

FACULTY PROFILE

Name	:	R. Chudamani
Designation	:	Professor
Date of Joining	:	1 st January, 1998
Name of the Institution	:	Sardar Vallabhbhai National Institute of Technology (SVNIT) Surat.
Department	:	Electrical Engineering
Contact details	:	0261-2201576 (office), 9978005556 (Mobile)
Specialization	:	Power Electronics, Electrical Machines & Drives
Academic Qualifications	:	<ul style="list-style-type: none">• Ph.D. 2009, IIT Madras.• M.Tech. (Power Electronics, Electrical Machines & Drives) 1997, IIT Delhi.• B.E. (Electrical) 1990, SVRCET, Surat.

Area of Research: Power Quality, Control of Multiphase machines, MTPA control in IPMSM, grid connected solar photo-voltaic system, stability analysis of multi-converter system, Space vector switching techniques for multi-phase inverters.

Teaching experience

- Lecturer in Electrical Engineering Department, SVRCET, September, 1991 to June, 1996.
- Lecturer in Electrical Engineering Department, SVNIT, January, 1998 to January, 2006.
- Assistant Professor in Electrical Engineering Department, SVNIT, January, 2006 to December, 2010.
- Associate Professor in Electrical Engineering Department, SVNIT, January, 2011 to January, 2019.
- Professor in Electrical Engineering Department, SVNIT, January, 2019 till date.

PG / Ph.D. Student's supervision

- 4 Ph.D. (degree awarded) and 3 Ph.D. (ongoing)
- 26 (degree awarded) and 2 M.Tech. (ongoing)

Papers published in international journals (First Author)

1. R. Chudamani, Krishna Vasudevan and C.S. Ramalingam, "A Novel Power System Frequency Estimation Method," IET-Electronic Letters, Vol. 44, Issue-17, Aug. 14, 2008, pp.1030-1032.
2. R. Chudamani, Krishna Vasudevan and C.S. Ramalingam, "Nonlinear Least Squaresbased Harmonic Estimation for a Shunt Active Power Filter," IET-Power Electronics, Volume 2, issue 2, 2008, pp. 134-146.
3. R. Chudamani, Krishna Vasudevan and C.S. Ramalingam, "Real Time Estimation of

Power System Frequency using Nonlinear Least Squares,” IEEE Transactions on Power Delivery, Volume 24, Issue 3, July 2009, pp. 1021 – 1028.

Papers in international conferences (First Author)

1. R. Chudamani, Krishna Vasudevan and C.S. Ramalingam, “Nonlinear Least Squares Harmonic Current Estimator for Three phase Loads,” IEEE International Conference on Industrial Technology, Dec. 17-19, 2006, pp. 1581-1586.
2. R. Chudamani, Krishna Vasudevan and C.S. Ramalingam, “Simulation Study of Shunt Active Power Filters using Nonlinear Least Squares Harmonic Extraction Technique,” IEEE international Conference of Power Electronics, Drives and Energy Systems for Industrial Growth, Dec. 14-17, 2006, pp. 1-5.
3. R. Chudamani, Krishna Vasudevan and C.S. Ramalingam, “Comparative Analysis of Harmonic Extraction Techniques for Three phase Three Wire Shunt Active Power Filters,” IEEE international Conference on Power Electronics and Drives, Nov.27-30, 2007, pp.1700-1705.

Papers published in international journals (Co-author)

