

# CURRICULUM VITAE

1. **Name** **DR. RAKESH MAURYA**

**Designation:** Associate Professor

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Email : *rmaurya@eed.svnit.ac.in*

2. Date of Birth: **December 25<sup>th</sup>, 1976**

3. Institution: **Sardar Vallabhbhai National Institute of Technology Surat, Gujarat**

4. Department: **Department of Electrical Engineering**

5. Field of Specialization: AC/DC Drives, Advanced Electric Drives, Active Filters, High Power Factor Converters, Multi Level Converters, DC-DC Converters, Power Converters for PV applications

## 6. Academic Qualifications (High School onwards):

S. No	Degree	University/ Institute	Division/ Grade	Year	Specialisation/ Subjects
1.	High School	U.P. Board, Allahabad	I Div. 74.67%	1991	Hindi, English, Maths, Science
2.	Intermediate	U.P. Board, Allahabad	I Div. 70.40%	1993	Hindi, English, Maths, Physics, Chemistry
3.	B.Tech	Kamal Nehru Institute of Technology, Sultanpur, U.P.	71.38%	1998	Electrical Engineering
4.	M.Tech	Indian Institute of Technology, Roorkee, UA	7.4	2002	Power Electronics & Electric Drives
5.	Ph.D	Indian Institute of Technology, Roorkee, UA	---	2014	Electrical Engineering

### Title of B.Tech. Project:

“Design, Fabrication High Voltage Power using Cascaded Single-Phase transformers”

### Title of M.Tech. Dissertation:

“Generation of Variable Frequency Analysis of VSCF Power Conversion Scheme using Brushless DC Generator ”

### Title of Ph.D Thesis:

“ Performance Investigations of Low Voltage High Current Power Supply”

## 7. Industrial experience, if any:

- (1) Undergone four week training at Bharat Pump and Compressor Limited (BPCL), Allahabad during B.Tech in 1996.
- (2) Undergone four week training at UP state Electricity Board, Allahabad during B.Tech in 1997.
- (3) Visited various industries during teaching, some of them are:
  - (a) BHEL, Haridwar
  - (b) L&T, Surat
  - (c) WAAREE Energies Limited, Surat
  - (d) Happy Engineering Limited, Surat
  - (e) Khatani Transformer Pvt. Limited, Surat

(f) Dawn Electrical Limited, Indore (M.P.).

### 8. Award / Prize / Certificates etc.

1. GATE Scholarship during year 2000-2002.
2. Perfect Award for achieving 100% results for year 2006 at College of Engineering, Roorkee.
3. QIP Scholarship during year 2010-2013.

### 9. Sponsored Research Project

1. Adoptive Control Algorithms for DSTATCOM, "Gujarat Council on Science and Technology, (GUJCOST)", 2016-18, S. K. Patel, S. R. Arya, R. Maurya.
2. Development of Topology and Control for Shunt and Series Connected Custom Power Devices, "Department of Science and Technology, New Delhi, Science and Engineering Research Board (SERB), " 2016-2019, S. R. Arya, R. Maurya.
3. Design of Low Cost Multifunctional Integrated Vehicle Battery Charger with Improved Power Quality Features, "INSTITUTE RESEARCH GRANT-SVNIT" (*Submitted*)

### 10. Publications:

#### (A) Research Papers published in National/ International Journals:

IEEE Transactions	IET-UK	Elsevier	Taylor & Francis	Other International Journals	Total
09	04	01	05	15	34
TPE-4, TIE-1, TIA-1 JESTPE-2 CPSSTPE-1	IET(GTD)-1, IET(RPG)-1 IET (EPA)-2	IJEPES-1	EPCS-5	ITEES-4, IJEEPS-5, IJPEC-2, IREE-1, JGE-1, JCSE-1, APE-1	

#### 2019

- (1) Ashutosh Kumar Giri, Sabha Raj Arya, Rakesh Maurya and B. Chitti Babu, "Mitigation of Power Quality Problems in PMSG based Power Generation system using Quasi-Newton based Algorithm," *International Transactions on Electrical Energy Systems*, 2019. (Accepted)
- (2) Rajan V. Rakesh Maurya, Shaikh Mo.Suhel A, "Implementation of PWM technique with Soft Starting Algorithm for Three-Phase Induction Motor Drives" *International Journal of Power and Energy Conversion* (Inderscience), 2019. (Accepted)
- (3) Shaikh Mo.Suhel A, Rakesh Maurya, Nitin Gupta, "Modified Switching Table Based Direct Torque Control of Six-Phase Induction Motor Drive," *Electric Power Components and Systems*, <https://doi.org/10.1080/15325008.2019.1637970> , 2019. (Accepted)
- (4) Shaikh Mo.Suhel A, Rakesh Maurya, "Simplified implementation of SVPWM techniques for a Six-phase machine with reduced current distortion features," *IET Electric Power Applications*, 2019. DOI:10.1049/iet-epa.2018.5918 (Accepted)

