Prachi Arora

26 | Female
+91 9718606847 | prachii.arora@gmail.com
B. Tech. (EE), HBTI, Kanpur | M.Tech (Power Electronics, Machines and Drives), IIT Delhi
Design Engineer, Su-Kam Power Systems Limited, Gurgaon

Career Objective

To pursue a challenging and professionally satisfying career which will enable me to utilize my technical skills and knowledge and where my potential can be maximized and I discover new horizons of myself.

Professional Experience — Total Experience: 3 years

Su-Kam Power Systems Limited, Gurgaon	Design Engineer	April 2015-Present
Galgotias College of Engineering and Technology, Greater Noida	Assistant Professor	July 2013-April 2015

Qualification

Year	Degree	Board / University	Percentage
2013	M. Tech.	I.I.T. Delhi	9.025/10
2011	B. Tech.	H.B.T.I. Kanpur	81.00
2007	Std. XII	C.B.S.E.	89.20
2005	Std. X	C.B.S.E.	88.60

Publications

- Paper on "Implementation of Modified Current Synchronous Detection Method for Voltage Control of Self-Excited Induction Generator" published in IET, Power Electronics, (PEL-2014-0718.R1).

Functional

- Hardware design- The existing topologies and research for new topologies which helps increase efficiency, reduce the cost and simplify the system. Testing of the product and its debugging.
- Simulation of the hardware set-up using various simulation tools. Finding the control parameters from the simulation.
- Handling the components selection- communicating with vendors, negotiating with the price in terms of quality and quantity.
- Responsible for documentation of a product including Finalization of its technical Specifications, bill of material preparation, Product Verification, Testing procedure and Verification of the Jig for testing.
- Support to sales, production and service department for new and existing products. Helping the marketing team for marketing of the product- making brochures, video and presentation.

Projects

PROFESSIONAL

Title: GRID FED INVERTER: Extracting maximum power from solar and transmitting to the grid — Oct 2015- Present
Responsibilities: Single-handedly involved in the prototype development of the product including the design of its sensing circuits, topology, SMPS (switched mode power supply). Simulated the model to find out the control parameters of the Phase locked loop (SOGI based PLL) for synchronization with grid, implementing Maximum Power Transfer from solar.

Title: Transformer-less pure sine wave inverters with 12V/24V compatible systems — April 2015-Oct 2015
Responsibilities: Testing and de-bug of the product, increasing the efficiency of the product for making it achieve 4-star energy rating by Bureau of Energy Efficiency (BEE), selecting the components qualifying the BIS standards, reduction in the cost of the product by second source qualification of the components in existing design, increasing the efficiency of the system by improving the technology used, verification of the Rig made for testing of the PCB cards.

Title: Solar Integrated Inverters within-built MPPT feature — Oct 2015- Present
Responsibilities: Integrated the two existing products for making it solar compatible and in-built feature of MPPT (Maximum Power Point Tracking). Involved in the testing and marketing of the product.

SUMMER INTERNSHIP- T.E.R.I.,The Energy and Resource Institute, Delhi,

Tiltle: Smart Mini Grid System — *May 2011- July 2011*
Abstract: Implemented various Maximum Power Point Tracking techniques to extract maximum power from the solar. Used boost topology to make stable DC bus and invert the output to feed the loads.

ACADEMIC

- **Design, modeling and Implementation of Intelligent Control Algorithms of SEIG system** July 2012- May 2013 (MTP)
  Abstract: Improvement of Power Quality problems, Voltage and Frequency regulation associated with the standalone Asynchronous Generator employed for non-conventional energy sources using STATCOM. It is a hardware implemented system in which an innovative method has been used to solve power quality issues with standalone asynchronous generator. Simulation of the prototype has been done to find the various constants and control parameters and then these have been used in the prototype model developed to verify simulation with the actual hardware results.

- **Improvement in Power System Stability using FACTS Controller** Jan 2011- May 2011 (BTP)
  ***Abstract*:** Improvement in the voltage stability of the distribution system using FACTS Controller. Several Technical issues related to FACTS installations have been highlighted and performance comparison of different FACTS controllers has been done. Simulation of various algorithm involving the voltage control using STATCOM has been done in Simulink Environment.

- **Scada for Power System Operation** Jan 2010- May 2010 (BTMP)
  ***Abstract*:** Study of the Supervisory Control and Data Acquisition system in various domains with the basic emphasis in Power System and Control.

- **Industrial Training in Panki Thermal Power Station** Jun 2010- Jul 2010
  ***Abstract*:** Industrial Training on Distribution and maintenance at Panki Thermal Power Station, involving Boiler maintenance Division, Electrical Distribution Division, Steam Generating Unit, cooling and maintenance.

Other Projects

- Simulation of the performance of the D.C. Motor using Matlab/Simulink under starting, speed control and braking.
- Voltage regulation, load balancing and harmonic elimination using DSTATCOM.
- Speed Control of Induction Motor Drive: Modeling of the Induction machine and its speed control using techniques like V/f control and vector control.
- Circuits, Design, control, analysis and applications of Improved power quality three-phase isolated Boost Bridge Converters.
- Design of single phase ac-dc converter with first stage in Dis-continuous Conduction Mode as buck boost and second as isolated SEPIC in Continuous Conduction Mode.
- Design of three-phase four-wire three single-phase VSI based AC series active filter for Harmonic Elimination, Neutral current compensation & Voltage regulation.

Skills Set

Operating Systems:	Windows XP, Windows-07, 08, Vista
Softwares known:	Simulink-Matlab, Psim, Multi-Sim, Ps-pice, dSPACE DSP
Programming Languages :	C, C++
IDE:	Code Composer Studio
Measuring Instruments:	Teledyne Lecroy, Tektronix (THS720 P, TPS2014), Power Analyzer (Yokogawa WT500), Aplab LCR-Q-METER, Chroma PV Array Simulator, Reveal Solutions Environmental chamber

Achievements and Extra-curricular Activities

- Has been academic school captain and held number of positions of responsibilities in various organizations in college.
- Award of Merit for winning prize in Extempore during Ensparc-2008 held in H.B.T.I., Kanpur.
- **Robotics-Events**: Participated in Robotics Workshop and won prizes in various robotics events.
- Has always been a good orator. Won several prizes for debates, speeches, quizzes, academic performance and other activities in school and college.
- Awarded for Star Performer for 2015 from Su-Kam Power Systems Limited for BIS Certification.
- Managed procurement of redundant components in previous scrapped cards and used in the upcoming new product.

Personal Details

Father's Name	:	Mr. KIRAN KUMAR ARORA
Date of Birth	:	September 2, 1989
Strengths	:	Team work and team management skills, Responsible, Diligent
Address	:	118/183, Guru Nanak Tower, Kaushalpuri, Kanpur, U.P.-208012
Hobbies	:	Travelling, Listening to music, Cooking