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**Assistant Professor,**  
**Department of Electrical Engineering**  
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## ACADEMICS

Qualification	Specialization	Year of completion	Institution	CGPA/ % of marks
Ph.D.	Design and Development of VFD based Voltage and Frequency controllers for a Self-Excited Induction Generator (SEIG) in Micro-Hydro Power Generation	2014	Indian Institute of Technology Delhi	8.818(in Course Work)
B. Tech	Electrical and Electronics Engg.	2006	Jawaharlal Nehru Technological University Hyderabad, India.	72.69

## EXPERIENCE

1. **Assistant Professor, SVNIT, Surat, India (Dec.2019-till date)**
2. **Postdoctoral Research Fellow at Khalifa University, Abu Dhabi, UAE (Aug.2019-Nov.2019)**
3. **Postdoctoral Research Associate at Khalifa University, Abu Dhabi, UAE (Dec.2014-July 2019)**
4. **Research Fellow at National University of Singapore, Singapore (Nov.2013-Oct.2014)**

## RESEARCH INTERESTS

Self-excited induction generators, power electronics, power quality, renewable energy (solar, hydro), micro-grids, modular multilevel converters, wireless power transfer and electric vehicles charging.

## PUBLICATIONS

### Journals: (Published and accepted)

1. **Rajasekharareddy Chilipi**, Ameena Alsumaiti and Bhim Singh, "Control of Grid-Tied Multiple Distributed Generation Systems with Cooperative Compensation Capabilities," in *IEEE Journal of Emerging and Selected Topics in Industrial Electronics*, (Early Access). 2021.
2. **Rajasekharareddy Chilipi**, Naji Al Sayari, and Jamal Al Sawalhi "Control of Single-Phase Solar Power Generation System with Universal Active Power Filter Capabilities using Least mean Mixed-Norm (LMMN) Adaptive Algorithm", *IEEE Transactions on Sustainable Energy*, vol. 11, no. 2, pp. 879-893, April 2020.
3. **Rajasekharareddy Chilipi**, Naji Al Sayari, and Jamal Al Sawalhi "Control of Dual Converter based Grid-tied Solar Photovoltaic System with Series-Shunt Compensation Capabilities", *IET Renewable Power Generation*, vol. 14, no. 1, pp. 164-175, January 2020.
4. **Rajasekharareddy Chilipi**, Naji Al Sayari, and Abdelali El Aroudi, "Coordinated Control of Parallel Operated Renewable-Energy-Based DG Systems", *IET Renewable Power Generation*, vol.12, no.14, pp 1623-1632, Oct. 2018.
5. **Rajasekharareddy Chilipi**, Naji Al Sayari, Khalifa Al Hosani, Muhammed Fasil, and Abul R. Beig, "Third order sinusoidal integrator (TOSSI)-based control algorithm for shunt active power filter under distorted and unbalanced voltage conditions," *International Journal of Electrical Power & Energy Systems*, Volume 96, 2018, Pages 152-162.
6. **Rajasekharareddy Chilipi**, Naji Al Sayari, Khalifa Al Hosani, and Abdul R. Beig "Adaptive Notch Filter Based Multipurpose Control Scheme for Grid-Interfaced Three-Phase Four-Wire DG Inverter" *IEEE Transactions on Industry Applications*, vol. 53, no. 4, pp. 4015-4027, July-Aug. 2017.