- (5) Asuthosh Giri , Sabha Raj Arya, Rakesh Maurya, B.Chitti Babu, “VCO less PLL Control Based VSC for Power Quality improvement in Distributed Generation System”, IET Electric Power Applications, DOI: 10.1049/iet-epa.2018.5827 , March 2019 (SCI) - In Press.
- (6) Sanjay Kumar Patel, Sabha Raj Arya and Rakesh Maurya , “Optimal Step LMS Based Control Algorithm for DSTATCOM in Distribution System,” *Electric Power Components and Systems*, 2019. (Accepted)
- (7) Sabha Raj Arya, Rakesh Maurya and Talada Appala Naidu, “Amplitude Adaptive Notch Filter with Optimized PI Gains for Mitigation of Voltage based Power Quality Problems,” *CPSS Transactions on Power Electronics and Applications*, Vol. 03, no. 04, pp. 313-323, Dec. 2018
- (8) Talada Appala Naidu, Sabha Raj Arya, and Rakesh Maurya, “Phase Locked Loop based on Third Order SSI for Compensation of Voltage Related Power Quality issues using DVR,” *Electric Power Components and Systems*, 2019. (Accepted)
- (9) Ashutosh Kumar Giri, Sabha Raj Arya and Rakesh Maurya, “Compensation of Power Quality Problems in Wind based Renewable Energy System for Small Consumer as Isolated loads,” *IEEE Transactions on Industrial Electronics*, Vol. 66, no. 11, . pp. 9023-9031, Nov. 2019
- (10) Shaikh Mo.Suhel A, Rakesh Maurya, “Realization of 24-Sector SVPWM with New Switching Pattern for Six-Phase Induction Motor Drive ,” *IEEE Transactions on Power Electronics*, vol. 34, no. 6, pp. 5079-5092, June 2019.
- (11) Talada Appala Naidu, Sabha Raj Arya, and Rakesh Maurya, “Multi-Objective Dynamic Voltage Restorer with Modified EPLL Control and Optimized PI Controller Gains,” *IEEE Transaction on Power Electronics*, vol. 34, no. 3, pp. 2181-2192, March 2019.

## 2018

- (12) Ashutosh Kumar Giri, Sabha Raj Arya and Rakesh Maurya, “Variable Learning Adaptive Gradient Based Control Algorithm for VSC in Distributed Generation,” *IET Renewable Power Generation*, Vol. 12, no. 16, . pp.1883 – 1892, Dec. 2018
- (13) Shaikh Mo.Suhel A, Rakesh Maurya, “A Comparative Study of PWM Techniques for Multiphase Induction Motor Drives,” *International Journal of Emerging Electric Power Systems*. 2018, DOI: 10.1515/ijeeps-2018-0049 (Accepted)
- (14) Ashutosh K Giri, Amin Qureshi, Sabha Raj Arya, Rakesh Maurya and B. Chitti Babu, “Power Quality Improvement in Stand-alone SEIG based Distributed Generation System using Lorentzian Norm Adaptive Filter,” *IEEE Transactions on Industry Applications*, 2018. DOI: 10.1109/TIA.2018.2812867 (Accepted)
- (15) B.R. Ananthapadmanabha, Rakesh Maurya and Sabha Raj Arya, “Bidirectional Converter for Electric Vehicle Battery Charging with Power Quality Features,” *International Transactions on Electrical Energy Systems*, 2018,

- (16) B.R. Ananthapadmanabha, Rakesh Maurya and Sabha Raj Arya, "Improved Power Quality Switched Inductor Cuk Converter for Battery Charging Application, " *IEEE Transactions on Power Electronics*. vol. 33, no. 11, pp. 9412-9423, Nov. 2018.
- (17) Ashutosh K Giri, Amin Qureshi, Sabha Raj Arya, Rakesh Maurya and B. Chitti Babu, "Features of Power Quality in Single Phase Distributed Power Generation using Adaptive Nature Vectorial Filter," *IEEE Transaction on Power Electronics*, vol. 33, no. 11, pp. 9482-9495, Nov. 2018.
- (18) Sanjay Kumar Patel, Sabha Raj Arya, Rakesh Maurya and B. Chitti Babu, "Control Scheme for DSTATCOM based on Frequency Adaptive Disturbance Observer," *IEEE Journal of Emerging and Selected Topics in Power Electronics*. vol. 6, no. 3, pp. 1345-1354, Sept. 2018.
- (19) B.R. Ananthapadmanabha, Rakesh Maurya and Sabha Raj Arya, "Hybrid Converter for Electric Vehicle Battery Charging with Power Quality Features," *International Journal of Computational Systems Engineering*, 2018. (Accepted)
- (20) Talada Appala Naidu, Sabha Raj Arya, and Rakesh Maurya, "Phase Locked Loop based Techniques for Compensation of Voltage Based Power Quality issues in Distribution System," *International Journal of Emerging Electric Power Systems*, 2018. (Accepted)
- (21) B.R. Ananthapadmanabha, Rakesh Maurya, Sabha Raj Arya and B.Chitti Babu, "Smart Battery Charging Station for Electric Vehicle using Half Bridge Power Converter, " *International Journal of Emerging Electric Power Systems*, 2018. DOI: <https://doi.org/10.1515/ijeeps-2017-0257> (Accepted)
- (22) Sabha Raj Arya, Rakesh Maurya and Ashutosh K Giri, "Enhancement of Power Quality in Wind based Distributed Generation System using Adaptive Vectorial Filter," *International Journal of Emerging Electric Power Systems*, 2018, DOI: <https://doi.org/10.1515/ijeeps-2018-0008>, (Accepted)

