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Dr. Mohammad AlMuhaini

Associate Professor

Interdisciplinary Research Center for Renewable Energy and Power Systems (IRC-REPS)
King Fahd University of Petroleum & Minerals, Saudi Arabia

Executive Summary:
Dr. Mohammad AlMuhaini is working as an associate professor in the electrical engineering department at King Fahd University of Petroleum and Minerals (KFUPM). He is the chair of the IEEE Saudi Arabia section since Jan. 2018. He holds a B.Sc and M.Sc Degrees in Electrical Engineering from King Fahd University of Petroleum & Minerals (KFUPM) in 2004, and 2007 respectively. In 2012, he completed his P.hD program from Arizona State University (ASU), Tempe, US. His PhD research work was focused in evaluating the reliability of secondary distribution networks including distributed generation which is considered as a main challenge in the future smart grids.

Education:
- ❑ PhD Electrical Engineering [Arizona State University, USA, 2013]
- ❑ M.S Electrical Engineering [King Fahd University of Petroleum and Minerals, Saudi Arabia, 2007]
- ❑ B.S Electrical Engineering [King Fahd University of Petroleum and Minerals, Saudi Arabia, 2004]

Distinguished Projects

- *Distributed Generation Integration for Optimal Operation and Improved Performance of Distribution System. (2007-2008, Student Member)*

- *Modeling of Wind Energy Generation for Reliability Assessment of Active Distribution Networks.(2013-2014,PI)*

- *A Smart Self-Healing Strategy for Electric Microgrids. (2105-2017,PI)*

- *Selection of optimal transmission voltage/technology for the Saudi Arabian transmission grid expansion: feasibility of 765 KV versus HVDC and 380 KV. (2014-2016,CO-I)*

- *Reliability and Smart Restoration of Microgrids including Hybrid Distributed Generation Systems. (2015,PI)*

- *Self-healing and Reconfigurable Resilient Smart Grid. (2016-2018,CO-I)*

- *Smart Solar Home Project. (2017-2019,PI)*

- *Integrated Energy Management System for Microgrids with Renewable Generation, Storage and Controllable Load Resources. (2017-2019,PI)*

- *Advanced Heliostat Electrical Drive System for Solar Power Tower Technology. (2018-2021,CO-I)*

Research Summary

- ➢ Number of Published Papers: 27
- ➢ Citations : 503
- ➢ H-Index : 11
- ➢ Number of Patents : 0
- ➢ Book Chapters: 1
- ➢ Article Reviewed (Elsevier, Springer, MDPI): 100

Award and Recognitions

- ➢ Best Short Course Coordinator: Best Short Course Coordinator Distinguish award for Academic Year 2016/2017.
- ➢ Best Poster Award: Modelling of Microgrid Demands and Load Composition for Highly Reliable Systems, IEEE Saudi Arabia Smart Grid (SASG) Conference 2018 , Jeddah, Saudi Arabia.
- ➢ Best Paper Award: Intelligent Flexible Priority List for Reconfiguration of Microgrid Demands Using Deep Neural Network, Scientific Research Track,10th KFUPM Students Forum, April 2019, Dhahran, Saudi Arabia.

Skills and Expertise

- ➢ Reliability Assessment of Smart Grids
- ➢ Energy and Outage Management Systems in Microgrid Operations
- ➢ Markov Models Applications in Power Systems
- ➢ Renewable Energy Resources and their Impact on the Reliability
- ➢ Optimization Techniques and their Applications in Power System