SOUVIK SENGUPTA

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SUMMARY

Passionate and dedicated PhD student in Electrical Engineering seeking a Researcher Systems Modeling position at Shell. Eager to contribute to the development and optimization of power systems and decarbonization efforts through advanced computational modeling and digital innovation.

EDUCATION

Pursuing PhD in Electrical Engineering   July 2019 - 2024
Indian Institute of Technology (IIT) Roorkee, India
- Specialization: Voltage and reactive power (Volt/VAR) control, PV, and battery energy storage systems (BESS)
- Research Focus: Optimization techniques and control, machine learning and AI for solar PV power and load demand forecasting

Master of Technology (M.Tech) in Power Systems   July 2016 - July 2018
National Institute of Technology Hamirpur
- Thesis on "Transient Stability Enhancement of a Hybrid Wind-PV Farm incorporating a STATCOM"

Bachelor of Technology (B.Tech) in Electrical Engineering   July 2010 - June 2014
West Bengal University of Technology (WBUT)
- Relevant coursework in electrical engineering

TECHNICAL SKILLS

- **Programming Languages:** MATLAB, openDSS, Python
- **Modeling and Simulation Tools:** RSCAD, PSCAD, Simscape Electrical - MATLAB
- **Power Systems Expertise:** Distribution system modelling, optimization, load flow and network analysis, HVDC/FACTS, transient simulations, fault analysis
- **Teaching Assistant:** Teaching Assistant: NPTEL Course: "Electrical Distribution System Analysis

PROJECTS

**Project Lead "D-SIDES: Demonstration of MW Scale Solar Integration in Weak   June 2018 - July 2023
Grids using Distributed Energy Storages"**
IIT Roorkee and Department of Science and Technology
- Modeled the IIT Roorkee distribution system using PSCAD, RSCAD, OpenDSS, and MATLAB
- Supervised the installation of a 150 kWh Battery Energy Storage System (BESS) on IITR campus
- Achieved international recognition with the "2022 IEEE Smart Cities Award"

PUBLICATIONS

- S. Sengupta, A. Kumar, and S. Tiwari, "Transient Stability Enhancement of a Hybrid Wind-PV Farm incorporating a STATCOM,"
- S. Tiwari, A. Kumar, and S. Sengupta, "Voltage Stability Analysis with a Novel Hybrid Controller using Shunt and Series Combination of FACTS Device"
- S. Sengupta, T. Gangwar, G. B. Kumbhar, and N. P. Padhy, "Multilevel Volt/VAR Control of Active Distribution Networks with Solar PV and BESS"
- S. Sengupta, A. Mishra, G. B. Kumbhar, and N. P. Padhy, "PHIL Experimentation for Evaluating Advanced Volt/VAR Control Performance of BESS in Active Distribution Networks"