## 2017

- (23) B.R. Ananthapadmanabha, Rakesh Maurya and Sabha Raj Arya, "Electric Vehicle Battery Charger with Improved Power Quality Cuk-derived PFC Converter," *Journal of Green Engineering*, Vol. 7, No. 1, pp:255-284, January 2017.
- (24) R.Maurya, S.P.Srivastava, and P.Agarwal, "Inter-Connection of Multiple DC-DC Converter for Low Voltage High Current Applications," *Asian Power Electronics Journal*, Vol. x, No. x, Month 2017 (Accepted)
- (25) B.R. Ananthapadmanabha, Rakesh Maurya and Sabha Raj Arya, "Magnetic Energy Recovery Switch Based Power Quality AC-DC Converters," *International*

(26) Sanjay Kumar Patel, Sabha Raj Arya, Rakesh Maurya and Bhim Singh, "Control of DSTATCOM using Extended Structure EPLL based Algorithm under Non-ideal AC Mains," *International Transactions on Electrical Energy Systems*, 2017. DOI: 10.1002/etep.2354

(27) S. K. Patel, S. R. Arya and R. Maurya, "Nonlinear Adaptive Volterra Filter for Control of Distribution Static Compensator," *IEEE Journal of Emerging and Selected Topics in Power Electronics*, vol. 5, no. 1, pp. 559-567, March 2017.

(28) Shaikh Mo.Suhel A, and Rakesh Maurya, "Modeling, Design and Analysis of Multi-Phase Induction Motor," *International Journal of Power and Energy Conversion* (Inderscience) vol. 8, no. 2, pp.186–203, 2017.

#### 2016

(29) S. K. Patel, S. R. Arya, R. Maurya, and B. Singh, "Control of Distribution Static Compensator Using Three-phase Enhanced Phase-locked Loop," *Electric Power Components and Systems*, vol. 44, no.13, pp. 1515-1529, 2016.

(30) S. K. Patel, S. R. Arya, R. Maurya, and B. Singh, "Interior point algorithm for optimal control of distribution static compensator under distorted supply voltage conditions," *IET Generation, Transmission & Distribution*, vol. 10, no. 8, pp. 1778-1791, 2016.

#### 2014

(31) Rakesh Maurya, S.P. Srivastava, Pramod Agarwal, "Design and Implementation of Three-Phase Resonant DC-DC Power Converter for Low Voltage High Current Applications," *Electric Power Components and Systems* (Taylor& Francis), vol. 42, pp. 1249-1265, 2014.

(32) Rakesh Maurya, S.P. Srivastava, Pramod Agarwal, "Multi-phase High Frequency Isolated DC-DC Converter for Industrial Applications," *International Journal of Emerging Electric Power Systems*, Volume 15, Issue 1, pp. 35–43, DOI: 10.1515/ijeeps-2013-0146, January 2014.

#### 2013

(33) R.Maurya, S.P.Srivastava, and P.Agarwal," Symmetrical and asymmetrical controlled three-phase high frequency isolated DC–DC converter," *International Journal of Electrical Power & Energy Systems* (Elsevier), vol. 52, pp. 132-142, 2013.

#### 2011

(34) Rakesh Maurya, S.P. Srivastava, Pramod Agarwal, " Design & Implementation of Transformer-Less Multi Output DC Power Supply, " *International Review of Electrical Engineering* (IREE), Vol. 6. no. 7, pp. 2910-2918, November-December 2011.