7. Naji Al Sayari, **Rajasekhareddy Chilipi**, Khalifa Al Hosani, and Fahad Al Maskari "Grid Synchronization and Control of Distributed Generation Unit with Flexible Load Compensation Capabilities using Multi-Output LMS-Filter" *International Journal of Electrical Power & Energy Systems*, vol. 93, pp. 253-265, December 2017.
8. **Rajasekhareddy Chilipi**, Naji Al Sayari, Khalifa Al Hosani, and Abdul R. Beig, "A Control Scheme for Grid-Tied DG Inverter under Unbalanced and Distorted Utility Conditions with Power Quality Ancillary Services" *IET Renewable Power Generation*, vol.10, no.2, pp.140-149, 2016.
9. **Rajasekhareddy Chilipi**, Naji Al Sayari, Abdul R. Beig and Khalifa Al Hosani, "A Multitasking Control Algorithm for Grid-Connected Inverters in Distributed Generation Applications Using Adaptive Noise Cancellation Filters" *IEEE Transaction on Energy Conversion*, vol. 31, no. 2, pp. 714-727, June 2016.
10. Naji Al Sayari, **Rajasekhareddy Chilipi** and Mohamad Barara, "An adaptive control algorithm for grid-interfacing inverters in renewable energy based distributed generation systems," *Elsevier Journal of Energy Conversion and Management*, vol. 111, pp. 443-452, March 2016.
11. Bhim Singh, S. S. Murthy, **Rajasekhareddy Chilipi**, and Prachi Arora, "Implementation of modified current synchronous detection method for voltage control of self-excited induction generator," in *IET Power Electronics*, vol.8, no.7, pp.1146-1155, 2015.
12. **Rajasekhareddy Chilipi**, Bhim Singh and S. S. Murthy "Performance of a Self-Excited Induction Generator with DSTATCOM-DTC Drive Based Voltage and Frequency Controller," *IEEE Transactions on Energy Conversion* vol.29, no.3, pp.545-557, Sept. 2014.
13. Bhim Singh, S. S. Murthy, **Rajasekhareddy Chilipi**, Sandeep Madishetti, and G. Bhuvaneswari, "STATCOM-VFD based voltage and frequency control of Small-Hydro Driven SEIG System," *IET Generation, Transmission and Distribution*, vol.8, no.9, pp.1528-1538, Sept. 2014.
14. Bhim Singh, S. S. Murthy, and **Rajasekhareddy Chilipi**, "STATCOM Based Controller for a Three-Phase SEIG Feeding Single-Phase Loads," *IEEE Transactions on Energy Conversion*, vol.23, no.2, pp.320-331, June 2014.
15. **Rajasekhareddy Chilipi**, Bhim Singh, S. S. Murthy, Sandeep Madishetti, and G. Bhuvaneswari, "Design and Implementation of Dynamic Electronic Load Controller for Three-Phase SEIG in Remote Small-Hydro Power Generation," *IET Renewable Power Generation*, vol.8, no.3, pp.269-280, April 2014.
16. **Raja Sekhara Reddy Chilipi**, Bhim Singh and S. S. Murthy "A New Voltage and Frequency Controller for Standalone Parallel Operated Self-Excited Induction Generators," *International Journal of Emerging Electric Power Systems*, vol. 13, no. 1, pp. 1–17, February 2012.
17. **R. S. R. Chilipi**, Bhim Singh, and S. S. Murthy, "A New Three-phase Four-wire Integrated Voltage and Frequency Controller for a Self-Excited Induction Generator Employing Water Pumping," *Journal of The Institution of Engineers (India)*, vol. 92, pp. 3-10, June 2011.

