

# **Dr. E. Vargil Kumar**

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**RESIDENTIAL ADDRESS : Flat-1, Balaji Nagar, Gudlavalleru**

**ACADEMIC QUALIFICATIONS : Ph.D (IIT-Delhi) Power Electronics**

## **ACADEMIC REWARDS/ ACHIEVEMENTS:**

- Received the best paper award for paper titled “**Design and Analysis of Two-Input DC-DC Converter Used in Low Voltage DC-Grid Applications**”, at IEEE-ICACT-2013 conference.
- Received MHRD scholarship for Ph.D.

## **PROFESSIONAL EXPERIENCE:**

<b>Designation</b>	<b>Institution</b>	<b>Period</b>
<b>Associate Professor</b>	GEC	1-1-2011 till date
Sr. Assistant Professor	GEC	1-7-2009 to 31-12-2010
Assistant Professor	GEC	20-12-2003 to 30-6-2009

## **SPECIALIZATION:**

DC-Micro grids, Multi-input DC-DC converters, Switched Mode Power Supplies Design, MIMO control designs

## **AWARDS / RECOGNISATIONS / ACHIEVEMENTS:**

Best Paper in IEEE - ICACT-2013, conference at Annamacharya Institute of Technology during 10<sup>th</sup> to 11<sup>th</sup> August 2013.

**MEMBERSHIP IN PROFESSIONAL BODIES:** MIEEE, MPES, MIE, LMISTE

## **PROJECTS GUIDED:**

<b>PhD</b>	<b>Post Graduation</b>	<b>Under Graduation</b>
<b>-</b>	<b>15</b>	<b>32</b>

**WORKSHOPS/SEMINARS/GUEST LECTURES ORGANIZED/ATTENDED:**

<b>Description</b>	<b>Total</b>
Workshops / Short term courses Organized	<b>04</b>
Workshops / Short-term courses Attended	<b>48</b>
Guest Lectures delivered	<b>-</b>
Professional Activities: (Resource Person/ Session Chair for conferences or symposium)	<b>04</b>

**RESEARCH PUBLICATIONS:**

No. of Papers Published	Conferences	National	5
		International	20
	Journals	National	3
		International	6
	Journals Ongoing	IEEE Transactions	2
No. of Books Published			

**R & D and CONSULTANCY:**

<b>Description</b>	<b>No. of Projects</b>	<b>Amount Sanctioned / Generated</b>	<b>Status</b>
In – House R & D	<b>1</b>	<b>2,02,000</b>	<b>Completed</b>

**PAPERS PUBLISHED IN JOURNALS:**

1. Published paper titled **“Performance Analysis of a high gain Bi-directional DC-DC Converter fed drive for an Electric Vehicle with Battery charging capability during braking”**, in International Journal of applied science engineering and management, Vol. 18, Issue 2, March 2024.
2. Published a paper titled **"Steady State Analysis of Interleaved High Conversion Ration Bidirectional DC-DC Converter"** in International journal of Electronics, Electrical and Computational Systems (IJEECS), ISSN 2348-117x, Vol.6, Issue 7, July 2017.
3. Published a paper at Journal of Electrical Engineering, Romania, Europe. *On “An improvement in dynamic response of a direct torque-controlled induction motor using sector advancing technique”*, which will be coming in March Edition, 2010.