**(B) Research papers published / presented in National / International conferences / conference proceeding:**

- (1) Shaikh Mo.Suhel A, Rajan V., Rakesh Maurya, "Modified SVPWM Techniques for Six-Phase Asymmetrical Induction Motor Drives," in proc.of *1st IEEE International Conference on Energy Systems and Information Processing (ICESIP)* at I.I.I.T.D.M. Kancheepuram, India, July 04-06, 2019
- (2) Kumari Shipra, S.N. Sharma, Rakesh Maurya, "A Study of Passivity Based Controllers for Switched Electrical Network," in proc.of *1st IEEE International Conference on Energy Systems and Information Processing (ICESIP)* at I.I.I.T.D.M. Kancheepuram, India, July 04-06, 2019
- (3) Yesha Prajapati, Rakesh Maurya, "Battery Charging Station for Multiple Electric Vehicles with Power Conditioning," in proc.of *1st IEEE International Conference on Energy Systems and Information Processing (ICESIP)* at I.I.I.T.D.M. Kancheepuram, India, July 04-06, 2019
- (4) Sabha Raj Arya, Ashutosh K. Giri, Amin Qureshi, Rakesh Maurya, B.Chitti Babu, "Control Approach to Improve the Power Quality for Effective Utilization of Single Phase Induction Generator," in proc.of *1st IEEE International Conference on Energy Systems and Information Processing (ICESIP)* at I.I.I.T.D.M. Kancheepuram, India, July 04-06, 2019
- (5) Shaikh Mo.Suhel A, Rajan V., Rakesh Maurya, "Elimination of 5th and 7th Current Harmonics in Six-Phase Asymmetrical IM Drive," in proceeding of *14th IEEE India Council of International Conference (INDICON)* at I.I.T. Roorkee, India 15<sup>th</sup> -17<sup>th</sup> December, 2017
- (6) Rakesh Maurya, Praveen Patle, "Quadratic SEPIC Derived Hybrid Output Converter For Photo-Voltaic Applications" in proc.of *6th International Conference On Computer Applications in Electrical Engineering- Recent Advances (CERA-2017)*, at I.I.T. Roorkee, India 5<sup>th</sup> -7<sup>th</sup> October, 2017
- (7) Rakesh Maurya, Sabha Raj Arya and Arjun P Raj, "Experimental Evaluation of Interleaved DC-DC Converters for Maximum PV Power Tracking" has been accepted for publishing in proceeding of *7th IEEE Power India International Conference (PIICON)* at GEC Bikaner, Rajasthan, India 25<sup>th</sup> -27<sup>th</sup> November, 2016
- (8) Sanjay K. Patel, Sabha Raj Arya and Rakesh Maurya, "Harmonic Mitigation Technique for DSTATCOM using Continuous Time LMS Adaptive Filter" in proceeding of UPCON 2016, IIT BHU, Varanasi, U.P. India.
- (9) Rakesh Maurya, S.P. Srivastava and Pramod Agarwal, "High Frequency Isolated LLC DC-DC Resonant Converter for Low Voltage High Current Applications" in proceeding of *IEEE International Conference on Power Electronics, Drives and Energy Systems (PEDES 2012)*, 16-19,2012, at I.I.Sc Bangalore, INDIA.
- (10) Maurya, R.; Srivastava, S.P.; Agarwal, P.; , "A comparative study of symmetrical and asymmetrical controlled high frequency isolated multi-phase DC-DC converter," in

*proceeding of 7th IEEE International Conference on Industrial and Information Systems (ICIIS), 2012 , pp.1-6, 6-9 Aug. 2012.*

- (11) Maurya R., Agarwal P. and Srivastava S.P., "Performance investigation of Multipulse Converter for Low Voltage High Current applications," in proceeding of *IEEE International Conference on Computer Science and Automation Engineering (CSAE)*, vol.1, pp.211-216, Shanghai, 10-12, June 2011.
- (12) Maurya, R.; Gunturu, P.; Mo, Suhel.; , "Simulation and design of an integrated fly back converter for uninterruptible power supply," in proceeding of *2nd International Conference on Computer and Automation Engineering (ICCAE)*, vol.3, no., pp.524-528, 26-28 Feb. 2010.
- (13) Sabha Raj Arya, Rakesh Maurya, and V.A. Shah, " Control Techniques for Improvement of Input Power Factor in AC-DC Converters," in Proc of *International Conference (PSACO)* During March 13-15, 2008, pp 342-348.
- (14) Faizal M.F.Hafiz, Ranjit Roy, Rakesh Maurya and S.P. Ghoshal, "PSO Optimized Small Signal Stability Analysis of DFIG for WECS" in proceeding of *3rd National Conference on Current trends in Technology (NUCONE 2008)*, Nirma University of Science & Technology, Ahmedabad, 27th -29<sup>th</sup> November, 2008.
- (15) Sabha Raj Arya and Rakesh Maurya, "Analysis of Chopper Fed D.C. Drive with pwm and Hysteresis Current Control Scheme," in proceeding of *31st National Systems Conference*, P-133, M.I.T. Manipal , 2007.
- (16) Rakesh Maurya, S.R.Arya and S.P.Srivastava, "Analysis of Grid Connected Power Converter for Variable Speed Wind Energy Conversion," in proceeding of *31st National Systems Conference*, p-147, M.I.T. Manipal, 2007.
- (17) Rakesh Maurya, S.P.Srivastava and Pramod Agarwal, "Performance Investigation of Proposed AC-DC Power Converter to Control three-Phase Power using Four Switches," in proceeding of *National conference at Nirma University, Institute of Technology*, NUCONE 2006, (November 30- Dec 02, 2006) at Ahemdabad.
- (18) Rakesh Maurya, S.P.Srivastava and Pramod Agarwal, " Wind Energy in India: present & Future," in proceeding of *2nd National conference on recent developments in mechanical engineering (NCME 2006)* (November 10-11, 2006) at TIET Patiala.