#### Conferences: (Published)

- **Rajasekhareddy Chilipi**, Ameena Al Sumaiti and B. Singh, "Control of Self-Excited Induction Generator-based Micro-Hydro Power Generation System Feeding Single-Phase and Three-Phase Loads," *2020 IEEE Industry Applications Society Annual Meeting, Detroit, MI, USA, 2020*, pp. 1-8
- **Rajasekhareddy Chilipi**, Naji Al Sayari, Khalifa Al Hosani, and Abdul R. Beig "Adaptive Notch Filter Based Multipurpose Control Scheme for Grid-Interfaced Three-Phase Four-Wire DG Inverter" *2016 IEEE Industry Applications Society Annual Meeting, Portland, OR, 2016*, pp. 1-8.
- Muhammed Fasil, Abdul R Beig, **Rajasekhareddy Chilipi**, Saikrishna Kanukollu, Naji Al Sayari and Khalifa Al Hosani, "Mitigation of Harmonics in Drilling Rigs using Shunt Active Power Filters" *2016 IEEE Energy Conversion Congress and Exposition (ECCE), Milwaukee, WI, USA, 2016*, pp. 1-8.
- Ujjwal Kumar Kalla, Bhim Singh, S. S. Murthy, Krishan Kant, and **Rajasekhareddy Chilipi**, "Adaptive harmonic cancellation scheme for voltage and frequency control of a single-phase two-winding SEIG," in *IEEE Industry Applications Society Annual Meeting*, vol., no., pp.1-7, 18-22, Oct. 2015.
- **Rajasekhareddy Chilipi**, Bhim Singh, and S. S. Murthy, "A 3-leg VSC based integrated voltage and frequency controller for a self excited induction generator employing water pumping," in *Proc. of IEEE Intl. Conf. on Industrial and Information Systems*, July -Aug. 2010, pp.580-585.

## PH.D. SUPERVISION (ON GOING)

1. **Thesis title:** Energy Management and Control of Micro-grids.  
**Student Name:** Mr. Ranjith Kumar Uppuluri  
**Role:** Main Supervisor
2. **Thesis title:** Design, Development and Control of Custom Power Devices for Power Quality Enhancement.  
**Student Name:** Mr. G Vishwas  
**Role:** Sole Supervisor
3. **Thesis title:** Design, Development and Control of MMC-based Power Electronic Transformers.  
**Student Name:** Ms. Ankita Sharma  
**Role:** Main Supervisor
4. **Thesis title:** Adaptive Control Algorithms for Dynamic Voltage Restorer.  
**Student Name:** Mr. Chinmay Deshpande  
**Role:** Main Supervisor

## M.TECH THESIS SUPERVISED

1. **Thesis title:** Model Predictive Control of Back-to-Back Connected Modular Multilevel Converters in HVDC Transmission Line  
**Student Name:** Mr. Rasik Ghoel  
**Role:** Sole Supervisor
2. **Thesis title:** Control of Battery Aided Microgrid with Solar-Wind Energy Sources in Grid Interactive and Isolated Mode Operation  
**Student Name:** Mr. Nikhil Tayade  
**Role:** Sole Supervisor

## B.TECH THESIS SUPERVISED

1. **Thesis title:** Advanced control of doubly fed induction generator in wind power systems  
**Role:** Sole Supervisor

## PATENTS

- Bhim Singh, S. S. Murthy, Ujjwal Kumar Kalla, and **Rajasekhareddy Chilipi** "A Digital Voltage Controller for Power quality Improvement in Two-winding Single-phase Self-excited Induction Generator System Driven by Bio-diesel/gas Prime Movers," Indian Patent No. 3115/DEL/2013. Published on 31<sup>st</sup> Aug. 2016.

## RESEARCH PROJETS (ON GOING)

1. **Title of the Project:** Design and Control of Renewable Energy based AC Microgrid Systems.  
**Budget:** 32, 94, 500 INR  
**Funding Agency:** Science and Engineering Research Board- Startup Research Grant (SERB-SRG).  
**Role:** Sole Investigator
2. **Title of the Project:** Research on Power Electronic Interface for Grid Integration of Renewables, Storage and Micro-Grids.  
**Budget:** 10, 00, 000 INR  
**Funding Agency:** SVNIT-SEED Grant.  
**Role:** Sole Investigator

## PROFESSIONAL ACTIVITIES

- Reviewer for IEEE Transactions on Energy Conversion
- Reviewer for IEEE Transactions on Industry applications
- Reviewer for International Journal of Electrical Power and Energy Systems
- Reviewer for IET Renewable power generation
- Reviewer for IET Generation, Transmission and Distribution