

Department of Electrical Engineering
Sardar Vallabhbhai National Institute of Technology,
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Dr. Suresh Lakhimsetty

Assistant Professor

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Research Areas

- Power Electronics
- AC Drives
- Multilevel inversion through Open-End Winding Configuration
- High Gain DC-DC converters
- Electric Vehicles

Educational Qualifications

Course	Specialization	Institution	Date of completion
Ph. D.	Power Electronics & Drives	National Institute of Technology, Warangal, Telangana	November 2019
M. Tech	Computer Controlled Industrial Power	National Institute of Technology, Calicut, Kerala	May 2010
B. Tech	Electrical & Electronics Engineering	Vignan Engineering College, Vadlamudi, Andhra Pradesh	May 2008
Diploma	Electrical & Electronics Engineering	Bapatla Polytechnic College, Bapatla, Andhra Pradesh	March 2005
SSC	--	Z P High School, Cherukuru, Andhra Pradesh.	March 2002

Research Projects

S. No.	Name of the Project	Funding Agency	Duration
1	Implementation of Efficient Switching Algorithms for Open-End Winding Induction Motor Drive for PV Powered Electric Vehicles	SVNIT Surat	2 Years (From February 2021) Amount: 10 Lakhs

Positions held

S. No.	Name of the Institute	Name of the post	Period	
			From	To
4	Sardar Vallabhbhai National Institute of Technology Surat, Gujarat	Assistant Professor	6 th May-2021	Till Date
3	V R Siddhartha Engineering College, Vijayawada	Assistant Professor	9 th May-2019	30 th April-2021
2	K L University, Vaddeswaram	Assistant Professor	28 th July-2014	7 th July-2015
1	Vignan's Lara Institute of Technology & Science, Vadlamudi	Assistant Professor	10 th June-2010	27 th July-2014

Significant Awards/Achievements/Honors/Distinctions Received

S. No.	Details of the Awards/Achievements/Honors/Distinctions
1	honored with Teacher of Excellence Award in the year 2012 at Vignan's Lara Institute of Technology & Science, Vadlamudi, AP.
2	Acted as Meta-reviewer for IEEE International Conference on Smart Technologies for Power, Energy and Control (STPEC-2021)
3	Acted as Meta-reviewer for IEEE Second International Conference on Power, Control and Computing Technologies ICPC ² T 2022
4	Acted as Technical Session Chair for the track Power Electronics and Electrical Transportation Systems at IEEE Second International Conference on Power, Control and Computing Technologies (ICPC ² T- 2022), organized by Department of Electrical Engineering, NIT-Raipur, INDIA, held from 1 st – 3 rd March 2022.
5	Acted as Technical Program committee member for International conference on Sustainable Development Goals & Gender Perspective (ICSDGAGP), 25 th and 26 th October 2021, Department of Electrical Engineering, and SVNIT Surat.

Journals

1. Kumar, PH, Mishra, D, **Lakhimsetty, S**, Somasekhar, VT. A space vector PWM scheme for an open-end winding induction motor drive with a reduced power loss. *Int Trans Electr Energ Syst.* 2021; 31(11):e13104. doi:10.1002/2050-7038.13104.
2. **Lakhimsetty, S**, Hema Kumar, P, Somasekhar, VT. Hybrid space-vector pulse width modulation strategies for a four-level open-end winding induction motor drive with an improvised harmonic performance and balanced DC-link capacitors. *Int Trans Electr Energ Syst.* 2021; 31:e12814. <https://doi.org/10.1002/2050-7038.12814>.
3. Chandra Sekhar, O, **Lakhimsetty, S**, Bhat, AH. A comparative experimental analysis of fractional order PI controller based direct torque control scheme for induction motor drive. *Int Trans Electr Energ Syst* 2021; 31:e12705. <https://doi.org/10.1002/2050 7038.12705>.

