DHANEKULA INSTITUTE OF ENGINEERING & TECHNOLOGY
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GANGURU :: VIJAYAWADA – 521 139.

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FACULTY PROFILE

Name of the Faculty: Dr. Guruvulu Naidu Ponnada
Designation : Professor & HOD
Email & Phone No: guruponnada@diet.ac.in & 9052986988
Department: Electrical and Electronics Engineering.

Educational Background:

1.B.Tech From Prasad V. Potluri Siddhartha Institute of Technology, Vijayawada, A.P
2. M.Tech From Jawaharlal Nehru Technological University, Ananthapuram.
3. Ph.D from Jawaharlal Nehru Technological University, Kakinada.
4. **PG Certificate Programme,** AICTE QIP PG Certificate Programme in **Data Science** under Sponsored category Conducted at **Indian Institute of Technology, Bhilai**, India.

Research Areas : Power Electronics, Electrical Drives, Renewable energy Sources, Power systems.

Experience : 19 Years

S. No	Institute	Designation	Period
1	DIET, Ganguru, Vijayawada, A.P	Professor	Aug 2025 to till date
2	DIET, Ganguru, Vijayawada, A.P	Associate Professor	Aug 2024 to July 2025
3	AITAM, Tekkali, Srikakulam, A.P	Associate Professor	July 2023 to Aug 2024
4	AITAM, Tekkali, Srikakulam, A.P	Sr. Assistant Professor	May 2012 to June 2023
5	GIET,Gunupur,Odisha	Assistant Professor	Nov 2011 to April 2012
6	AITAM, Tekkali, Srikakulam, A.P	Assistant Professor	June, 2009 to Sept.2011
7	REC, Dakamari, Visakhapatnam, A.P	Assistant Professor	Jan. 2008 to June 2009

Professional Member:

- Institute of Electrical and Electronics Engineers (IEEE) Professional body.
- Life Member of Indian Society for Technical Education (ISTE), Professional body.
- Life Member of International Association of Engineers (IAENG), Professional body.

Patents:

1. Priority based Identification of wireless multiport parallel E- Vehicle charging station and E-Vehicle, Application Number: 202341016848(IP India).

2. Intelligent solar power theft detection technology using Wi-Fi Notification, Application Number: 202041029285(IP India).

3. Optimal Design of Modular DC-DC converter combined with series resonance converters for energy integration, Application Number: 2020103761(IP Australia).

4. A system and method to analyze performance of super capacitor for energy storage, Application No.202441020944 A (IP India).

5. A system with Multilevel Inverters for effective power generation and conversion, Application No. 202441058946 (IP India).

6. A Battery Management System for Electrical Vehicle, Application No.202541034770 A (IP India).

7. Automated Cleaning Mechanism to Improve Solar Panel Efficiency, Application No. 202541102472 A (IP India).

Reviewer Certificate:

- International Journal of Circuit Theory and Applications as reviewer received certificate from WILEY publications
- International Conference on Smart and Sustainable Energy Systems (ICSSES 2024) Organized by the Department of Electrical & Electronics Engineering, Vishnu Institute of Technology (A), Bhimavaram, Andhra Pradesh, India during 16-17 February 2024.
- International Conference on Computational Intelligence for Green and Sustainable Technologies (ICCIGST-2024), organized by the Department of Electrical & Electronics Engineering, Velagapudi Ramakrishna Siddhartha Engineering College, Vijayawada, Andhra Pradesh, India.
- International Conference on Power Electronics & IoT Application in Renewable Energy and its Control (PARC 2026), organized by the Department of Electrical Engineering, GLA University, Mathura, Uttara Pradesh, India.

List of Publications (National and International Journals):

1) P. Guruvulu Naidu, Ch. Saibabu, S. Satyanarayana, "Fault Detection and Tolerance of a Hybrid Five Level Inverter" Iranian Journal of Science and Technology, Transactions of Electrical Engineering (2021), Springer, doi.org/10.1007/s40998-021-00415-y.
2) P. Guruvulu Naidu, Ch. Saibabu, S. Satyanarayana," A Single Phase Five-Level Inverter with Single and Multiple Switch Fault Tolerance Capabilities" Electrical Engineering, (2021), Springer, DOI: 10.1007/s00202-021-01295-5.
3) P.Guruvulu Naidu, S.Satyanarayana, Ch.Saibabu, "Design of closed-loop control for Solar PV based Multi-Level Inverter" International Journal of Innovative Technology and Exploring Engineering (IJITEE) ISSN: 2278-3075, Volume-9
   Issue-2S3, December , 2019.
4) Guruvulu Naidu Ponnada; Ch Sai Babu; Satyanarayana, S " Model Predictive Control for DC-DC Boost Converter for Elimination of Overshoot and Achieving Faster Response in Solar PV Applications", i-Manager's Journal on Electrical Engineering,Vol. 14, Iss. **3,**(Jan/Mar2021): DOI:10.26634/jee.14.3.17979.
5) P.Guruvulu Naidu, B.Srinivasa Rao, "Control of PMSG Wind Turbine Based on PI/ANN Controllers under Unbalanced Grid Voltage and Nonlinear Load Conditions", IJECE, Volume 8, Pages 153-166.
6) P.Guruvulu Naidu, N.Syam Kumar, Ch.Ravi Kumar, K.Kanaka Raju "A New Simulation Approach Of 3-Φ Transformer-less Grid Connected PV Inverter Using Hysteresis Controller" IRJET, Volume: 04 Issue: 12 , Dec-2017.
7) P Guruvulunaidu, Ch.Prasad, R Durgaprasad" Solar PV Array-Fed Water Pumping System Using Zeta Converter based Closed-Loop Control of BLDC Motor Drive" International Journal Of Engineering Research & Technology (IJERT), Volume: 07 Issue: 5,pages:389-397 , May-2018.
8) Guruvulu Naidu Ponnada, T Eswara Rao, S Srinivasa Rao, J Ankamma Rao, B.Trinadha, "Real time Implementation of PV-Wind Hybrid System using FPGA-MPPT Controller" Journal of Electrical Systems (JES), ISSN: 1112-5209, Vol. 20 No. 3,2024.
9) Guruvulu Naidu Ponnada, Kapu V. Sri Ram Prasad, K. Dhananjay Rao. "A Novel Fault Diagnosis of Induction Motor by Using Various Soft Computation Techniques: BESO-RDFA" IEEE Open Access Journal of Power and Energy, ISSN: 2687-7910, Volume: 12, Page(s): 146 – 156, March 2025.
10) Guruvulu Naidu Ponnada, Sridhar Patthi1,Obulesu Dakka, Ruttala Srinu,Parveen Kumar, Sairaj Arandhakar, "An ameliorated single-phase five-level multi-switch fault-tolerant inverter with reduced number of switches" Electrical Engineering, (2025), Springer, DOI: 10.1007/s00202-025-03196-3.
11) Guruvulu Naidu Ponnada, Thamatapu Eswara Rao, Srinivasa Rao Boddepalli, "A Non-Isolated Bidirectional Converter with Enhanced Voltage Gain and Common Ground for Energy Storage Systems" IEEE Journal of Emerging and Selected Topics in Industrial Electronics, March 2026.