**(c) Research Papers Communicated for Publications:**

- (1) Sanjay Kumar Patel, Sabha Raj Arya and Rakesh Maurya, "Harmonic Mitigation Technique for DSTATCOM Using Continuous Time LMS Adaptive Filter," IEEE Industry Applications Society. (submitted)
- (2) Sanjay Kumar Patel, Sabha Raj Arya and Rakesh Maurya and Bhim Singh, "Power Quality Problems and Solution in Distribution System," *Journal of The Institution of Engineers (India): Series B*, (Springer). (under review)
- (3) B.R. Ananthpadmanabha, Rakesh Maurya and Sabha Raj Arya, "High Step-up Gain PFC Converter for Electric Vehicle Battery Charging," *IETE Journal of Research*. (under review)

- (4) Ashutosh Kumar Giri, Sabha Raj Arya and Rakesh Maurya, Amin Qureshi, "Control Approach for Effective Utilization of Single Phase Induction Generator," International Journal of Electrical Power and Energy Systems (under review)
- (5) Talada Appala Naidu, Sabha Raj Arya, and Rakesh Maurya, "Phase Locked Loop based Techniques for Compensation of Voltage Based Power Quality issues in Distribution System," International Journal of Emerging Electric Power Systems. (Revised and resubmitted)
- (6) Ashutosh Kumar Giri, Sabha Raj Arya and Rakesh Maurya, "Adaptive Control Algorithm for VSC in Distributed Generation with Improved Power Quality Features," IET Generation, Transmission & Distribution (submitted)
- (7) Ashutosh Kumar Giri, Sabha Raj Arya and Rakesh Maurya, "Variable learning Adaptive Gradient Based Control Algorithm for VSC in Distributed Generation," IEEE Journal of Emerging and Selected Topics in Power Electronics. (submitted)
- (8) Ashutosh Kumar Giri, Sabha Raj Arya and Rakesh Maurya, "An Adaptive Control for VSC to Enhance Power Quality in Isolated Mode Power Generation," IEEE Transactions on Energy Conversion. (submitted)
- (9) Ashutosh K Giri, Amin Qureshi, Sabha Raj Arya, Rakesh Maurya and B. Chitti Babu, "Control of Distributed Power Generation System Using Echo State Network for Remote Located Domestic Loads," IET Electric Power Applications. (submitted)
- (10) B.R. Ananthapadmanabha, Rakesh Maurya and Sabha Raj Arya, "Isolated Bidirectional Converter for Electric Vehicle Battery Charging with Power Conditioning," CPSS Transactions on Power Electronics and Application. (submitted)

#### **11. List of Ph.D. Thesis Guided/ Guiding:**

- (1) Sanyay Kumar Patel, "Control Algorithm for DSTATCOM to Mitigate Power Quality Problems," August 31, 2018 (Awarded) as Co-Supervisor
- (2) B.R. Ananthapadmanabha, "Improved Power Quality Power Converter for Electric Vehicle Battery Charging" September 17, 2019 (Awarded) as main supervisor
- (3) Ashutosh Kumar Giri, "Power Quality Improvement in Wind based Distributed Power Generation System" (thesis submitted on September, 2019)
- (4) Shaikh Mohammed Suhel, "Performance Investigations on Multi-phase Induction Motor Drives" (thesis synopsis report submitted in July, 2019)
- (5) Talada Appala Naidu, "Control Algorithm for Dynamic Voltage Restorer to achieve Multi-Objective" (thesis pre-synopsis scheduled on December 03, 2019)
- (6) Kumari Shipra, "Passivity Based Controller for Switched Electrical Network"
- (7) Jyoti Gupta, "Integrated battery Charger with Improved Power Quality Features"
- (8) Jayadeep, "DSTATCOM and its Application in DG system"
- (9) Shah Krunal UmeshKumar, "Control of Multi-phase Induction Motor Drives"
- (10) Richa Dubey, "Control of Induction Motor Drives"

