

Curriculum Vitae

Ms. DIVYA BHARATHI R

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Career Objective:

Ambitious and dedicated to pushing the boundaries of knowledge by utilizing advanced methodologies and pioneering technologies with a focus on contributing valuable insights to the global research landscape through cross-disciplinary cooperation and innovative problem-solving.

Academic Qualification:

| Academic | University / Board of Education | Institute / School | Year of study | Percentage/ CGPA |
|--|---|---|----------------------|-------------------------|
| Ph.D (ongoing) | National Institute of Technology Tiruchirappalli | National Institute of Technology Tiruchirappalli | 2021-26 | - |
| M.E.- Power Systems Engineering | Anna University | College of Engineering, Guindy, Chennai. | 2019-21 | 8.69 |
| B.E.- Electrical and Electronics Engineering | Anna University | Saranathan College of Engineering, Trichy | 2014-18 | 8.12 |
| HSC | State Board Tamil Nadu | SRV Matriculation HSS, Samayapuram, Trichy | 2013-14 | 88.33% |
| SSLC | State Board Tamil Nadu | St. Little Flower Matric. HSS, Kattur, Trichy | 2011-12 | 93.00% |

Area of Interest:

- ❖ Power Systems Planning
- ❖ Distributed Generation Units
- ❖ Grid Integration of Electric Vehicle Charging Stations
- ❖ Optimization Techniques

Technical Skills:

- ❖ **Simulation tools:** MATLAB, PSCAD
- ❖ **Programming:** C, C++
- ❖ **Other tools:** MS office, Latex

Academic Project:

PhD Research (ongoing)

Optimizing Electric Vehicle Charging Stations and Distributed Generators in Smart Grids

- A hybrid optimization approach is proposed for the joint planning of Electric Vehicle Charging Stations (EVCS) and Distributed Generation (DG) units. The objective is to minimize real power loss in the distribution network while simultaneously enhancing EV drivers' convenience. To achieve this, the analysis is carried out on a superimposed framework that integrates the power distribution network with the transportation network, ensuring both system efficiency and user-centric planning.

PG Project

Metaheuristic optimization algorithms for effective congestion management in distribution networks.

- A two-stage congestion management method is developed using ABC and CS algorithms. Generator rescheduling and optimal solar PV placement are applied on IEEE 30-bus system, ensuring reduced congestion and power losses.

UG Project

Implementation of High-power Factor Rectifier Based on LUO Converter Topology.

- A high-power factor rectifier based on the Luo converter topology aims to improve power quality by minimizing harmonic distortion and achieving a power factor close to unity at the input AC mains. The Luo converter's inherent high voltage gain and efficiency, combined with power factor correction, makes it suitable for applications like motor drives and LED lighting.

Journal Publications

1. **Divya Bharathi Raj** and Venkatakirthiga Murali, "Optimizing Electric Vehicle Charging Stations and Distributed Generators in Smart Grids: A Multi-Objective Meta-Heuristic Approach, **IEEE Latin America Transactions**, Vol. 23, No. 11, November 2025, pp. 1022 - 1035, DOI: [10.1109/TLA.2025.11194767](https://doi.org/10.1109/TLA.2025.11194767)
2. **Divya Bharathi Raj** and Venkatakirthiga Murali, "Optimal Electric Vehicle Charging Station Deployment in Microgrids: Strategies and Approaches" in **Part B: Economics, Planning, and Policy.**, Taylor and Francis (Accepted for publication on 08.12.2025)

Conference Publications:

1. **R. D. Bharathi** and M. V. Kirthiga, "Integrated Planning of EV Infrastructure and Distributed Generators Using Hybrid Algorithm," *2025 IEEE 5th International Conference on Sustainable Energy and Future Electric Transportation (SEFET)*, Jaipur, India, 2025, pp. 1-6, doi: [10.1109/SEFET65155.2025.11255298](https://doi.org/10.1109/SEFET65155.2025.11255298).
2. **Divya Bharathi Raj** and Venkatakirthiga Murali, "A Novel Hybrid Algorithm for Charging Station Planning Problem," **23rd National Power Systems Conference (NPSC), Indore, India, 2024**, pp. 1-6, doi: [10.1109/NPSC61626.2024.10986982](https://doi.org/10.1109/NPSC61626.2024.10986982). (Attended)
3. **D. B. R** and V. M, "Allocation of EV Charging Stations in a Micro-grid," **IEEE International Conference on Energy Technologies for Future Grids (ETFG), Wollongong, Australia, 2023**, pp. 1-6, doi: [10.1109/ETFG55873.2023.10408134](https://doi.org/10.1109/ETFG55873.2023.10408134).
4. Jatin, **Divya Bharathi Raj** and Venkatakirthiga Murali, "Optimal Reconfiguration of Microgrid with Electric Vehicle Charging Stations and Distributed Generators", **2025 IEEE 4th International Conference on Smart Technologies for Power, Energy and Control, NIT Goa, India. (Accepted)**

