

Faculty Profile



Dr. R. Vinifa , M.E., Ph.D.
Professor / EEE

HIGHLIGHTS:

- Number of Journal Publications: 33
- H-Index: 8
- i10 index: 5
- Patents Published: 2
- Patents Granted: 2
- Recognized Anna University Supervisor.

PROFESSIONAL LINKS:

- Scopus ID: 55811649800
- Scopus Link: <https://www.scopus.com/authid/detail.uri?authorId=55811649800>
- Google Scholar ID: u41yok0AAAAJ
- Anna University Faculty ID: 2122528
- AICTE Faculty ID: 19319609171
- Anna University Supervisor ID: 3730004
- LinkedIn: <https://www.linkedin.com/in/vinifa-r-27461116b>

Ph.Ds GUIDING:

- Full Time Scholars: 3
- Part Time Scholar : 1

PROFESSIONAL BACKGROUND:

- Teaching Experience : 14 yrs
- Research Experience: 6 years

FDP Conducted

- Received an amount of Rs. 3.5 lakhs to organize an ATAL sponsored FDP on “**Electric Vehicles: Technological Innovations and Market Trends**” from 02.12.24 to 07.12.24.

AREA OF SPECIALIZATION:

- Electric Vehicles
- Power Quality

- Power Converters
- Design of Controllers

PATENTS PUBLISHED/GRANTED:

- Electric Cycle
- Autonomous Electric Truck integrated with Solar Power

PUBLICATIONS

1. **R, Vinifa., A, Kavitha., & Selwynraj A, I.** (2026). Modelling of single band and double band hysteresis based current controlled voltage source inverter in a microgrid. *International Journal of Electronics*, 1–21. <https://doi.org/10.1080/00207217.2026.2707618>.(SCI)
2. A.Adlin Arul, R. Vinifa, J.Anish kumar, N.R. Shanker, Secondary magnetic field based runtime prediction of shaft bend in induction motor using giant magneto-resistance sensor, *Measurement*, 269, 120816, <https://doi.org/10.1016/j.measurement.2026.120816>, 2026. (SCI)
3. AA Arul, **R Vinifa**, JA Kumar, NR Shanker, Motor shaft bend measurement based on magnetic field using GMR sensor and multiple linear regression, *Sādhanā* 50 (3), 1-18 (SCI)
4. S. Lavanya Devi, **R. Vinifa**, Assessment of Novel Self-tuned Emotional Learning based Intelligent controller for Bidirectional Cascaded Quasi-Z-Source DC-DC Converter Control, *Electric Power Components and Systems*, <https://doi.org/10.1080/15325008.2023.2269927> (SCI)
5. **Vinifa R**, Kavitha A, Immanuel Selwynraj A, A Comparison of Instantaneous and Extension p-q Methods for Current Controlled Voltage Source Inverter in Microgrid, *International Journal of Electronics*, 2021, 109:11, 1896-1914, <https://doi.org/10.1080/00207217.2021.2001859> (SCI)
6. **Vinifa R**, Kavitha A, Immanuel Selwynraj A, Control of power in the grid integrated solar photovoltaic system using linear quadratic regulator, *Materials Today: Proceedings*, 2021, 45, 981-985. (Scopus)
7. **Vinifa Rajakumar**, Kavitha Anbukumar, Sliding Mode Controller based current controlled voltage source inverter for power quality improvement in Microgrid, *IET Renewable Power Generation*, 2020, 14(11), 1860-1872. (SCI)
8. **Vinifa R**, Kavitha A, Immanuel Selwynraj A, Power Quality Enhancement using Lyapunov based Voltage Source Inverter for the Grid Integrated Renewable Energy System, *International Journal of Emerging Electric Power Systems*, 2019, 20(6),1-13. (WoS)
9. **R. Vinifa**, A. Kavitha, Control of Voltage Source Inverter using Linear Quadratic Regulator for the three phase grid integrated renewable energy system, *Journal of Electrical Engineering*, 2019, 19(2).
10. **R. Vinifa**, A. Kavitha, A. Immanuel Selwynraj, Power flow control for the Grid Integrated Renewable Energy System, *International Journal of Mechanical Engineering and Technology*, 2018, 9(12), 395-402. (Scopus)
11. **Vinifa R**, Kavitha A, Enhancement Of Power Quality Using Double-band Hysteresis Controller For The Grid Integrated Renewable Energy System, *International Transactions on Electrical Energy Systems*, 2018, 28(11), 1-17. (SCI)
12. **R. Vinifa**, A. Kavitha, A. Immanuel Selwynraj, Maximum Power Point Tracking of Boost Converter of a PV system using Fuzzy Logic, *International Journal of Mechanical Engineering and Technology*, 2017, 8(12), 584-593. (Scopus)