4. P. H. Kumar, **S. Lakhimsetty** and V. T. Somasekhar, "An Open-End Winding BLDC Motor Drive With Fault Diagnosis and Autoreconfiguration," in *IEEE Journal of Emerging and Selected Topics in Power Electronics*, vol. 8, no. 4, pp. 3723-3735, Dec. 2020, doi: 10.1109/JESTPE.2019.2948968. ISSN: 2168-6777.
5. Chandra Sekhar O, **Lakhimsetty, S.** Direct torque control scheme for a five-level multipoint clamped inverter fed induction motor drive using fractional-order PI controller. *Int Trans Electr Energ Syst* 2020; 30:e12474. <https://doi.org/10.1002/2050-7038.12474>
6. **S. Lakhimsetty** and V. T. Somasekhar, "An Efficient Predictive Current Control Strategy for a Four-Level Open-End Winding Induction Motor Drive," *IEEE Transactions on Power Electronics*, vol. 35, no. 6, pp. 6198-6207, June 2020. DOI: 10.1109/TPEL.2019.2954864. ISSN No. 0885-8993.
7. **S. Lakhimsetty** and V. T. Somasekhar, "A Four-Level Open-End Winding Induction Motor Drive With a Nested Rectifier–Inverter Combination With Two DC Power Supplies," *IEEE Transactions on Power Electronics*, vol. 34, no. 9, pp. 8894-8904, Sept. 2019. ISSN No. 0885-8993, DOI: 10.1109/TPEL.2018.2884023
8. **S. Lakhimsetty**, V. S. P. Satelli, R. S. Rathore and V. T. Somasekhar, "Multilevel Torque Hysteresis-Band Based Direct-Torque Control Strategy for a Three-Level Open-End Winding Induction Motor Drive for Electric Vehicle Applications," *IEEE Journal of Emerging and Selected Topics in Power Electronics*, vol. 7, no. 3, pp. 1969-1981, Sept. 2019. ISSN:- 2168-6777, DOI: 10.1109/JESTPE.2018.2870382
9. **S. Lakhimsetty** and V. T. Somasekhar, "Discontinuous decoupled SVPWM schemes for a four-level open-end winding induction motor drive with waveform symmetries," *IET Power Electronics*, vol. 11, no. 2, pp. 280-292, 20 2 2018. ISSN No.: 1755-4535, DOI: 10.1049/iet-pel.2017.0096
10. **S. Lakhimsetty**, N. Surulivel and V. T. Somasekhar, "Improvised SVPWM Strategies for an Enhanced Performance for a Four-Level Open-End Winding Induction Motor Drive," in *IEEE Transactions on Industrial Electronics*, vol. 64, no. 4, pp. 2750-2759, April 2017. ISSN No.: 0278-0046, DOI: 10.1109/TIE.2016.2632059.
11. **L. Suresh.**, G. R. S. Naga Kumar., M. V. Sudarsan and K. Rajesh “ A Comparative Analysis of PWM Techniques for ZSI in Application of Electric Vehicles ” *Journal of Electrical Systems*, Vol.9, Issue-4, December 2013, pp.453-467 [ISSN 1112-5209].

12. **L. Suresh.**, G.R.S.Naga Kumar & Dr. O. Chandra Sekhar “Analysis of Fuel Cell Based Converters in Application of Microgrids” *Journal of Electrical Engineering (JEE)* Vol. 15 Iss. 1 Jan. 2015, pp 191 - 198 [ISSN 1582-4594].

National / International Conferences

1. S. T. Ramsham and **S. Lakhimsetty**, "Fuzzy-Logic Speed Controller for 3-Level Open-End Winding Induction Motor Drive with Predictive Torque Control Technique," 2022 *Second International Conference on Power, Control and Computing Technologies (ICPC2T)*, 2022, pp. 1-5, doi: 10.1109/ICPC2T53885.2022.9776783.
2. **S. Lakhimsetty** and K. M. Shaik, "A Comparative Analysis of Current Control Strategies for a Solar based Single-Phase Grid Connected Inverter," *2021 International Conference on Sustainable Energy and Future Electric Transportation (SEFET)*, 2021, pp. 1-5, doi: 10.1109/SeFet48154.2021.9375693.
3. S. V. S. Prasad, R. R. Singh, V. T. Somasekhar and **S. Lakhimsetty**, "Performance evaluation of an induction motor drive with direct torque control for open-end winding and cascaded three-level topologies," *2017 6th International Conference on Computer Applications in Electrical Engineering-Recent Advances (CERA)*, Roorkee, 2017, pp. 308-313.
4. **S. Lakhimsetty** and V. K. J. D. Prasad, "Comparative performance analysis of decoupled SVPWM techniques for a four-level open end winding induction motor drive," *2016 IEEE 7th Power India International Conference (PIICON)*, Bikaner, 2016, pp. 1-6.
5. Dr. K. S. Sivanandan, **L. Suresh**, and Dr. T. S. Sirish “ Design and Development of Microcontroller Based Control Model for Hybrid Assistive Limb (Knee)” *2nd International Conference on Signals, Systems & Automation (ICSSA 2011)* on 24th and 25th of January 2011 at G H Patel college of engineering and Technology, Gujarat.

Supervision of M. Tech students

S. No.	Name of the student	Thesis title	Year
1	Ms. Sushmita Tejrao Ramdham (P20IC012)	Fuzzy Predictive Torque Control Scheme for A 3-Level Open-End Winding Induction Motor Drive	2022

Workshop/SSTPs/Conference Organized

Title	Name of the coordinator(s)	Date(s)
Digital Signal Processor: An Introduction with Code Composer Studio and PSIM Software	Dr. Mahmadasraf A. Mulla & Dr. Suresh Lakhimsetty	14-16, 23-24 April-2022
Introduction to PLECS Tool for Power Electronics Applications	Dr. Suresh Lakhimsetty & Dr. M. Hareesh	2 nd – 6 th July-2020

Membership of professional bodies

S. No.	Name of the Academy/Professional Body	Membership No.	Period	
			From	To
1	IEEE Member	90531636	01/01/2022	Till Date
2	IE(I) Member	M-1745632	01/01/2022	Till Date

Reviewer for the Journals

- IEEE Transactions on Industrial Electronics
- IEEE Transactions on Power Electronics
- International Transactions on Electrical Energy Systems
- Optimal Control Applications and Methods
- IEEE Journal on Emerging and Selected Topics in Power Electronics

Place: Surat

Date: 05/11/2022

Suresh Lakhimsetty