1. Mahmadasraf Abdulhamid Mulla, Chudamani Rajagopalan, and Anandita Chowdhury. "Hardware implementation of series hybrid active power filter using a novel control strategy based on generalised instantaneous power theory." *IET Power Electronics* 6, Vol. 3, pp. 592-600, 2013.
2. Mahmadasraf Abdulhamid Mulla, Chudamani Rajagopalan, and Anandita Chowdhury. "Compensation of Three-Phase Diode Rectifier with Capacitive Filter working under Unbalanced Supply Conditions using Series Hybrid Active Power Filter" *IET Power Electronics* , Vol. 7, Issue 6, June 2014, 1566 – 1577.
3. M. A. Mulla, R. Chudamani, and A. Chowdhury. "Experimental Evaluation of a Novel Control Method for Series Hybrid Active Power Filter working under Unbalanced Supply Conditions." *International Journal of Electrical Power & Energy Systems, Elsevier*, Vol. 64, January 2015, Pages 328–339.
4. M. A. Mulla, R. Chudamani, and A. Chowdhury, “An experimental assessments on different control techniques of series hybrid active power filter”, *International Transactions on Electrical Energy Systems*, Vol. 25, pp. 3075-3095, 2015.
5. Heli Golwala and R. Chudamani, “New Three-Dimensional Space Vector-Based Switching Signal Generation Technique Without Null Vectors and With Reduced Switching Losses for a Grid-Connected Four-Leg Inverter”, *IEEE Transactions on Power Electronics*, Volume: 31, Issue: 2, Feb. 2016, pp- 1026 – 1035.
6. Nilesh Shah and R. Chudamani, “Experimental Evaluation of a Partially Shaded Photovoltaic System with a Fuzzy-based Peak Power Tracking Control Strategy”, *IET Renewable Power Generation*, vol. 10, no. 1, pp. 98-107, 2016.

7. Nilesh Shah and R. Chudamani, “Experimental Investigation of a Multifunctional Grid Interactive Photovoltaic System Operating in Partial Shading Conditions”, IET Renewable Power Generation, vol. 10, no. 9, pp. 1382 – 1392, October 2016.
8. Chetan K. Lad and R. Chudamani, “ Simple Overlap Control Strategy for Commutation torque ripple minimization in a Brushless DC motor Drive”, International Journal on Engineering and Science (JESTECH), August, 2017, Volume 20 Issue 4, pp. 1406-1419.
9. Chetan K. Lad and R. Chudamani, “ Simple Overlap Control Strategy for Commutation torque ripple minimization in BLDC motor Drive”, IET Electric Power Applications, Volume 12, Issue 3, pp. 797-807, October 2017.
10. Rashmi Patel and R. Chudamani, “Stability Analysis of the main Converter supplying a constant Power load in a multi-converter system considering various parasitic elements”, International Journal on Engineering and Science (JESTECH), available online from 4th April, 2020.

Recent Conference Presentations (Co-author):

1. Toppo Elijah and R. Chudamani Multi-Objective Steepest Descent Optimization for MTPA Control of IPMSM Drive IEEE international Conference of Power Electronics, Drives and Energy Systems for Industrial Growth, IIT Madras, India, December 18-21, 2018.
2. Rashmi Patel and R. Chudamani Multi Objective Decision Making for Improving the Stability and Efficiency of a Multi-converter System Loaded with Constant Power Load IEEE international Conference of Power Electronics, Drives, Toulouse, France, July, 9-12, 2019.
3. Rashmi Patel and R. Chudamani Stability Analysis and Efficiency Improvement in a Multi-Converter System using Weighted Optimization Technique”, 2nd IEEE International Conference on Smart Technologies for Power, Energy & Control (STPEC-2021) 19 -22, December 2021.

Short term Courses Organized

- Jointly coordinated a short term course with Dr. M.A. Mulla on “Microcontroller based Power Electronics System Implementation (MPESI-2017)” sponsored by **NaMPET, CDAC** - Trivandrum, India during 14-18 August 2017.
- Jointly coordinated several short-term courses with Dr. M. A. Mulla and Dr. H.R. Jariwala under the aegis of **AICTE, TEQIP**.

Any other information:

Duties discharged in the department:

1. Ph.D. coordinator for two and half years from 2011.
2. PG in-charge of the PG programme, Power Electronics and Electrical Drives (PEED) for two years from March, 2016.
3. Final Year Faculty Adviser for one and a half year from June, 2018.
4. Served the department at the capacity of **Head of the Department** from 16th December, 2019 to 16th December, 2021. **(Two years)**