5. Akash Kumar, Anish Sharma, Abishek, **Divya Bharathi Raj** and Venkatakirthiga Murali, “Optimal Network Reconfiguration using BPSO Technique with EVCSs and DGs”, **2025 IEEE 4th International Conference on Smart Technologies for Power, Energy and Control, NIT Goa, India. (Accepted)**
6. Ritika Anand, **Divya Bharathi Raj**, Venkatakirthiga Murali, “PSO and Fuzzy based Optimal Allocation of Wind Turbines”,**2025 IEEE 4th International Conference on Smart Technologies for Power, Energy and Control, NIT Goa, India. (Accepted)**

Workshop Attended:

| S. No. | Name of the Workshop/STTP | Duration | | Name of the Institute |
|--------|--|----------|----------|--|
| | | From | To | |
| 1 | Renewable Energy Based Electric Vehicle Technology | 11.03.24 | 15.03.24 | National Institute of Technology, Tiruchirappalli |
| 2 | Operation and control of solar PV Electric Conversion System | 18.12.23 | 22.12.23 | National Institute of Technology, Tiruchirappalli |
| 3 | Wearable devices and AI&ML - Trends and Technologies | 17.07.23 | 21.07.23 | National Institute of Technology, Tiruchirappalli |
| 4 | Introduction to Modelling and Simulation Tools for Engineering Applications (IMSTEAA). | 20.05.23 | 24.05.23 | National Institute of Technology, Tiruchirappalli |
| 5 | Essence of Emergency Response Support system | 06.04.22 | 10.04.22 | National Institute of Technology, Tiruchirappalli |
| 6 | Function Generator using OP-AMP | 16.09.15 | 16.09.15 | Saranathan College of Engineering, Tiruchirappalli |

Memberships in Professional bodies:

| S. No. | Membership Details | Membership Number | Validity |
|--------|--|-------------------|--------------------------|
| 1 | Associate member, The Institution of Engineers, India. | AM3000578 | Life time |
| 2 | Graduate Student Member, IEEE Madras Section, | 100555258 | 31.12.2024 to 31.12.2025 |

Scholarships:

| Name of the Scholarship | Providing Organization | Duration | |
|-------------------------|--|----------------|-----------|
| | | From | To |
| Institute Scholarship | Government of India at NIT Tiruchirappalli | September 2021 | Till date |
| GATE Scholarship | Government of India at CEG, Anna University, Chennai | August 2019 | May 2021 |

Other Qualifications:

- Qualified for **GATE 2025, 2022, 2019** examination in Electrical Engineering paper.

Award and Recognition:

- ❖ **Student Travel Award** by **2025 IEEE 4th International Conference on Smart Technologies for Power, Energy and Control, NIT Goa, India.**
- ❖ **Student Travel Award** by 2025 IEEE 5th International Conference on Sustainable Energy and Future Electric Transportation (SEFET). MNIT Jaipur, India.
- ❖ **Chairperson** for IEEE Student Branch, at National Institute of Technology Tiruchirappalli, since 2024 to till date.
- ❖ **Volunteered** in the successful conduction of First International Conference on Intelligent Solutions for Emergency Response and Disaster Management (ISERDM) held at National Institute of Technology Tiruchirappalli, 2023.
- ❖ Participated and won the **First Prize** in the Analog Design Contest held in Saranathan College of Engineering, Trichy, by Research Cell EEE in 2016.
- ❖ Participated and won “**Student Project of the Year 2017-18**” under the Institute for Exploring Advances in Engineering (IEAE) student project program - 2018 (SPP).

Personal Profile:

Date of birth: 27.05.1997

Father’s Name: Mr. Raj. S

Gender: Female

Linguistic Abilities: Tamil, English

Declaration:

I hereby declare that the above furnished information is true to the best of my knowledge and belief.

Place: Trichy

Date: 22.01.2026

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