### **PAPERS PUBLISHED IN CONFERENCES/WORKSHOPS:**

1. Eate Vargil Kumar, B. Mahesh Babu, G. Kishore Babu, "Optimized Hybrid Buck DC-DC Converter with QFT controller", International conference on Artificial Intelligence techniques for Electrical Engineering systems. AITEES 2022.
2. Eate, Vargil Kumar, and Mummadi Veerachary "QFT based Robust Controller design for switched inductor – capacitor hybrid Buck-SEPIC Two-Input DC-DC Converter" *2018 IEEE International Conference on Power Electronics, Drives and Energy Systems (PEDES)*. IEEE, 2018.
3. Yarlagadda, Anil Kumar, et al. "A Modified Seven Level Cascaded H Bridge Inverter." *2018 5th IEEE Uttar Pradesh Section International Conference on Electrical, Electronics and Computer Engineering (UPCON)*. IEEE, 2018.
4. Eate, Vargil Kumar, and Mummadi Veerachary. "Analysis of two-input Switched Inductor-Capacitor Hybrid Buck-SEPIC DC-DC converter." *2017 IEEE Transportation Electrification Conference (ITEC-India)*. IEEE, 2017.
5. Eate, Vargil Kumar, and Mummadi Veerachary. "Analysis of Switched Inductor Hybrid Buck-SEPIC two input DC-DC converter." *2016 IEEE International Conference on Power Electronics, Drives and Energy Systems (PEDES)*. IEEE, 2016.
6. Published a paper on **“Steady state analysis of Multi-input DC-DC converter”** at **“PEDES-2014”** an IEEE International conference, at IIT-Bombay, during 16<sup>th</sup> to 19<sup>th</sup> December 2014.
7. Published a paper on **“Steady state analysis of Multi-input DC-DC converter”** at **“PEDES-2014”** an IEEE International conference, at IIT-Bombay, during 16<sup>th</sup> to 19<sup>th</sup> December 2014.
8. Published a paper on **“Steady State analysis of large step down ratio Two-input DC-DC converter”** at **“ICCC-2013”** an IEEE International conference, at Government College of Engineering, Trivandrum, Kerala, during 13<sup>th</sup> to 15<sup>th</sup> December 2013.
9. Published a paper on **“Design and Analysis of Two-Input DC-DC Converter Used in Low Voltage DC-Grid Applications”** at **“ICACT-2013”**, IEEE International conference, at Indian Annamacharya Institute of Technology, during 10<sup>th</sup> to 11<sup>th</sup> August 2013.
10. Published a paper on **“Two input DC-DC converters for DC grid applications”** an PECON-2012, IEEE International conference, at Deenbandh Chottu Ram Univ. of Technology, Haryana during 2<sup>nd</sup> to 5<sup>th</sup> December 2012.
11. Published a paper on **“Steady State Exploration of 3-Ø SEIG with Novel Leading VAR Controller and alleviation of harmonics using shunt and series active power filters “at**

PEDES-2010 an IEEE International conference held at Indian Habitat Center New Delhi, conducted by IEEE and IIT Delhi during 20<sup>th</sup> to 24<sup>th</sup> December 2010.

12. Published a paper on **“Steady state Investigation of self excited three phase induction generator with novel leading VAR controller and mitigation of harmonics using active power filters** “at PECON-2010 an IEEE International conference held at Malaysia, during 29<sup>th</sup> to 1<sup>st</sup> December 2010.
13. Published a paper on **“A Sector advanced technique to improve dynamic response of a direct torque controlled Induction motor”** at PECON-2010 an IEEE International conference held at Malaysia, during 29<sup>th</sup> to 1<sup>st</sup> December 2010.
14. Published a paper on **“A Novel Low Cost Bi-Polar –starting and unipolar-running converter for extended torque speed characteristics of spindle motor”** at PECON-2010 an IEEE International conference held at Malaysia, during 29<sup>th</sup> to 1<sup>st</sup> December 2010.
15. Published a paper on **“Electronic control Unit for an Adaptive Cruise control and Engine Management system in a vehicle using Electronic Fuel Injector”** at INTERACT-2010 an IEEE International conference held at Chennai, during 3<sup>rd</sup> to 5<sup>th</sup> December 2010.
16. Presented a paper at NPSC-2010, conducted by Osmania University during 15<sup>th</sup> – 17<sup>th</sup> December 2010, titled **“Analysis of three phase SEIG with novel LVARC along with Alleviation of harmonics with SAF”**.
17. Published a paper at NPSC-2010, conducted by Osmania University during 15<sup>th</sup> – 17<sup>th</sup> December 2010, titled **“An improvement in dynamic response of a direct torque controlled induction motor using sector advancing technique”**.
18. Presented a paper at National Seminar, conducted by Gudlavalleru Engineering College on 24<sup>th</sup> October 2009, titled **“Steady State Investigation of wind power generation with VAR Controller”**.

## **LIST OF WORKSHOPS/PAPER CONTESTS ORGANIZED:**

1. Acted as Coordinator & SPOC for a one-day National Workshop on 'NPTEL' jointly organized by Gudlavalleru Engineering College and IIT-Madras, on 6<sup>th</sup> December 2018.
2. Acted as Coordinator for National Level Paper Presentation **“PHASE – 2K10”** conducted at Gudlavalleru Engineering College, Gudlavalleru.
3. Acted as Coordinator for National Level Paper Presentation **“PHASE – 2K9”** organized at Gudlavalleru Engineering College, as part of GECFEST-09 Gudlavalleru.
4. Acted as Coordinator for National Level Paper Presentation **“PHASE – 2K6”** organized at Gudlavalleru Engineering College, as part of GECFEST-10 Gudlavalleru.

