Gavhane Pratik Shantaram

EDUCATION

MASTER OF TECHNOLOGY | JULY 2016-Present | VIT UNIVERSITY, VELLORE, TN, INDIA
· POWER ELECRTNICS & DRIVES | CGPA: 8.33/10

BACHELOR OF ENGINEERING | MAY 2015 | PUNE UNIVERSITY, PUNE, MH, INDIA
· ELECTRICAL ENGINEERING | First Class with Distinction (60.01 %)

DIPLOMA | JUNE 2012 | MAHARASHTRA STATE BOARD OF TECHNICAL EDUCATION, INDIA
Bharati Vidyapeeth's Jawaharlal Nehru Institute of Technology.
· ELECTRICAL ENGINEERING | First Class with Distinction (75.88 %)

VOCATIONAL TRAINING | OCTOBER 2010 | DIRECTORATE OF VOCATIONAL EDUCATION AND TRAINING, INDIA
· ELECTRICIAN | First Class (75 %)

PROFESSIONAL EXPERIENCE

- ### WORK EXPERIENCE

CYGNI ENERGY | JULY 2018 – PRESENT
· Design Engineer, working on data monitoring and analysis of solar home systems.

RESEARCH STUDENT | SOLAR ENERGY RESEARCH CELL, VIT UNIVERSITY, VELLORE
· During Masters I worked as Research Student on different projects in Lab.

INTERNSHIP | ABHIYANTA ELECTRICAL CONSULTANTS & ENGINEERS | JUNE 2012 – AUGUST 2012
· Building Electrification Design

APPRENTICESHIP | FIAT INDIA AUTOMOBILES LIMITED | OCT 2009 – OCT 2010
· Electrical Maintenance of assembly line

- ### PUBLICATION

EL-PSO BASED MPPT FOR SOLAR PV UNDER PARTIAL SHADED CONDITION

· Gavhane, P.S., Krishnamurthy, S., Dixit, R., Ram, J.P. and Rajasekar, N., 2017. EL-PSO based MPPT for Solar PV under Partial Shaded Condition. Energy Procedia, 117, pp.1047-1053.

- **PROJECTS**

ANALYSIS, MODELLING AND CONTROL OF 3-PH GRID TIE INVERTER FOR DISTRIBUTED POWER GENERATION SYSTEM

· Simulation (MATLAB) and hardware in loop (HIL) implementation of grid connected inverter for Control of Active and Reactive Power injection.
· Implementation of d-q transform based Inner Current loop control and outer power loop control.

IoT SOLUTION FOR DC MICROGRID IN RURAL INDIA

· Site Visits to understand the needs of rural households in Karnataka.
· Integration of IoT solution to schedule maintenance and improve the performance of system by Data analysis.

MODELLING, DESIGN & CONTROL OF ELECTRIC DRIVE FOR LINEAR COMRESSOR

· MATLAB Simulation, Modelling and control of power electronics drive for linear compressor to improving efficiency of refrigeration and a smart control for the same.

EL-PSO BASED MPPT FOR SOLAR PV UNDER PARTIAL SHADED CONDITION (PSC)

· Simulation (MATLAB) and hardware implementation of MPPT under PSC using the Enhanced Leader Particle Swarm Optimization (EL-PSO) and Comparative study with other methods like P&O, PSO.
· Modeling of PV cell and Coding of EL-PSO in MATLAB Script.

ENHANCEMENT OF VOLTAGE STABILITY IN POWER SYSTEM BY SHUNT COMPENSATION

· The fundamental causes of voltage instability were identified as incapability of system to satisfy reactive power demand. To meet excessive load demand shunt capacitor bank ware switched
· Designed 3-Phase π-Transmission line model and Hardware implementation of Shunt compensation.

IMPROVEMENT OF THE GRID POWER QUALITY USING STATCOM FOR WIND FARM

· Studied Power Quality Issues and Standards
· Simulation study under different abnormal operating conditions.

DESIGN OF TELECOM POWER SUPPLY

· Simulation Study of Telecom Power Supply for output of 48V DC supply with objective to improve Input power Factor of Circuit.

LINEAR GENERATOR FOR ELECTRICAL POWER GENERATION FROM OCEAN WAVES

· Build a small prototype for Final semester Diploma Project.

- **WORKSHOPS**

- **IGCS Winter School 2018: Smart Grid-Sustainable Integration of Renewables for Tomorrow's Power Grids | FEB 18**
- **GIAN course on "SiC Devices enabled Power Converters Applications- Opportunities and Challenges" | DEB 17**
- **A forum on Smart Grid for Smart City's in India | JULLY 17**
- **Programming FPGA controller for Solar PV application based on Lab VIEW | NOV 17**
- **High Penetration of Renewable Energy in Smart Grid – Perspective & Challenges | AUG 16**
- **PV Cell Modelling, MPPT Implementation & Interconnection Schemes | OCT 16**
- **Solar Vehicle Design & Manufacturing | OCT 16**
- **Modelling and Design of DC-DC Converter for Traction Application | NOV 16**
- **FPGA Programing for DC-DC Converter | MARCH 17**

- **PLC & SCADA Training | OCT14**
- **Hands On Switchgear Training Program For Future Engineers L&T | JAN12**

- **SIMULATION and HARDWARE TOOLs**

MATLAB | EMTP | PSIM | dSPACE | ARDUINO |

AREA OF INTREST
RENEWABLES APPLICATION FOR ENERGY ACCESS, MICRO GRID TECHNOLOGY, MODELING AND CONTROL OF ELECTRICAL DRIVES.

ACHIEVEMENTS
· **1st runner-up in Rural Energy Challenge in Green Energy Summit at IITM | JAN 2018**
· **1st Prize in quiz on Codes and Standards | DEC17**
· **3rd Prize for Innovative Idea for Energy Conservation | DEC17**
· **Best Paper prize in Science and Engineering Conference | DEC16**
· **2ed Winner of National Level Robotics Competition | AUG13**