OCT'23- DEC'23

NEWSLETTER

SARDAR VALLABHBHAI NATIONAL INSTITUTE OF TECHNOLOGY SURAT

DEPARTMENT OF ELECTRICAL ENGINEERING

The Department of Electrical Engineering is one of the oldest departments at Sardar Vallabhbhai National Institute of Technology. The department actively conducts various academic and research activities throughout the year. This newsletter presents a brief about various activities from October 2023 to December 2023.

HIGHLIGHTS

- Research Publications
  - Journals -04
  - Conferences - 04
- Research Project - 01

Department Vision

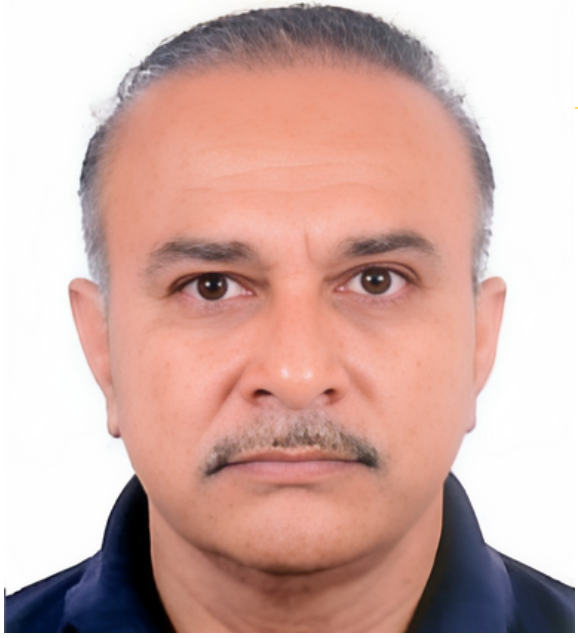
To be the leading department disseminating globally acceptable education, effective industrial consultancy and relevant research output.

Department Mission

To be a global centre of excellence in technical education and innovation producing competent professionals with integrity.

Programme Educational Objectives

- Graduates will be able to solve engineering / industrial problems by employing various learning resources and modern tools.
- Graduates will be able to design products to meet social, economic and environmental demand by innovative ideas.
- Graduates will be able to investigate complex problems and take up research and development work in the allied fields.
- Graduates will be able to communicate effectively through oral and written presentation of technical reports, adopting lifelong learning with integrity and ethics; and they will have interpersonal skills required to lead and nurture diverse teams.