## **LIST OF WORKSHOPS /CONFERENCES /SEMINARS ATTENDED:**

1. Two-week workshop on Translation using Machine Learning Applications organized by NPTEL, IITM Madras from 3<sup>rd</sup> to 14<sup>th</sup> June 2024.
2. One week Faculty Development Programme on “PLC HMI (Human –Machine Interface) Design and Integration”, 1<sup>st</sup> to 6<sup>th</sup> July 2024, Department of EEE, SR Gudlavalleru Engineering College.
3. A one week Virtual FDP on “Intelligent control of Electrical Systems Using Machine Learning”, 16th to 20<sup>th</sup> October 2023, Department of EEE, SR Gudlavalleru Engineering College.
4. A one week Faculty Development Program on “Advances In Renewable Energy & Electric Vehicle”, 20<sup>th</sup> Feb -24th Feb 2023, Department of EEE, SR Gudlavalleru Engineering College.
5. “Advances in Optimization and Online FDP on Control of Electrical Engineering Systems”, 11th – 20th July, 2022, Electronics & ICT Academy, NIT Warangal in association with Seshadri Rao Gudlavalleru Engineering College, Gudlavalleru.
6. Two day workshop on “Machine Learning: Concepts and Applications”, 30<sup>th</sup> June-01<sup>st</sup> July, R&D Cell, Seshadri Rao Gudlavalleru Engineering College, Gudlavalleru.
7. Faculty Development Programme on “Insights of NEP 2020 and Strategies for Its Implementation”, 12/06/2022, Seshadri Rao Gudlavalleru Engineering College.
8. One Day FDP on “Intellectual Property Rights”, 26/03/2022, IQAC in association with ISTE, Gudlavalleru Engineering College
9. A 40 hour FDP on “Control Techniques and Smart solutions in Microgrid”,18/04/2022 to27/04/2022, NIT Warangal,Warangal
10. A One Week faculty Development Program on “Modelling and Simulation of Electrical Systems”, 28/2/2022 to 04/03/2022,Seshadri Rao Gudlavalleru Engineering College
11. A One week faculty development Program on “Intelligent Control Techniques For Electrical Systems”,31/01/2022 to 04/02/022, Seshadri Rao Gudlavalleru Engineering College.
12. Attended ATAL online FDP on “Electric Vehicles” organized by NIT-Calicut, during 25<sup>th</sup> January 2021 to 29<sup>th</sup> January 2021, and obtained the certificate.
13. Attended ATAL online FDP on “Internet of Things (IoT)” organized by Shri Ramdeobaba College of Engineering and Management, during 15<sup>th</sup> December 2020 to 19<sup>th</sup> December 2020, and obtained the certificate.
14. Attended an online FDP on “IEEE Authorship and Publication Ethics” by Education Society chapter of IEEE Vizag Bay section during 14<sup>th</sup> -18<sup>th</sup> December 2020.

15. Attended an online FDP on “Automation and Intelligent control of Electrical Systems – Phase-III” by Department of EEE, Gudlavalleru Engineering College from 16<sup>th</sup> -21<sup>st</sup> November 2020.
16. Participated in the second workshop on “Post-Editing Technical Translations in Indian Languages”, by LTRC, IIIT-Hyderabad from 2<sup>nd</sup> to 4<sup>th</sup> November 2020.
17. Attended an online FDP on “Automation and Intelligent control of Electrical Systems – Phase-II” by Department of EEE, Gudlavalleru Engineering College from 21<sup>st</sup>-26<sup>th</sup> September, 2020.
18. Attended an online FDP on “Automation and Intelligent control of Electrical Systems – Phase-I” by Department of EEE, Gudlavalleru Engineering College from 3<sup>rd</sup> to 8<sup>th</sup> August, 2020.
19. Attended an online FDP on “An Academic Perspective on Research” by Department of CSE, SRKR from 3<sup>rd</sup> to 7<sup>th</sup> August, 2020.
20. Attended an online FDP on “Electric power grid modernization: trends, challenges and opportunities” by Department of EEE, National Institute of Engineering, Mysuru from 20<sup>th</sup> -24<sup>th</sup> July 2020.
21. Attended an online FDP on “Electric power grid modernization: trends, challenges and opportunities” by Department of EEE, National Institute of Engineering, Mysuru from 6<sup>th</sup> -10<sup>th</sup> July 2020.
22. Attended an online workshop on “Industrial training program on Electrical Vehicles organized by TVS Training services and Agimus technologies from 3<sup>rd</sup> to 7<sup>th</sup> July 2020 and received certificate of completion.
23. Attended an online FDP on “Applied Research in Electric Vehicle Technologies” by Department of EEE, Gudlavalleru Engineering College from 15<sup>th</sup> to 20<sup>th</sup> June, 2020.
24. Attended an GoI -MHRD sponsored online **Two-week** FDP on " Open Source Tools for Research"from 8<sup>th</sup> – 14<sup>th</sup> June, 2020" by Pandit Madan Mohan Malviya National Mission on Teachers and Teaching and University of Delhi and obtained the certificate.