13. **Vinifa Rajakumar**, Kavitha Anbukumar, Immanuel Selwynraj Arunodayaraj, Power Quality Enhancement Using Linear Quadratic Regulator based Current-Controlled Voltage Source Inverter for the Grid Integrated Renewable Energy System, **Electric Power Components and Systems**, 2017, 45(16), 1783-1794. (SCI)
14. **Vinifa R**, Kavitha A, Lijo J Thomas, Control of grid connected parallel inverter for renewable energy applications, **International Journal of Applied Engineering Research**, 2015, 10(70), 182 – 188.
15. **Vinifa R**, Santhosh, Sugumar, Yogeeshwaran, Panner Selvam, Hologram based Menu Ordering System in Smart Restaurant, **Design Engineering**, 2021, 8, 5506-5512
16. **R. Vinifa**, S. Ajaymoorthy, Abhishek Kumar, Anish Kumar, Mukesh Kumar, Detecting the Leakage of LPG Using GSM Module. **European Chemical Bulletin**, 2023, 12, 4011-4016, doi:10.31838/ecb/2023.12.s1-B.395
17. **R. Vinifa** , M. Ulagammai, T. Stenika, and A. Immanuel Selwynraj, Control of an Inverter for Enhancing Power Quality in a Microgrid, Lecture Notes in Electrical Engineering 1465, https://doi.org/10.1007/978-981-95-0207-3_14. (Scopus)
18. A Adlin Arul, **R. Vinifa**, J. Anish Kumar, K. Suresh Kumar, Prediction of shaft bend faults in Industrial Drives using Adaptive Wavelet Transform and Gradient Boosting Regression, **Lecture Notes in Networks and Systems**, 1452, 2025. (Scopus)
19. **R. Vinifa**, M. Jothi Krishnan, M. Abinaya, M. Ulagammai, Leveraging Machine Learning for Advanced Security Systems, **Lecture Notes in Networks and Systems**, 1452, 2025. (Scopus)
20. **R. Vinifa**, M. R. T, M. R. A and A. P. D., "A Robust Voltage Regulator for Charging Electric Vehicles," *2025 11th International Conference on Communication and Signal Processing (ICCSP)*, Melmaruvathur, India, 2025, pp. 1659-1663, doi: 10.1109/ICCSP64183.2025.11089182. (Scopus)
21. **Vinifa. R**, H. R, M. K and A. P.D, "Electric Vehicle Charger for Enhanced Efficiency Performance," *2025 11th International Conference on Communication and Signal Processing (ICCSP)*, Melmaruvathur, India, 2025, pp. 1664-1667, doi: 10.1109/ICCSP64183.2025.11089226. (Scopus)
22. **Vinifa. R**, T. M, S. R and A. P. D., "Optimizing Vehicle-to-Grid Integration (V2G) Using a Controllable Bidirectional Charger," *2025 11th International Conference on Communication and Signal Processing (ICCSP)*, Melmaruvathur, India, 2025, pp. 1643-1647, doi: 10.1109/ICCSP64183.2025.11088774. (Scopus)
23. **Vinifa, R.**Suriya, G.,Charan, G.R. Optimizing Power Conversion Technologies for Sustainable Electric Vehicle Mobility,Proceedings of the 2024 10th International Conference on Communication and Signal Processing, ICCSP 2024, 2024, pp. 638–642. (Scopus)
24. **Vinifa, R.**,Vishnu Prasad, N.Santhosh, A.Amarnath, M. Contact-less Food ordering System in Restaurants using hologram, Proceedings of the 2024 10th International Conference on Communication and Signal Processing, ICCSP 2024, 2024, pp. 444–447. (Scopus)
25. **Vinifa R**, Sinoj P, ‘Microstrip Patch Antenna Design for Tumor Detection’, In Proc of International Conference on Artificial Intelligence & Digital Twin Technology 2023.
26. **Vinifa R**, Stenika T, ‘Hysteresis Current Control of Inverter for the Improvement of Power Quality In Microgrid’, In Proc of IEEE International Conference on Nanoelectronics, Nanophotonics, Nanomaterials, Nanobioscience & Nanotechnology 2023.

27. **Vinifa R**, Vetrivel S, Ragul E, Mohammed Younus F, Pradeep P K, 'Particle Swarm Optimization based Maximum Power Point Tracking', In IEEE 7th International Conference on Trends in Electronics and Informatics, 2023, doi: 10.1109/ICOEI56765.2023.10125791. (**Scopus**)
28. **Vinifa R**, Kavitha A, Immanuel Selwynraj A, 'Control of power in the grid integrated solar photovoltaic system using linear quadratic regulator', In Proc. of International Conference on Advanced Materials Research, Sathyamangalam, 2019.
29. **Vinifa R**, Kavitha A, Immanuel Selwynraj A, Power Management in the Grid Integrated Solar Photovoltaic System, 11th International Exergy, Energy and Environment Symposium IEEEES'11, Chennai, 2019.
30. **Vinifa R**, Kavitha A, Linear Quadratic Regulator based current control of grid connected inverter for renewable energy applications, IEEE Conference on Energy Efficient Technologies for Sustainability, 2016. (**Scopus**)
31. H. Gilda Jasmine Rani, **R. Vinifa**, A. Kavitha, 'Analysis and Control of Grid Connected Inverter for Renewable Energy Applications', In Proc. of International Conference on Electrical, Communication and Computing, Chennai, 2014.
32. **R. Vinifa**, A. Kavitha, Fuzzy based Maximum Power Point Tracking on a PV system, IEEE Conference on Energy Efficient Technologies for Sustainability, 2013 (**Scopus**).
33. **Chapter Title:** Power Management in the Grid Integrated Solar Photovoltaic System.
Authors: **Vinifa R**, Kavitha A, Immanuel Selwynraj A
Book: Energy and Exergy for Sustainable and Clean Environment, Volume 1, 2022.(**Scopus**)
Pages:3-14
DOI:10.1007/978-981-16-8278-0
Publisher: Springer Nature

COURSES CERTIFIED:

- Introduction to IOT
- Python Core

SPECIAL SESSIONS DELIVERED:

- Power Converters for Electric Vehicles
- Energy Conservation Approach for Power Quality Improvement

PROFESSIONAL MEMBERSHIPS:

- ISTE
- IEI
- SCRS