PROF. A.K.PANCHAL
Head, DoEE
SVNIT, Surat

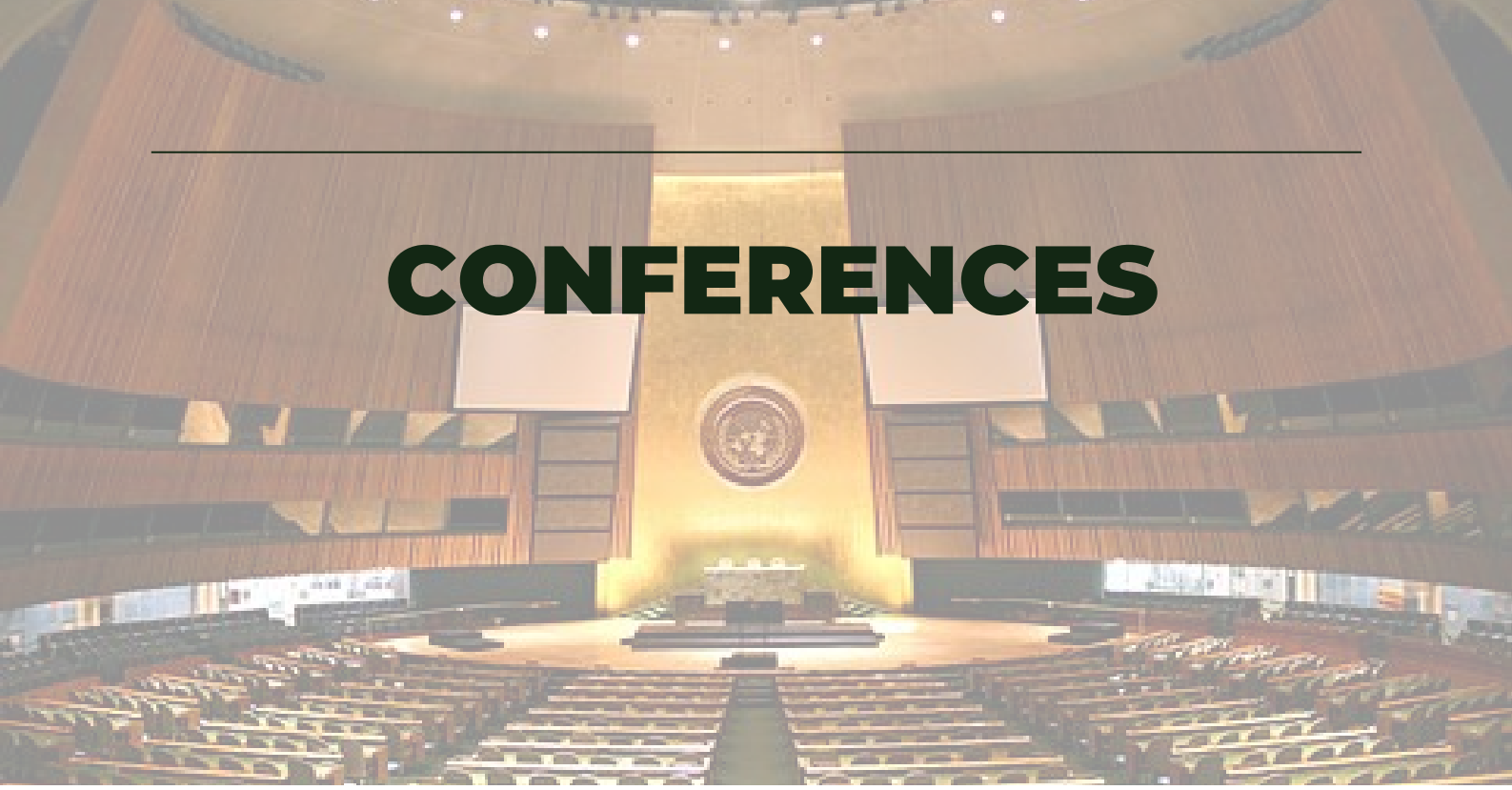
Welcome to the Department of Electrical Engineering at SVNIT! Our department is well-known for student-focused teaching-learning, engineering, and technology practice-oriented research and education. Nearly 40 faculties and staff are dedicated to imparting their high-quality education and research experiences to our students and scholars to become leaders of the next generation of technocrats with the highest professional achievements. The curricula and well-equipped laboratories are designed to prepare the workforce to overcome the present and emerging technological challenges of the century.

As a research-oriented department, our research activities are extended to the major areas of Electrical Engineering, including power and renewable energy systems, power electronics and drives, instrumentation, and control. Our faculty research is funded by several national and state agencies (SERB-DST, MeitY, CSIR, INAE, MHRD, GUJCOST, etc.). Our research in cutting-edge technology is published in the national and international referred journals with the IEEE, IET, Taylor & Francis, Elsevier, Springer, and other reputed publishers. Our department offers testing and consultancy services to the nearby industrial belt HAZIRA, Surat Municipal Corporation, power distribution companies, etc.

With nearly 500 UG, 150 PG and 100 PhD scholars, we are one of the largest and most prestigious departments within the Gujarat state. Our graduates place themselves in prestigious positions in the corporate, government, and educational institutions. Many fresh B. Tech. and M. Tech. graduates opt for higher education in the reputed international and national institutions (IISc, IITs, IIMs and others). We are dedicated to bring our education and research programmes to higher recognition in national and international level. I invite you to visit our website for exploring the department faculties, research activities, and exciting opportunities that await you here at DoEE.