25. Attended an GoI -MHRD sponsored online **Two-week** FDP on " MANAGING ONLINE CLASSES and CO-CREATING MOOCS: 2.0 "from May 18 - June 03, 2020" by Pandit Madan Mohan Malviya National Mission on Techers and Teaching and University of Delhi, and obtained the certificate.
26. Attended an GoI MHRD sponsored online FDP on “Comprehensive e-Learning to e-Training guide for Administrative Work" by Pandit Madan Mohan Malviya National Mission on Techers and Teaching and University of Delhi and obtained the certificate.
27. Attended a one-week online FDP on “Design and development of Photovoltaic Modules for PV generation” organized by Lendi Institute of Engineering and Technology from 25<sup>th</sup> May to 30<sup>th</sup> May 2020.
28. Attended an online FDP on “Faculty Awareness Programme on Outcome Based Education (OBE) and NBA Accreditation” by Singhad Institute of Technology and Science, Narhe, Pune on 11<sup>th</sup> May 2020, and received certificate of appreciation.
29. Attended a one-week online FDP on “ICS Tools” by Sri Vidyaniketan Engineering College, Tirupati, from 11<sup>th</sup> to 16<sup>th</sup> May 2020, and received certificate of Merit.
30. Attended a one online webinar on “Virtual classroom management using Microsoft Teams” by LakiReddy Balireddy college of Engienering on 11<sup>th</sup> May 2020.
31. Attended a one-day National Workshop on 'NPTEL' jointly organized by Gudlavalleru Engineering College and IIT-Madras on 6th December 2018.
32. Attended and presented a paper at “**PEDES-2018**” an IEEE International conference, at IIT-Bombay, during 18th to 21<sup>st</sup> December 2018.
33. Attended and presented a paper at “**TTEC-2017**” an IEEE International conference, at IIT-Bombay, during 16th to 19th December 2014.
34. Attended and presented a paper at “**PEDES-2016**” an IEEE International conference, at IIT-Bombay, during 16th to 19th December 2014.
35. Attended a two day FDP on “**Renewable Energies and Grid Integration Systems**”, at Velagapurdi Siddartha Engineering college, Vijayawada during 7th to 9th October 2016.

36. Attended and presented a paper at “**PEDES-2014**” an IEEE International conference, at IIT-Bombay, during 16th to 19th December 2014.
37. Attended and presented a paper at “**ICCC-2013**” an IEEE International conference, at Government College of Engineering, Kerala, during 13th to 15th December 2013.
38. Attended and presented a paper at “**ICACT-2013**” an IEEE International conference, at Indian Annamacharya Institute of Technology, during 10th to 11th August 2013.
39. Attended and presented a paper at “**PECON-2012**” an IEEE International conference, at Deenbandh Chottu Ram Univ. of Technology, Haryana during 2nd to 5th December 2012.
40. Attended and presented a paper at “**PEDES-2010**” an IEEE International conference, at Indian Habitat Center, New Delhi, during 20th to 24th December 2010.
41. Attended and presented a paper at “**NPSC-2010**”, a prestigious National conference at Osmania University, Hyderabad, during 15th to 17th December 2010.
42. Attended a two day workshop on “PSCAD” on 30th & 31st March 2007 by KLG Systel, at V.R.Siddhartha Engineering College ,Vijayawada
43. Attended a one day workshop on “Student feedback & performance appraisal” on 17th Feb 2007 at Gudlavalleru Engineering College conducted by National Institute for Technical Teachers Training and Research, Chennai
44. Attended a twelve days workshop on “Instructional Design & Delivery” during 20th November to 2nd December 2006 by NITTTR, Chennai sponsored by AICTE.
45. Attended a six days workshop on “Instructional Design & Delivery” during 3rd July to 8th July 2006 at Gudlavalleru Engineering College conducted by National Institute for Technical Teachers Training & Research, Chennai
46. Attended a one day workshop on “Energy Efficient Management” on 20th October 2004 at B.V.R. Institute of Technology, Narasapur, Medak
47. Attended a 3 Weeks workshop on “Generation, Measurement & Testing techniques in High Voltage Engineering” during 11th October to 2nd November 2004 by U.G.C. Academic Staff College, J.N.T.U, Hyderabad.
48. Attended a seminar on “Biometrics in Information Technology”, conducted by Gudlavalleru Engineering College.

**CERTIFICATIONS: Nil**  
**GUEST LECTURES DELIVERED: 04**

**MEMBERSHIP IN PROFESSIONAL BODIES:**

☐ MIE

☐ MIEEE , PES, PELS

☐ LMISTE

**CONSULTANCY ACTIVITIES: Nil**

**GRANTS FETCHED:**

Acted as Co-cordinator for MODROBS for a grant of about Rs. 6 Lakhs.