

Mamta Suthar Sharma

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Education

- **M.Tech. in Energy Studies (Center for Energy Studies), IIT Delhi (CGPA: 8.1/10)**
July 2007-May 2009
 - Title: Photovoltaic based Hybrid System Hardware Design and Simulation using Maximum Power Point Electronics tracking control algorithms.
- **B.E. in Electronics & Communication, Rajasthan Tech. University, (70.50%) with honors.**
July 2002-May 2006

Software/Hardware/Programming Skills

- CAD Software to design electrical and electronics circuits.
- C Programming language.
- MATLAB and TRNSYS Software Simulation.
- PCB design and fabrication process.
- Analog and Digital circuit design on Bread board.
- Vivado software for HDL projects and implementation of FPGA devices.
- NI Multisim Software to design Analog circuits.

ECE Courses and Practical Lab Instructed

Courses: Basics of Electronics, Electrical Circuit Analysis, Analog Electronics, Digital Electronics, Network Theory, Electrical and Electronics Measurement and Instrumentation.

Labs: Analog Circuit lab, Digital electronics lab, Analog/ Digital Communication lab, Linear IC Application lab, EDC lab, VLSI (FPGA) lab, EMI lab.

Teaching and R&D Experience

- **Assistant Prof.-** ECE Department of JB Institute of Engineering & Technology, Hyderabad. July 2019 to till Date.
- **R&D Experience, IIT Roorkee-** Designed a hardware setup of maximum power point electronics tracker and mechanical tracker for performing solar experiment and applied different optimization technique for getting maximum output from designed Solar Photovoltaic Systems. Additionally, instructed lab and tutorials for IIT Roorkee B.Tech students.

July 2010-July 2015
- **Senior Lecturer-**ECE Department of MERI College of Engineering & Technology, New Delhi NCR. July 2009 - June 2010

Undergraduate Projects

- PC Based Oscilloscope.
- Universal Power Board (Hardware Project)

Additional Responsibility

- Designed Electronics Devices & Circuits and Analog Communication lab manuals and course files.
- Organized a workshop on “PCB design” in JBIET, Hyderabad in Jan 2020.
- Worked for NBA criteria 5 documentation.
- Departmental library in charge.
- Hospitality in charge for the International Conférence on DISC, Jan 2020, JBIET, Hyderabad.

Research Paper Publications

- **Performance evaluation of SPV system using two axis and maximum power point tracking**, *Springer International Conference on Devices, Intelligent Systems & Communications (DISC)*, 2020.
Mamta Sharma
- **Comparison of Mathematical Models of Photo-Voltaic (PV) Module and effect of various Parameters on its Performance**, *IEEE International Conference on Energy Efficient Technologies for Sustainability (ICEETS)*, pp.1355-1359, 2013
Mamta Suthar, G.K. Singh and R.P. Saini
- **Performance Evaluation of Sun Tracking Photovoltaic Systems: A Case Study**, *IET International Conference on Advances in Power Electronics and Instrumentation Engineering (PEIE)*, pp.120-127, 2013.
Mamta Suthar, G.K. Singh and R.P. Saini
- **Effects of Air Pollution for Estimating Global Solar Radiation in India**, *International Journal of Sustainable Energy* (2014), DOI:10.1080/14786451.2014.979348
Mamta Suthar, G.K. Singh and R.P. Saini

Research and Master Level Courses Done

Electronics Techniques for Signal Conditioning & Interfacing, Instrumental Transducers, Modeling Simulation & Computer Applications, Non-Conventional Sources of Energy, Power Generation Transmission and Distribution, Energy conservation, Economics and planning of Energy Systems, Wind and Small Hydro Energy Systems.

Master's Thesis

- **Photovoltaic based hybrid system design and simulation**
 - Comparative analysis of different Solar based Hybrid Energy Systems.
 - Design, Performance Evaluation and costing of solar photovoltaic systems for M .Tech. energy lab in CES, IIT Delhi.
 - Design, Performance Evaluation and costing of Photovoltaic and Fuel Cell based hybrid Energy system for whole Building of CES, IIT Delhi.

Workshop/Conferences/FDP Participated

- National workshop on energy scenario and energy security organized by IIT Delhi and PCRA.
- Energy efficiency and climate change organized by IIT Delhi.
- Workshop on Photovoltaic Based System Design Organized by Photovoltaic Laboratory, Centre for Energy studies IIT Delhi.
- Scoping Workshop for India-UK Cooperation in Solar Energy Research Organized by Photovoltaic Laboratory, Centre for Energy studies IIT Delhi.
- One week FDP on “Pedagogical Research, Technical writing and Publication” organized by ECE Department JBIT College, Hyderabad from 1-7th August, 2019.