I am happy to present the 11th issue of the Department's quarterly newsletter. The major parts of this collection include short-term training programmes organised (in the virtual mode), activities of Electrical Engineering Society, research publications and projects. I acknowledge the efforts of the committee members Dr. J. Venkataramanaiah, Dr. G. Sushnigdha and Dr. Suresh Lakhimsetty in editing this issue. I also thank Mr. Mayank Bhagat for assisting the committee members.

“Quality means doing things right and in time when no one is looking at you.” Henry Ford said for the successful business, and we do believe and follow it.

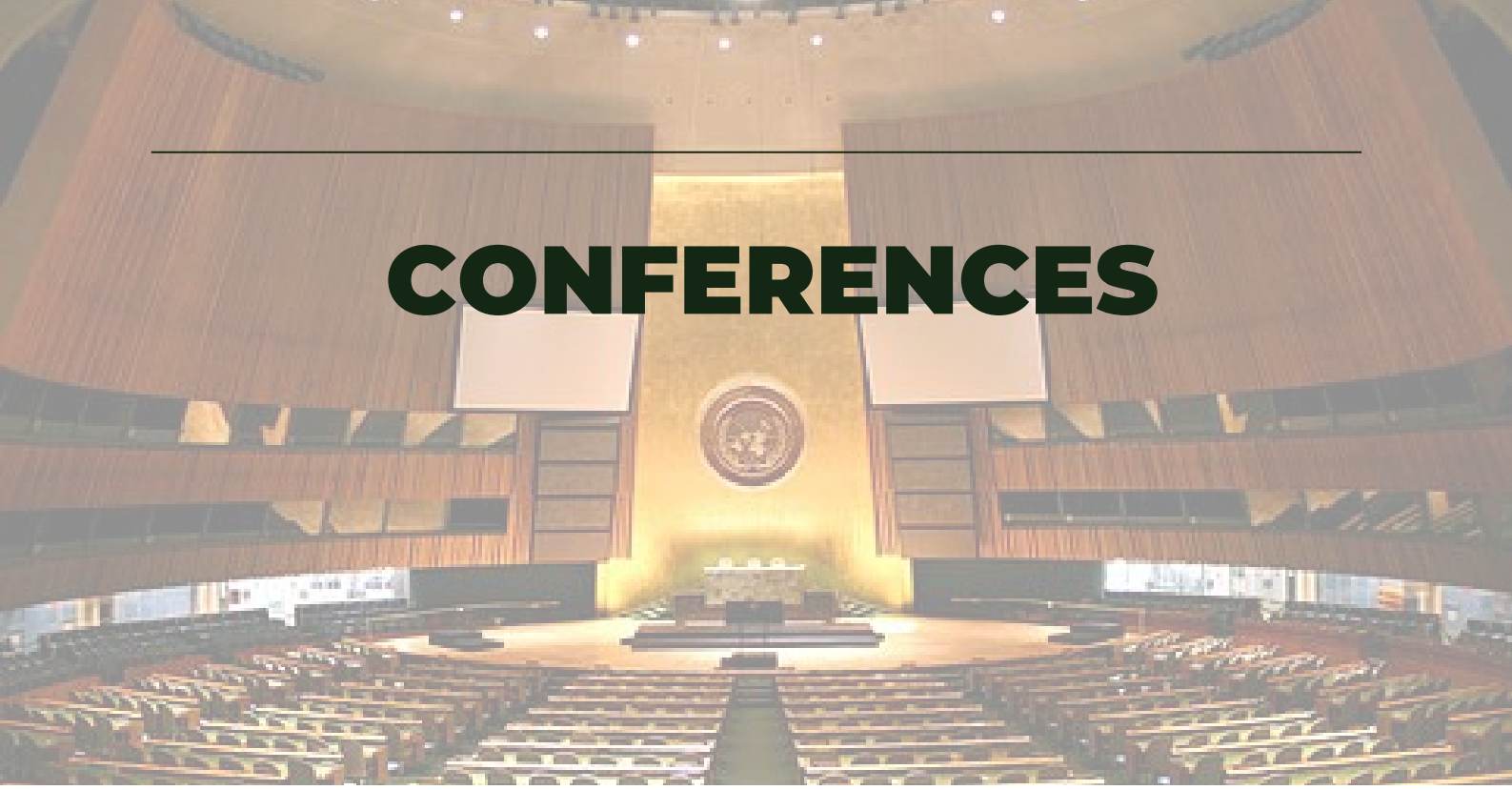


