (two papers)
 - Research on Egyptian grid power quality issues (report)
 - Investigating stability issues when connecting one machine to an infinite bus (report)
 - Review in EPQU2011 and AEECT2011 conferences

Relevant Experience

- May 2016
- Student**, *IEEE PES T&D, Dallas, TX, USA.*
Wind Power Plant Grounding for personal safety. This was a half-day tutorial about designing a grounding grid for wind power plants.
- Ground Conductor Design
 - Equivalent Soil Resistivity for WPP grounding design
 - Safety Criteria Calculations
 - Ground Impedance Calculations

- Ground Potential Calculations
 - Safety assessment
- Dec 2015 **Student**, *ETAP University*, Houston, TX, USA.
Arc Flash Hazard Advanced Workshop. This was a five-day course about Arc Flash hazard modeling and protection.
- Fault Current Calculations and Overcurrent Protective Devices
 - Protective Device Coordination, Parallel Operation of Sources and Auto-Evaluation (Automated Protection and Coordination Evaluation)
 - Arc Flash Physics and 3-Phase Arc Flash Analysis Using IEEE 1584-2002 & NFPA 70E 2015
 - Modeling Arcs in 1-Phase Systems and Arc Faults in LV Equipment and Arc Flash Mitigation Techniques
- Nov 2015 **Student**, *PowerWorld Training*, Taylor, TX, USA.
Introduction to PowerWorld Simulator: Interface and Common Tools. This was one-and-a-half day course about PowerWorld. The training was conducted at ERCOT HQ.
- Interact with PowerWorld Simulator through text-based interfaces and graphic one-line diagrams
 - Build and modify power system models and one-line diagrams
 - Exchange information with spreadsheets and text files
 - Create rich color contours, incorporate GIS shapefiles, and enhance the appearance and dynamic behavior of one-line diagrams
- Aug 2013 **Student**, *SEL University*, Pullman, WA, USA.
Integrating Substation Systems Using the SEL-2032. This was a five day course about substation automation with SEL-2032 communication processor.
- Configure SEL-2032 port settings and User Commands
 - Configure SEL-2032 Automatic Message Settings for Data Collection
 - Configure SEL-2032 Math/Data Movement settings for Data Concentration and Scaling
 - Configure SEL-2032 Programmable Logic and Control settings
 - Configure SEL-2032 for DNP3, Ethernet, Modbus, FTP and Telnet
 - Configure SEL-2032 for Multi-tiered Data Acquisition and Control
- Summer 2006 **Intern**, *Shubra Al-Kheima Power Station*, Cairo, Egypt.
Summer Internship Program in Generation Station
- Develop understanding of the Egyptian code for grid and substation operation
 - Develop familiarity with substation and generation equipment, maintenance practices and fundamental operation of thermal power plants
 - Contribute to technical reports

Leadership Experience

- May 2013–
 Aug 2014 **Vice Chair**, *IEEE PELS-PES-IAS Joint Student Branch Chapter*, College Station, TX, USA.
- Solicit support from aforementioned societies, apply for awards and programs
 - Propose plans to improve graduate climate on behalf of grad student members
 - Give overview of EE department and the advantage of Electric Power as a discipline
 - Recruit new members and outreach for other community

- Jun 2013–
May 2014 **Treasurer**, *Egyptian Student Association (ESA)*, College Station, TX, USA.
I was responsible for dealing with the organization's finances, providing banking and financial services in support of the activities and programs of the Association. This included:
- Manage bank account , Comply with the University legislation and raise funds (\$3000 in July-2013 only)
 - Organize various activities such as farewell parties, social events, trips for members
 - Ensure that record-keeping and Provide periodic reports on the financial situation of the Association
 - Prepare and present budgets for new or ongoing activities
- Jun 2013–
Jun 2014 **Treasurer**, *IEEE Power & Energy Conference at Texas (PECT 2015)*, College Station, TX, USA.
- Manage all accounts receivable and accounts payable
 - Submit IEEE Conference sponsorship application and coordinate with IEEE societies
 - Contact companies and IEEE societies for financial and technical Sponsorship

Honors

- Oct 2015 **Travel Grant**, *Electrical and Computer Engineering Department, Texas A&M University*.
- Aug 2015 **Student Housing Support Program**, *North American Power Symposium*.
- May 2015 **Best Paper Award**, *Society of Underwater Technology*.
- Oct 2015 **Office of Graduate Studies Travel Grant**, *Texas A&M University*.
- Oct 2013 **Outstanding Joint Student Chapter**, *IEEE Industry Applications Society*.
- May 2011 **Presentation Award**, *Faculty of Engineering at Cairo University*.
- 2009–2011 **MSc fellowship**, *Faculty of Engineering, Cairo University*.
- May 2009 **Top 1% of Class 2009**, *Faculty of Engineering, Cairo University*.
- Jan 2008 **Future Teaching Assistant Award**, *Society of Petroleum Engineers*.

Conferences and Workshops

- Oct 2013 **IEEE IAS Meeting**, Orlando, FL, USA.
- Sep 2013 **Fair Use- Using Copyrighted Material in Research Works**, College Station, TX, USA.
- Sep 2013 **Creative Commons Licenses- Publishing Your Research via Open Access**, College Station, TX, USA.
- May 2012 **RATC Open Source Workshop**, Houston, TX, USA.
- Apr 2012 **Real-World Event Analysis with Symmetrical Components**, College Station, TX, USA.
- Apr 2012 **Smart Grid Workshop**, College Station, TX, USA.

Activities

- 2011–2012 **Volunteer**, *Souty Campaign*, Cairo, Egypt.
- 2011–2012 **Volunteer**, *Masrena Campaign*, Cairo, Egypt.
- 2011–2012 **Information Committee Head**, *Mohamed Salim Al-Awa Presidential Campaign*, Cairo, Egypt.
- 2011–2012 **Translator**, *GlobalVoices.com*, Cairo, Egypt.

2011 **Writer**, *Moheer.com*, Cairo, Egypt.
2009–2011 **Volunteer**, *Volunteer*, Cairo, Egypt.

Languages

Arabic Native
English Full professional proficiency