

Dr. Muhammad Ali Memon

1 Personal Data

- 1.1 Name: Dr. Muhammad Ali Memon
- 1.2 Designation along with organization Name: Associate Professor and Chairman Department of Electrical Engineering, NED University, Karachi.
- 1.3 Address: Department of Electrical Engineering, NED University, Karachi.
- 1.4 CNIC No. 42201- 3367540-9
- 1.5 E-mail address: mmemon68@gmail.com, alimemon@neduet.edu.pk
- 1.6 Telephone No. 0346-3738555

2 Field of Expertise (Power Systems, Smart Grids, Energy)

3 Qualification Details :

- 3.1 PhD (Power Systems, 2011, Michigan Technological University, USA)
- 3.2 M. Engg (Electrical Engineering) 2005, NED University, Pakistan
- 3.3 M.B.A, 2000, Sindh University, Pakistan
- 3.4 Bachelors (Electrical Engineering, 1993, Mehran University, Pakistan)

4 Total Experience

- 4.1- Industrial Experience 8 years
- 4.2- Academic Experience 15 years

5 Chairman Department of Electrical Engineering, NED University of Engineering and Technology since 2013.

IEEE PES Chairman Karachi Chapter since two years.

6 Experience in Relevant Field(s) along with brief Description

- 5.1 Consultancy Work Experience:
 - 5.1.1- Design of Power Factor improvement Plants (done during job at Fauji Foundation)
 - 5.1.2- Generating Station Designing. (Done during job at Fauji Foundation)
 - 5.1.3 Design of control and protection schemes (Done during job at Fauji Foundation)
- 5.3 Supervision of control, protection, maintenance and trouble shooting of generators, transformers and motors. I have also worked on PLCs, Speed control cards, AVRs (Done during job at Fauji Foundation)
- 5.4 Teaching/Academic Experience: Teaching Power Systems courses at bachelor and masters level (Done during job at NED University)

5.5 Substation Design

Project Consultants	Dr. Muhammad Ali Memon
Project funding Agency	NED University of Engineering and Technology, Karachi.
Project cost	Approx. 56 Million PKR
Project Core Area	Sub Station Distribution design, Installation and commissioning
Award Date	March 2014
Completion Date	Dec, 2015

6.

Title of Dissertation / ISP
Optimum Placement of Power Factor Improvement Devices to Improve Voltage Stability Synchronphasor Technology
Statistical Analysis of Synchronphasor Data
Analysis of Switching Transients in Integrated Power System
Line to Ground Fault Study of KESC EHT Transmission Network
Energy Management System at NEDUET
Energy audit of NED University using advanced instrumentation
Design of on-grid wind and solar energy Integration System
Power System operation analysis by pattern recognition using synchronphasor data.
Simulation and analysis of hybrid solar system for different practical scenario.
Modeling of K.E Network for Analysis of the typical operational problem and their solutions.
Protection Coordination of H.T K Electric network

Simulation and analysis of PV solar Array charge controller for improving its performance
Distributed Generation Stability Analysis for Grid frequency and voltage variation
Establishment of Smart Grid Test Bed at Department of Electrical Engineering NEDUET
Optimal placement of Phasor Measurement Units of (PMU) for maximum observability of IEEE 39-Bus System
Analysis of Earthing System of One of the New Substations at NED University, Main Campus as per IEEE Std 80-2000 and Finite Element Method"
Development of Proper Communication between Phasor Measurement Units for establishment of Smart Grid Test Bed
Review and Implementation of Various Perturb & Observe based Algorithms and design of Optimized DC/DC converters for PV Generation Systems"

7- Five (5) PhD students

8- Registration No. PEC/any other body etc. ELECT/11571

9- Research Grants

9.1 IEEE Standards Education Committee, "Design and Implementation of a cost effective synchrophasor measurements Unit" in 2013

9.2 HEC- British Council research grant for "Modeling of HV Transmission line to avoid Line Congestion of K Electric" of 3.53 Million, project completed in 2018.

11 List of Research Publications/ Reports/Book Chapter:

11.1- Detection of coherent groups of generators and the need for system separation using synchrophasor data

Muhammad Ali; Bruce A. Mork; Leonard J. Bohmann; Laura E. Brown
 2013 IEEE 7th International Power Engineering and Optimization Conference (PEOCO)
 Year: 2013
 Pages: 7 - 12
 Cited by: Papers (3)
IEEE Conferences

11.2- Abdullah Munir, Anila Abbas, Muhammad Ali Memon "Efficiency and Harmonic Analysis of UPS and its effects on Karachi Electric Grid" in international Journal of IT, Engineering and Applied Sciences Research (IJIEASR) ISSN: 2319-4413 Volume 4, No. 3, March 2015

11.3- Samiya Zafar, Muhammad Ali Memon, Optimizing Line Power flows by Shunt Capacitor Placement using Synchrophasor Technology, (International Conference on Environment and Electrical Engineering (EEEIC) 2017, Milan, Italy) 6-9 Jun, 2017
 (<http://ieeexplore.ieee.org/document/7977717/>)

11.4- Samiya Zafar, Muhammad Ali Memon, Optimizing Line Power Flows by Series Capacitor Placement, (International Conference on Environment and Electrical Engineering (EEEIC) 2017, Milan, Italy) 6-9 June,2017
(<http://ieeexplore.ieee.org/document/7977718/>)

11.5- Chapter 4, Establishment of Energy Efficient (Green) University Campuses, Knowledge Sharing Program with Pakistan (Economic Development and Managerial Efficiency of Pakistan)

10.6- PhD Thesis Report:”Development of System Separation Strategies Using Synchrophasor Data”

9- Special Expertise in Software

9.1 PSSE

9.2 ASPEN

9.3 ETAP

9.4 Matlab