CONFERENCES

- Rashmi Ketan Patel, **Chudamani R**, “Experimental Investigation on Influence of Parasitics on Stability of Multi-Converter System and analysis of Optimum Performance”, IECON-2023, 49th International Conference of the IEEE industrial Electronics Society, 16-19, September, 2023, Singapore.

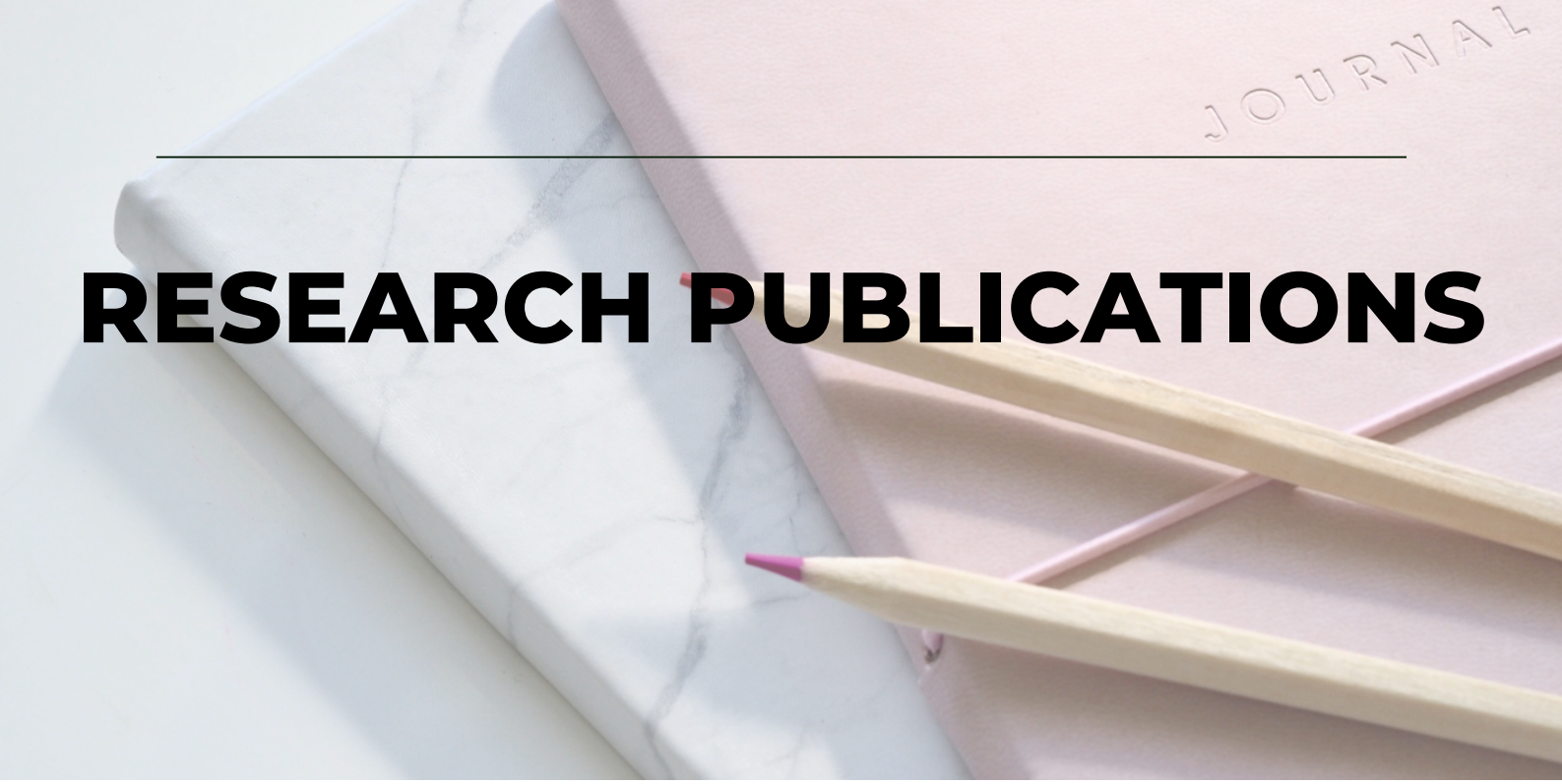
- Jahera Shaik, **R. Chudamani**, Chandani P. Gor, “Torque Ripple Reduction Strategy in FPIM Operating under Double Phase Fault with Pentagon and Pentacle Stator Configurations”, IECON-2023, 49th International Conference of the IEEE industrial Electronics Society, 16-19, September, 2023, Singapore.