## 12. List of M.Tech. Dissertations Guided:

- (1) "Battery Charging Station for Multiple Electric Vehicle with Power Conditioning," by Ms. Yesha Prajapati (P17EL011), 2019.
- (2) "Improved Power Factor Correction Converter for plug-in Electric Vehicles with Reduced Switching Stress," by Mr. Ravindra Kumar Saini (P17EL010), 2019
- (3) "Bidirectional converter for electric vehicle battery charging system," by Mr. Vivek Kumar Singh, Co-guide Dr. Prabhakar Tiwari,MMMUT, Gorakhpur, 2019.
- (4) "Standalone Operation of Seven-Level and Nine-Level Modified Packed U-Cell (MPUC) Single-Phase Inverter for PV Applications," by Mr. Pankaj Singh, Co-guide Lt. Kishan Bhusan Sahay,MMMUT, Gorakhpur, 2019.
- (5) "Three Level DC-DC Converter For Battery Charging Application," by Mr. Yogesh Sahu, Co-guide Dr. Prabhakar Tiwari,MMMUT, Gorakhpur, 2019.
- (6) "SEPIC Converter Based Improved Power Quality AC-DC Conversion for Switched Mode Power Supply," by Mr. Rahul Kumar Rai, Co-guide Dr. A. K. Pandey,MMMUT, Gorakhpur, 2019.
- (7) "Performance investigation of Grid connected PMSG based WECS," by Mr. Raj Kamal Tiwari, Co-guide Dr. A. K. Pandey,MMMUT, Gorakhpur, 2019.
- (8) "Performance Analysis of Asymmetrical Six Phase Self-Excited Induction Generator," Mr. Sharat Yadav (P16EL008), 2018.
- (9) "Integration of Electrical Sources for Microgrid Application," Mr. Bandaru Obulesu (P16EL015), 2018.
- (10) "Direct Torque Control of Six-phase Induction Motor with Reduced Stator Current Harmonics", by Mr. Boddapu Ganesh (P15EL002), 2017.
- (11) "Control Strategy for Power Converter Interface for Uninterrupted DC Supply in Nanogrid Applications," by Mr. Tridib De (P15EL006), 2017.
- (12) "SEPIC Derived Hybrid Output Converters for Photovoltaic Applications", by Mr. Patle Pravin Kumar Lalit (P14EL014),, 2016.
- (13) "Speed Control of Multi-Phase Induction Machine", by Mr. Vamja Rajan Vinodray(P14EL010), 2016.
- (14) "Investigation of PWM Techniques for Three-Phase Voltage Source Inverter Fed Induction Motor Drive", by Mr. Burle Tulasi Rao (P14EL013) , 2016.
- (15) "DC-DC Converters for Photovoltaic Applications", by Mr. Arjun P. Raj (P13EL020), 2015.
- (16) "Performance Investigation of Power Factor Connected VSI fed Induction Motor Drives", by Mr.Hari- Shankar (P13EL010), 2015.
- (17) "Active Power Correction methods by PFC converters, by Mrs Neetha Raveendran, Co-guide Dr. Sabh Raj Aryaand Mrs K.T.Mangaladevi, 2015.
- (18) "Simulation and Design of Low Voltage High Current Multipulse Converter", by Mr. Shaikh Mohammed Suhel A. (P08EL875), 2010.
- (19) Simulation and Small Signal analysis of Full Bridge DC-DC Converter", By Mr.

Naveen Kumar Bohra (P08EL861), 2010.

(20) "Simulation and Design of An Integrated Fly-Back Converter for DC UPS", By Mr. Punnaiah Gunturu (P08EL852), 2009.

(21) "Bidirectional Buck-Boost Converter for Electric Vehicle Application" By Ms. Swati G. Savaliya (P06EL860), Co guide Mr. H.R. Jariwala, 2008.

(22) "Particle Swarm Optimization Based Small-Signal Analysis of Doubly Fed Induction Generator For Wind Energy Conversion System", By Mr. Faizal M.F. Hafiz (P06EL853), Co-guide Mr. Ranjit Roy, 2008.

### **13. Reviewer of National/ International Journals/ Conferences:**

- IEEE Transaction on Industrial Electronics
- IEEE Transaction on Power Electronics
- IET Power Electronics
- IETE Journal of Research
- International Journal of Electronics
- Electric Power Components and Systems
- Energy Conversion and Management
- National System Conference, 2007

### **14. Assignment carried out in other Insitution/ University:**

- An expert in curriculum workshop for development of new curriculum and syllabus for the Department of Electrical and Electronics Engineering, National Institute of Technology Sikkim, during May 31, 2019 to June 03, 2019
- Session Chair for 6<sup>th</sup> IEEE International Conference on Computer Applications in Electrical Engineering - Recent Advances (CERA 17) organized by the Department of Electrical Engineering, IIT Roorkee during October 05-07, 2017.
- Expert to review Doctoral Condidate and PG students at research week orqganized by Gujarat Technical University (GTU) at Ahemdabad.
- Session Chair for 7th IEEE Power India International Conference (PIICON) at GEC Bikaner, Rajsthan, India 25<sup>th</sup> -27<sup>th</sup> November, 2016.
- Nominated as AICTE Observer for Common Maganement Admission Test (CMAT) and Graduate Pharmacy Aptitude Test (GPAT)-2016.
- Appoinated as Observer for Joint Entrance Exam Main(JEE-Main-2016) and JEE (main) 2017.
- Appoinated as Deputy Presiding Officier for Joint Entrance Exam (Advanced) (JEE-2016)

