Mohamed Abuella

1725 Marlynn Dr, #131 – Charlotte, NC28262 – USA

+1 (813) 330 5642 • mhdabuella@gmail.com • mohamedabuella.github.io
Skype: mohammed_abuella • mohamed-abuella • mhdabuella • mhdella
Scholar: Mohamed Abuella

Summary

I am interested in modernizing the grid and optimizing its integration of renewables by applying descriptive, predictive and prescriptive analytics. Looking for opportunities to transfer and improve my knowledge and skills. The technical skills are presented as Acquired Expertise in the Experience section.

Education

University of North Carolina at Charlotte (UNCC) **USA**
Ph.D in Electrical Engineering, GPA 4.0 *2014–2018*

Southern Illinois University at Carbondale (SIUC) **USA**
M.Sc in Electrical and Computer Engineering, GPA 4.0 *2010–2012*

Higher Polytechnic Institute & College of Industrial Technology at Misurata **Libya**
DipHE in Instrumentation 82%, and B.Tech Electromechanical Engineering, 86% *2001–2008*

Experience

Research Assistant **USA**
Energy Production and Infrastructure Center (EPIC) at UNC Charlotte *2014– –*
Statistical and Predictive Analytics to Modernize the Grid and Optimize its Integration of Renewables, Focusing on Solar Energy Resources. Supervised by Prof. Badrul Chowdhury.
- Acquired Expertise: *Energy Analytics, Energy Markets, Renewable Energy & Supply Chain, Machine Learning*

M.Sc Research **USA**
Department of Electrical and Computer Engineering at SIUC *2010–2012*
Optimization for Electric Power Systems Including Wind Power, Supervised by Prof. Constantine Hatziadoniu.
- Acquired Expertise: *Power Systems Analysis, Operation and Planning, Systems Optimization, Smart Grid*

Teaching Assistant and Lab Instructor **Libya**
College of Industrial Technology at Misurata *2008–2009*
Taught Mathematics, Power Systems Analysis, and Programmable Logic Controller (PLC).
- Acquired Expertise: *Teaching, Tutorials, Lab Modeling & Simulations*

Electrical Technician **Libya**
Residential Electrical Wiring and Water & Wastewater Company *2001–2008*
Wiring and maintain electrical control equipment. Repair and rewind AC motors at the pumping stations.
- Acquired Expertise: *Electrical Wiring & Installations, Maintenance & Operation*

Recognitions

Outstanding Reviewer: IEEE Transactions on Sustainable Energy *2017*

Third Prize for Student Papers: The 47th North American Power Symposium *2015*

The 12th Place: Global Energy Forecasting Competition *2014*

The 1st Place: Department of Electromechanical at College of Industrial Technology *2008*

Publications

Wrote dozen of published papers, for the complete list of publications, please see my profile at Google Scholar, which is named as: Mohamed Abuella.

1. M. Abuella, "Using Particle Swarm Optimization for Solving Optimal Power Flow for IEEE Benchmarks that Including Wind Power Generators," (Master thesis, SIUC), 2012.
2. M. Abuella and B. Chowdhury, "Solar Power Probabilistic Forecasting by Using Multiple Linear Regression Analysis," in IEEE Southeast Con. Proceedings, 2015.
3. M. Abuella and B. Chowdhury, "Solar Power Forecasting using Artificial Neural Networks," in North American Power Symposium (NAPS), 2015.
4. M. Abuella and B. Chowdhury, "Solar Power Forecasting Using Support Vector Regression," in Proceedings of the American Society for Engineering Management 2016 International Annual Conference, 2016.
5. M. Abuella and B. Chowdhury, "Random forest ensemble of support vector regression models for solar power forecasting," in 2017 IEEE Power Energy Society Innovative Smart Grid Technologies Conference (ISGT), 2017.
6. M. Abuella and B. Chowdhury, "Hourly probabilistic forecasting of solar power," in 2017 North American Power Symposium (NAPS), 2017.
7. M. Abuella and B. Chowdhury, "Forecasting Solar Power Ramp Events Using Machine Learning Classification Techniques," in 2018 IEEE 8th International Symposium on Power Electronics for Distributed Generation Systems (PEDG), 2018.
8. M. Abuella and B. Chowdhury, "Qualifying Combined Solar Power Forecasts in Ramp Events' Perspective," in IEEE Power and Energy Society General Meeting, 2018.
9. M. Abuella and B. Chowdhury, "Improving Combined Solar Power Forecasts Using Estimated Ramp Rates: Data-driven Post-processing Approach," IET Renewable Power Generation Journal, 12(10), 1127-1135, 2018.
10. M. Abuella, "Post-processing approach for Solar Power Combined Forecasts of Ramp Events," (Doctoral Dissertation, University of North Carolina at Charlotte), 2018.
11. M. Abuella and B. Chowdhury, "Forecasting of solar power ramp events: A post-processing approach," Renewable Energy, 133, 1380-1392, 2019.