- Jahera Shaik, **R. Chudamani,** Chandani P. Gor, “Modeling and Simulation of Open Phase Stator Winding Fault in Pentagon connected Five Phase Induction Motor Drive using Back-EMF”, IECON-2023, 49th International Conference of the IEEE industrial Electronics Society, 16-19, September, 2023, Singapore.



CONFERENCES

- Kevin Patel, **P. B. Darji**, “Analysis of Active Cell Balancing Topologies with Electrical Cell Modeling Techniques”, 11th National Power Electronics Conference (NPEC 2023), 14-16 December 2023, IIT Guwahati.



RESEARCH PUBLICATIONS

Journals

- Deepak Mishra, **Gangireddy Sushnigdha**, "A Novel Re-entry Trajectory Design Strategy Enforcing Inequality and Terminal Constraints in Height-Velocity Plane", Advances in Space Research, 2023.

- U. Pati and **K. D. Mistry**, "Cyber-Resilient Trading for Sustainable Energy Management: A Three-Phase Demand-Side Management Solution with Integrated Deep Learning Based Renewable Energy Forecasting," IEEE Transactions on Industry Applications, pp. 1-9, 2023, doi: 10.1109/TIA.2023.3332061.

- Joshi Sukhdev Nirbheram, **Aeidapu Mahesh**, Bhimaraju Ambati, Techno-Economic Optimization of Standalone Photovoltaic-Wind Turbine-Battery Energy Storage System Hybrid Energy System Considering the degradation of the components, Renewable Energy, Accepted for Publication.

- **Aeidapu Mahesh**, A Hybrid Search Space Reduction Algorithm and Newton-Raphson based Selective Harmonic Elimination for an Asymmetric Cascade H-Bridge Multi-level Inverter, International Journal of Emerging Electric Power Systems,. (Accepted for Publication)

Short-Term Training Course / Workshops

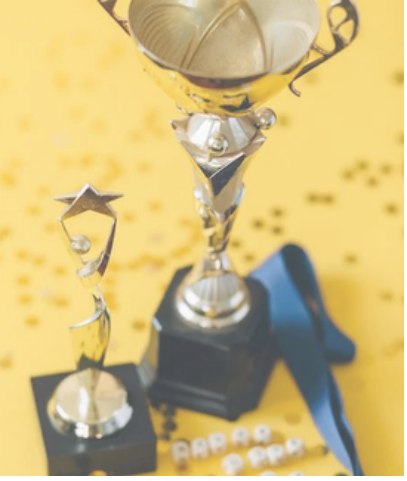
- **Suresh Lakhimsetty, Mahesh Aeidapu, K. V. Praveen Kumar and J. Venkataramainah** organised a high-end workshop (Karyashala) entitled "Digital Signal Processor and FPGA Controllers for Power Electronics and Drives Applications, 18-24 December 2023.