### **15. Membership of Professional Societies:**

Life member, System Society of India

Member, IEEE

## 16. List of Expert Lecture delivered/ Invited Talk:

- (1) Improved Power Converter for Electric Vehicle Battery Charging, during One week STTP on "Future of Electric Mobility in India" at Marwadi University, Rajkot (Gujarat), June 17-21, 2019.
- (2) Energy Scenario and Impact of Power Electronics in 21st Century during Self Sponsored short terms course on "Power Quality and Distributed Power Generation", at Sardar Vallbhbhai National Institute of Technology, Surat (Gujarat) during Dec 20-24, 2017.
- (3) Bidirectional Converter for Electric Vehicle Battery Charging with Power Quality Features during Self Sponsored short terms course on "Power Quality and Distributed Power Generation", at Sardar Vallbhbhai National Institute of Technology, Surat (Gujarat) during Dec 20-24, 2017.
- (4) Resonant Converter for Low Voltage High Current Applications during Self Sponsored short terms course on "Power Quality and Distributed Power Generation", at Sardar Vallbhbhai National Institute of Technology, Surat (Gujarat) during Dec 20-24, 2017.
- (5) Power Converters for Integration of Renewable Sources to Microgrid, during National Workshop on "Modern Micro-grid and SCADA" at Government Engineering College, Banswara (Rajasthan) on October 14, 2017.
- (6) Power supply system for electric locomotive and its recent developments, during two weeks training cum workshop for supervisors and technicians of Indian Railways organized by Electronics Engineering department at Sardar Vallbhbhai National Institute of Technology, Surat (Gujarat) during Feb 06-18, 2017.
- (7) DC-DC Converters and Its Integration for UDC, during Self Sponsored short terms course on "Power Conditioning and Distributed Power Generation", at Sardar Vallbhbhai National Institute of Technology, Surat (Gujarat) during Dec 26-30, 2016.
- (8) Introduction to Soft Switching Converter, during Self Sponsored short terms course on "Power Conditioning and Distributed Power Generation", at Sardar Vallbhbhai National Institute of Technology, Surat (Gujarat) during Dec 26-30, 2016.
- (9) Recent Advances in Control of Multiphase Motor Drive, during QIP sponsored short terms course on Advances in Electrical Machines, at Sardar Vallbhbhai National Institute of Technology, Surat (Gujarat) during Dec 12-16, 2016.
- (10) Experimentation of Power Electronic Converters with dSPACE DS 1104 Interface, during QIP short terms course on Advances in control and Instrumentation Education and their implementation, at Sardar Vallbhbhai National Institute of Technology, Surat (Gujarat) during Dec 12-16, 2016.
- (11) Design of Resonant DC-DC Converters, during short terms course on Power Electronics Circuits and Control, at Sardar Vallbhbhai National Institute of Technology, Surat (Gujarat) during Dec 14-18, 2015.
- (12) Hybrid Output Converters for Nano-grids Applications, during short terms course on Power Electronics Circuits and Control, at Sardar Vallbhbhai National Institute of

Technology, Surat (Gujarat) during Dec 14-18, 2015.

(13) Performance of DC-DC Converters for Maximum Power Point Tracking in PV Applications, during short terms course on Power Electronics Circuits and Control, at Sardar Vallbhbhai National Institute of Technology, Surat (Gujarat) during Dec 14-18, 2015.

(14) Hybrid Output Converters for PV Applications, during short terms course on “Recent Trends and Practices in Electrical Systems” at Marwadi Education Foundation’s Group of Institution, Rajkot (Gujarat) on Dec 07-11, 2015.

(15) Improved Power Quality Converters(IPQC), during short terms course on Advancement and Applications of Power Electronics in Present scenario, at Malaviya National Institute of Technology, Jaipur (Rajasthan) during Dec 22-26, 2014.

(16) Power Converters for low voltage high current applications, during short terms course Power Electronics: Systems and Control, at Sardar Vallbhbhai National Insitute of Technology, Surat (Gujarat) during Dec 08-12, 2014.

(17) Global Energy Scenario and Impact of Power Electronics in 21<sup>st</sup> Century, during short terms course Power Electronics: Systems and Control, at Sardar Vallbhbhai National Insitute of Technology, Surat (Gujarat) during Dec 08-12, 2014.

(18) Improved Power Qaulity Converters-A Review, during short terms course on “Operation, Testing & Protection of Electrical Systems” at Marwadi Education Foundation’s Group of Institution, Rajkot (Gujarat) on August 07, 2014.

#### **17. List of Courses/ lecture Co-ordinated:**

(1) Two week TEQIP (III) Sponsored Short terms course on “Power Electronics for Distribution System and Electric Drives”, during June 25<sup>th</sup> – July 4<sup>th</sup>, 2018.

(2) One week Self Sponsored short terms course on “Power Quality and Distributed Power Generation”, during Dec 20-24, 2017.

(3) One week TEQIP Sponsored finishing school on “ Design and Control of Power Electronics Circuits using OPAL-Real Time Simulators ”, during March 17-23, 2017.

(4) One week Self Sponsored short terms course on “Power Conditioning and Distributed Power Generation”, during Dec 26-30, 2016.

(5) An invited talk on “Recent advances in the Power Electronics Interface” by Dr. Rajiv Kumar Singh, Associate Professor, Department of Electrical Engineering, I.I.T. B.H.U. on July 22, 2016.