Conferences:

1) Guruvulu Naidu Ponnada, R Chander, N.Malla Reddy, J.Sivavara Prasad, " Adaptive Deep Artificial Neural Network-Based Transient Stability Enhancement of Grid-Connected SCIG Under Fault and Harmonic Disturbance" International Conference on Electronics, Computing, Communication and Control Technology (ICECCC), Bangalore, India, 17-18 July 2026.
2) Guruvulu Naidu Ponnada, Srinivasa Rao Boddepalli, "Innovation Strategies and Commercial Viability of Electric Vehicle Battery Management Systems" 3rd IEEE International Conference on Power Electronics and Energy (ICPEE 2025) was hosted by School of Electrical Engineering, between 14th to 16th December, in KIIT Deemed to be University, Bhubaneswar.

3) Guruvulu Naidu Ponnada, Thamatapu Eswara Rao, Srinivasa Rao Boddepalli, "Design and Performance Analysis of Vertiwind Power Generation by Radial Axis Permanent, Magnet Generator" organized by the Department of Electrical Engineering, BIT Sindri, Dhanbad (828123), Jharkhand, India and technically co-sponsored by IEEE Kolkata Section scheduled during 7th-8th December 2024.

4) Guruvulu Naidu Ponnada, NTejeswara Rao, Matta Mani Sankar, "A Novel Approach for Out of Step Detection Using Extended Transient Stability Analysis Incorporating Effects of Exciter, Turbine and Speed Governor" International Conference on Computational Intelligence for Green and Sustainable Technologies (ICCIGST-2024), EEE Department, Velagapudi Ramakrishna School of Engineering, Vijayawada, India during 18-19 July 2024.

5) Guruvulu Naidu Ponnada, NTejeswara Rao, T Lokanadha Rao and G Ashok, "Simulation of Various Matrix Converters Using MATALAB" International Conference on Smart and Sustainable Energy Systems (ICSSES 2024) Organized by the Department of Electrical & Electronics Engineering, Vishnu Institute of Technology (A), Bhimavaram, Andhra Pradesh, India during 16-17 February 2024.

6) Ponnada Guruvulu Naidu , Thamatapu Eswara Rao, Srinivasa Rao Sura, Santosh Karra, Vasudeva Naidu Pudi ," Implementation of MPPT Techniques to Improve the Reliability of PV-WIND Hybrid System " International Conference on Computational Intelligence, Networks and Security (ICCINS-2023) , on 22nd & 23rd December 2023, Lakireddy Bali Reddy College of Engineering (Autonomous), Mylavaram, Andhra Pradesh, India.

7) P.Guruvulu Naidu,B.Ravi Kumar,B.B.Rath," Design and Implementation of Agricultural spraying Drone" a two-day National Conference on Recent Advances in Science and Engineering (RAIS)-2023, GVPCE(W), Visakhapatnam, A.P.

8) P. Guruvulu Naidu, Ch. Saibabu, S. Satyanarayana, "Analysis of different Multilevel Inverter topologies for grid connected Solar PV Application" seventh National Conference on Power system Engineering-2021, page No.62-67. SDMCET, Dharwad, Karanataka.

9) P. Guruvulu Naidu, Ch. Saibabu, S. Satyanarayana, "Model Predictive Control for DC–DC Buck Converter for Elimination of Overshoot and Achieving Faster Response for Solar PV Applications" seventh National Conference on Power system Engineering-2021, page No.92-97. SDMCET, Dharwad, Karanataka.

Book Chapters:

- Ponnada Guruvulu Naidu , Thamatapu Eswara Rao, "Power Management of Photovoltaic system Under Partial Shading Conditions" Book Title: Distributed energy storage systems for digital power systems, Publisher: Elsevier Publication.

Dr. Guruvulu Naidu Ponnada