FACULTY PROMOTIONS

NAME: DR. H.R.JARIWALA
DESIGNATION: PROFESSOR
MONTH OF PROMOTION: DECEMBER 2023

NAME: DR. P.B.DARJI
DESIGNATION: PROFESSOR
MONTH OF PROMOTION: DECEMBER 2023

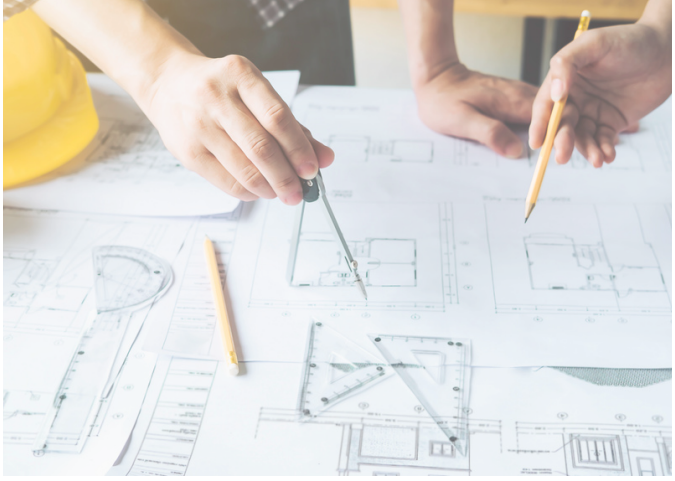
NAME: DR. S.R.ARYA
DESIGNATION: PROFESSOR
MONTH OF PROMOTION: DECEMBER 2023



FACULTY ACHIEVEMENTS

- Dr. S.R.Arya awarded by TATA RAO Award.

- Dr. Vasundhara Mahajan (Associate Professor, Department of Electrical Engineering) and Dr. Alka Mungray (Associate Professor, Department of Chemical Engineering) won silver medal in Women's doubles.


SANCTIONED PROJECTS

- **Project Title**: Implementation of Novel speed control strategies for PV based PMSRM drives in EV
- **Sponsored by**: SERB-INDIA
- **Sanctioned Amount**: 40 Lakhs
- **Duration:** 3 Years
- **PI**: Dr. Kunisetti. V. Praveen Kumar
- **Co-PIs**: Dr. Rajasekharareddy Chilipi, Dr. Suresh Lakhimsetty.

PH.D. AWARDEE

DS17EL007
05/08/23

VEGHELA MEGHNA AMRUTLAL

"NON-ISOLATED COUPLED INDUCTOR-BASED HIGH STEP-UP GAIN DC-DC TOPOLOGIES"

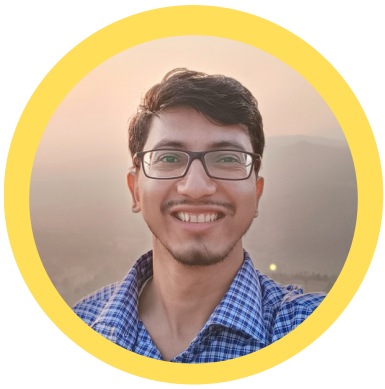
SUPERVISOR - DR. M. A. MULLA

TEAM

GANGIREDDY SUSHNIGDHA
ASSISTANT PROFESSOR
DOEE, SVNIT SURAT

J.VENKATARAMANAIAH
ASSISTANT PROFESSOR
DOEE, SVNIT SURAT

SURESH LAKHIMSETTY
ASSISTANT PROFESSOR
DOEE, SVNIT SURAT



MAYANK BHAGAT
SENIOR TECHNICIAN
DOEE, SVNIT SURAT