(6) One week TEQIP Sponsored short terms course on “Power Electronics Circuits and Control”, during Dec 14-18, 2015.

(7) One week TEQIP Sponsored short terms course on “Power Electronics: Systems and Control”, during Dec 08-12, 2014.

#### **18. List of Short Term Courses Participated:**

(1) India – UK Advanced Training School (IUATS) on “ Optimal design and control of Smart community: New ideas for off-grid communities” at Indian Institute of Technology Gandhinagar, Gandhinagar, India during November 7-17 , 2016.

- (2) Short Course on “Advanced Power Electronics and Electrical Drives” at Department of Electrical Engineering, MANIT Bhopal, M.P. during Jan 03, 2016 to Jan 07, 2016.
- (3) TEQIP Sponsored One Week STTP on "Design of Experiment and Artificial Neural Network” at Department of Chemical Engineering, S.V. National Institute of Technology, Surat During June 22- 26, 2015.
- (4) Short Course on “Power Electronics Applications for Renewable Integration” at Department of Electrical Engineering IIT Kanpur during March 30, 2015 to April 01, 2015.
- (5) TEQIP Sponsored One Week STTP on "Applications of Evolutionary Computation Techniques on Power Systems” at S.V. National Institute of Technology, Surat During July 14- July 18, 2014.
- (6) TEQIP Sponsored One Week STTP on " Renewable Energy Systems ” at S.V. National Institute of Technology, Surat During July 07- July 11, 2014.
- (7) Training program on “Transforming Engineering Education System to Match Global Standard- Objective & Outcome based Education System (OOBS)” at EQUATE, New Delhi during July 02-05, 2014.
- (8) One Week STTP on “Power Transformer: Trends in Design, Analysis, Protection and Condition Monitoring ” at Indian Institute of Technology, Roorkee during June 04-08, 2012.
- (9) Induction Training organized by EQUATE New Delhi at Sardar Vallabhbhai National Institute of Technology, Surat during January 15-17, 2008.
- (10) AICTE Sponsored One Week STTP on "Advanced Engineering Optimization Through Intelligent Techniques" at S.V. National Institute of Technology, Surat During June 30- July 04, 2008.
- (11) DST-SERC on "Electric Power Quality: Monitoring, Analysis and Mitigation" Being organized at IIT Kanpur during April 07-11, 2008
- (12) VLSI And Embedded System during Dec17-22, 2007 at Central Institute of Tool design , Hyderabad (A.P.)
- (13) Resources Assessment and Scope of Entrepreneurship for sustainable development in Uttaranchal at College of Engg. Roorkee on Jan 13, 2006.
- (14) Effecting Teaching and Management Skills at College of Engineering Roorkee during July 10-13, 2006.

#### **19. Teaching and Research Experience:**

- (1) Presently as Associate Professor from 28.01.2019 to till date in the Department of Electrical Engineering, Sardar Vallabhbhai National Institute of Technology, Surat, INDIA.
- (2) Served as Assistant Professor from 01.03.2008 to till date in the Department of Electrical Engineering, Sardar Vallabhbhai National Institute of Technology, Surat, INDIA.

- (3) Served as Lecturer from 07.08.2007 to 01.03.2008 in the Department of Electrical Engineering, Sardar Vallabhbhai National Institute of Technology, Surat, INDIA.
- (4) Served as Senior Lecturer from 01.03. 2005 to 26.07.2007 in the Department of Electrical Engineering, College of Engineering, Roorkee, INDIA.
- (5) Served as Lecturer from 07.03. 2002 to 01.03.2005 in the Department of Electrical Engineering, College of Engineering, Roorkee, INDIA

**20. Subjects Taught:**

**(A) At Undergraduate Level**

- Electro-techniques
- Network Theory
- Electrical Machine-I & II
- Advanced Power Electronics Converters & its Applications
- Electrical Drives
- Utilization of Electrical Energy & Traction

**(B) At Postgraduate Level**

- AC Drives
- Power Electronics-II
- Modelling of Electrical Machines and DC Drives

**21. Departmental and Institutional Responsibilities:**

**A) At present**

- Chairman, Time Table Committee, May 2015 till date.
- Member, Department Web Incharge
- Member, Department Purchase Committee
- Lab Incharge, Electric Drives Lab
- Chief Warden, Sarabhai Bhavan from March 13, 2019 till date.
- Member-Secretary, Council of Warden
- Faculty Advisor, B.Tech II ( Electrical)

**B) In past**

- Chief Warden, Tagore Bhavan from July 01, 2014 to March 12, 2019.
- Warden, Swami Vivekanand Bhavan from Jan 01, 2014- July 01, 2014.
- Warden, Hostel Section Administration, from August 2008 to July, 2010.
- Member-Secretary, Council of Warden from August 2008 to July, 2010.
- Member, Time Table Committee, during August 2008-July,2010 and July 2014- May 2015.

**(Dr. RAKESH MAURYA)**