

Dr. UMBRIN SULTANA
(Approved PhD Supervisor-HEC)

PEC NO. ELECT/16479
Contact No. 99261263-8 (Ext.2207)
Email Address: siqara@yahoo.com
siqara@neduet.edu.pk

OBJECTIVE: To pursue challenging researches in the field of Electrical Engineering in order to enhance my academic and professional skills for the service of the society.

SCHOLASTICS:

Level	Program	Field of Study/Specialization	Board /University/Institute	Year of Passing
Post Grad.	Ph.D.	Electrical Engineering	Universiti Teknologi Malaysia	2017
Master's Degree	M.Eng. (Electrical)	Electrical Power Sys. Engineering	NED University of Engineering & Technology	2003
Bachelor's Degree	B.Eng. (Electrical)	Electrical Engineering	NED University of Engineering & Technology	1999
Bachelor's Degree	B.Sc.	Science	University of Karachi	1994
Higher Secondary School Certificate	Intermediate	Science (Pre-Engineering)	BIE Karachi	1992
Secondary School Certificate	Matric	Science	BSE Karachi	1990

PROFESSIONAL TRAINING / CERTIFICATION

Certification Title	Field of Study	Institute
Energy Audit and Energy Conservation	Engineering	NEDUET Karachi
Programmable Logic Control	Engineering	Institute of Industrial Electronics Engineering
Visual Basic	Engineering	The Institute of Computer

		Technology, Gulshan e Iqbal
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WORK EXPERIENCE:

Job Title	Employer	Job Period	More Info
Assistant Professor	NEDUET Karachi	November 2006 to Date	Teaches Electrical Engineering Undergraduate Courses Like Energy Conversion, Feedback Control system, Circuit Theory etc.
Assistant Professor	NEDUET Karachi, Sindh, Pakistan	June 2010 to Date	Teaches Postgraduate in Evening Program. Courses are Energy Conservation, Energy Planning, Energy Audit, Power Generation Economics and Advance Process Control system
Faculty Member (Visiting)	NEDUET Karachi, Sindh, Pakistan	April 2006 to July 2006	Taught Electrical Engineering Undergraduate Courses.
Faculty member	Preston University, Karachi, Sindh, Pakistan	April 2006 to October 2006	Taught undergraduate students (Engg.) and B.Tech. students
Tutor	SIQARA GROUP TUTORIALS	August 2003 to January 2006	Taught undergraduate students (Engg.) and O-level students
Electrical Engineering Design	S. Mehboob & Company, Sindh, Pakistan	June 2000 to July 2003	Worked as an Electrical Design Engineer on both National and International Projects.

Management Experience:

- ✓ FYP Convener from October 2017 to October 2019 in Electrical Engineering Department.
- ✓ Reviewer for several National and International journals.
- ✓ Supervisor, several Thesis, ISPR of M.E (Electrical) student, NED University of Engineering and Technology, Karachi.
- ✓ Supervisor, several undergraduate FYP, B.E (Electrical), NED University of Engineering and Technology Karachi
- ✓ Class Advisor, January 2009 to January 2013, Electrical Engineering Department.
- ✓ Undergraduate Class coordinator, January 2012 to January 2013, Electrical Engineering Department
- ✓ Supervised final year projects related to Energy Audit by using DILUX and MOTOR MASTER Software and protection in different industries by using Etap software.

Software Knowledge:

- ✓ Multisim
- ✓ Motor Master
- ✓ Visual Basic
- ✓ Microcontroller
- ✓ Dilux
- ✓ Calculux
- ✓ Etap
- ✓ MATLAB/Simulink

RESEARCH PUBLICATIONS:

- ✓ AR Bhatti, Z Salam, B Sultana, N Rasheed, A B Awan, **U Sultana**, M Younas, "Optimized sizing of photovoltaic grid-connected electric vehicle charging system using particle swarm optimization," International Journal of Energy Research, vol. 43, issue 1, pp.500-522,2019. **(ISI Journal IF = 3.741)**
- ✓ **U. Sultana**, A. B. Khairuddin, B. Sultana, N. Rasheed, S. H. Qazi, and N. R. Malik, "Placement and sizing of multiple distributed generation and battery swapping stations using grasshopper optimizer algorithm," Energy, vol. 165, pp. 408-421, **2018. (ISI Journal IF = 6.082)**
- ✓ **U. Sultana**, A. B. Khairuddin, N. Rasheed, S. H. Qazi, and A. Mokhtar, "Allocation of distributed generation and battery switching stations for electric vehicle using whale optimiser algorithm," JOURNAL OF ENGINEERING RESEARCH, vol. 6, pp. 70-93, **2018. (ISI Journal IF = 0.387)**
- ✓ S. H. Qazi, M. W. Mustafa, **U. Sultana**, N. H. Mirjat, S. A. Soomro, and N. Rasheed, "Regulation of Voltage and Frequency in Solid Oxide Fuel Cell-Based Autonomous Microgrids Using the Whales Optimisation Algorithm," Energies, vol. 11, p. 1318, **2018. (ISI Journal IF = 2.702)**
- ✓ N. Rasheed, S. H. Amin, **U. Sultana**, A. R. Bhatti, and M. N. Asghar, "Extension of grounding mechanism for abstract words: computational methods insights," Artificial Intelligence Review, vol. 50, pp. 467-494, **2018. (ISI Journal IF = 5.747)**
- ✓ N. Rasheed, S. H. Amin, **U. Sultana**, and A. R. Bhatti, "Hopfield Net spreading activation for grounding of abstract action words in cognitive robot," Biologically Inspired Cognitive Architectures, vol. 21, pp. 37-46, **2017. (ISI Journal IF = 0.613)**
- ✓ **Sultana, U.**, A. B. Khairuddin, A. S. Mokhtar, S.H.Qazi, and B. Sultana. **2017.** An Optimization Approach for Minimizing Energy Losses of Distribution Systems Based on Distributed Generation Placement. *Jurnal Teknologi.* 79: 87-96. **(ISI Master List Journal)**

- ✓ S.H.Qazi, M. W. Mustafa, **U. Sultana**, and N.H.Mirjal. **2017**. Current Harmonics Mitigation from Grid Connected Variable Speed Wind Turbine Due to Nonlinear Loads Using Shunt Active Power Filter *Jurnal Teknologi*. 79: 45-53. **(ISI Master List Journal)**
- ✓ S.H.Qazi, M. W. Mustafa, **U. Sultana**, and N.H.Mirjal, "Enhanced Power Quality Controller in an Autonomous Microgrid by PSO Tuned PI Controller," *Indian Journal of Science and Technology*, vol. 10, pp. 1-9, **2017**. **(ISI Master List Journal)**
- ✓ Qazi, S. H., Mustafa, M., Hussain, N. & **Sultana, U.** **2017**. Performance evaluation of PI and PI-PSO in improving power quality of an autonomous microgrid. **1/1/2017** ed.: IET Digital Library. <https://ieeexplore.ieee.org/document/8361253>
- ✓ **Sultana, U.**, A. B. Khairuddin, M. M. Aman, A. S. Mokhtar, and N. Zareen. **2016**. A Review of Optimum DG Placement Based on Minimization of Power Losses and Voltage Stability Enhancement of Distribution System. *Renewable and Sustainable Energy Reviews*. 63: 363-378. **(ISI Journal IF = 12.110)**
- ✓ **Sultana, U.**, A. B. Khairuddin, A. S. Mokhtar, N. Zareen, and B. Sultana. **2016**. Grey Wolf Optimizer Based Placement and Sizing of Multiple Distributed Generation in the Distribution System. *Energy*. 111: 525-536. **(ISI Journal IF = 6.082)**
- ✓ Rasheed, N., S. H. Amin, **U. Sultana**, R. Shakoor, N. Zareen, and A. R. Bhatti. **2016**. Theoretical Accounts to Practical Models: Grounding Phenomenon for Abstract Words in Cognitive Robots. *Cognitive Systems Research*. 40: 86-98. **(ISI Journal IF = 1.902)**
- ✓ Sultana, B., M. W. Mustafa, **U. Sultana**, and A. R. Bhatti. **2016**. Review on Reliability Improvement and Power Loss Reduction in Distribution System Via Network Reconfiguration. *Renewable and Sustainable Energy Reviews*. 66: 297-310. **(ISI Journal IF = 12.110)**
- ✓ Zareen, N., M. Mustafa, **U. Sultana**, R. Nadia, and M. Khattak. **2015**. Optimal Real Time Cost-Benefit Based Demand Response with Intermittent Resources. *Energy*. 90: 1695-1706. **(ISI Journal IF = 6.082)**
- ✓ Zareen, N., M. Mustafa, S. Khokhar, and **U. Sultana**. **2014**. A Reliability-Cost-Benefits (Rcb) Model for the Addition of Dg to Independent Micro-Grid Networks. *Jurnal Teknologi*. 1: 81-88. **(ISI Master List Journal)**
- ✓ S. H. Qazi, M. Uqaili, and **U. Sultana**, "Whales Optimization Algorithm Based Enhanced Power Controller for an Autonomous Microgrid System," in *2019 8th International Conference on Modern Power Systems (MPS)*, 2019, pp. 1-7.
- ✓ **Sultana, U.**, Qazi, S.H., Rasheed, N., and Mustafa, M.: 'Performance analysis of real-time PSO tuned PI controller for regulating voltage and frequency in an AC microgrid', *International Journal of Electrical and Computer Engineering*, 2021, 11, (2), pp. 1068