Name of Faculty	**Dr. R.VIJAY**	
Designation	Asst. Professor	
Nature of Job/Appointment	Contract	
Date of Joining	19-02-2024	
E-mail	vijayr_eee@cbit.ac.in, vijai.mtp@gmail.com	

Education Qualifications	Name of the Degree	Class
Ph.D	Doctor of Philosophy (Electrical Engineering)	Highly Commended
PG	M.E., (Power Systems Engineering)	First Class Distn.
UG	B.E., (Electrical & Electronics Engineering)	First Class

Work Experience	
Teaching	**14 Years**
Research	**3.5 Years**
Industry	--
Others	--
Area of Specialization	Power Systems, Optimization & Evolutionary Algorithms.
Professional Memberships	✓ Indian Society for Technical Education (ISTE) (Membership No: LM120991) ✓ Institute of Engineers (IE) (Membership No: AM1778571) ✓ Soft Computing Research Society (SCRS) (Life Member) ✓ Institute For Engineering Research and Publication (IFERP) (Membership No: PMIN85792361)
Responsibilities held at the Institution Level:	MATLAB Coordinator, Member of Electret committee – Sudhee & Sruthi - 2024, Member of Campus & Stage Decoration Committee - Sudhee & Sruthi -2025 ❖ **Program Coordinator, M.Tech – Electrical Power Engineering**, CVR College of Engineering, Hyderabad. ❖ **Key Member**, Board of Studies (EEE Department) – Contributed to curriculum design and the introduction of new courses for undergraduate and postgraduate programs at CVR College of Engineering, Hyderabad. ❖ **Assistant NBA Coordinator** – Successfully facilitated accreditation for **6 years (UG Program)** and **3 years (PG Program)**. ❖ **Head**, Departmental Research Committee – Led initiatives to strengthen research culture and scholarly output within the department. ❖ Served in the **Controller of the Examinations Office**, Anna University, Coimbatore (Zone IX), overseeing exam coordination and evaluation processes for 80 affiliated colleges.
Responsibilities held at the Department Level:	Class Mentor, Class in charge
Research Guidance:	B.E/B.Tech Dissertations – **23**, M.E/ M.Tech Dissertations – **25**
Awards Received:	Got selected for "**InSc Young Achiever Award 2019**"
Courses Handled at Undergraduate / Post Graduate Level.:	1. Power Systems – I 2. Power Systems – II 3. Basic Electrical Engineering 4. Power System Operation and Control

5. Restructured Power Systems
6. Utilization of Electrical Energy
7. EHV AC Transmission
8. Economic Operation of Power Systems
9. Energy Conservation
10. Renewable Energy Systems
11. Power System Dynamics
12. Evolutionary Algorithms Applications In Power Engineering
13. Research Methodology and IPR

No. of Papers Published	National Journals – -- International Journals – **27 (7-SCIE)** National Conference – **05** International Conference – **09 (Scopus)**
Projects Carried out	--
Patents	**Copyrights: 1, Patent: 1** ❖ Copyright Granted – "Quorum Sensing-Based Bacterial Swarm Algorithm to Solve Economic Power Dispatch Problem", Copyright Office, Government of India, Registration No. L-86320/2019, granted on October 14, 2019. ❖ Patent Published – "Developing and Fabricating a Low-Cost Prosthetic Arm", published in July 2024, Application No. 202441053283.
Technology Transfer / **Invited Speaker**	➢ Delivered a lecture on "Current Trends in Power System Operation and Control" at J.B. Institute of Engineering & Technology, Hyderabad, April 7, 2025. ➢ Presented a talk on "Recent Trends in Artificial Intelligence and Its Application in Power Systems" at Kongunadu College of Engineering & Technology, Trichy, Tamil Nadu, March 16, 2021. ➢ Delivered an expert lecture on "Basics of Optimization Techniques in Engineering" at BHEL, Trichy, co-organized by The Institution of Engineers (India), Tiruchirappalli Centre, Tamil Nadu, May 2, 2018. ➢ Conducted a hands-on training session on "PSO and Its Application to Optimal Placement of PV Systems in Distributed Generation" during a Two-Week AICTE-Sponsored Faculty Development Program on Applications of Power Electronics in Renewable Energy Systems, CVR College of Engineering, Hyderabad, November 23, 2017. ➢ Delivered a session on "Basics of MATLAB and Programming Aspects" during a Hands-on Training on MATLAB Programming and Its Application in Image Processing at Karpagam College of Engineering, Coimbatore, Tamil Nadu, September 28, 2012.
No. of Books/Chapters Published with details	1. Vijay, R, "Plastic Material Identification and Categorization by Applying Convolutional Neural Network", 2024 IEEE 4th International Conference on Sustainable Energy and Future Electric Transportation (SEFET), Hyderabad, India, pp. 1-6, 2024. **https://doi.org/10.1109/SEFET61574.2024.10718239** 2. Vijay, R., Ayyagari, A., & Salkuti, S. R. (2025). Automated protection mechanism for transformer overloading with a voiceover alert system. In *Next-Generation Green Energy Technologies for Sustainable Development* (pp. 293–305). Springer Nature Singapore. **https://doi.org/10.1007/978-981-95-0441-1_14** 3. Vijay, R. (2024). Plastic material identification and categorization by applying convolutional neural network. In *Proceedings of the 2024 IEEE 4th International Conference on Sustainable Energy and Future Electric Transportation (SEFET)* (pp. 1–6). IEEE. **https://doi.org/10.1109/SEFET61574.2024.10718239**

4. Vijay, R., Gajwari, S. K., Gunturu, A., & Tadkale, N. (2024). Enriched power yield from photovoltaic systems under partial shadowing conditions by velocity grey wolf algorithm. In *Proceedings of the 2024 IEEE 4th International Conference on Sustainable Energy and Future Electric Transportation (SEFET)* (pp. 1–6). IEEE. **https://doi.org/10.1109/SEFET61574.2024.10717899**

5. Vijay, R., Pranay, P., Nendralla, B., & Pranay, L. S. (2024). Household power consumption analysis using machine learning. In *Proceedings of the 2024 IEEE 4th International Conference on Sustainable Energy and Future Electric Transportation (SEFET)* (pp. 1–6). IEEE. **https://doi.org/10.1109/SEFET61574.2024.10718254**

6. Vijay, R., Dharavathu, P., Gopaluni, D. A., & Jale, A. R. (2024). Automated revealing and warning system for pits and blockades on roads to assist carters. In *International Conference on Computational Intelligence in Machine Learning* (Lecture Notes in Electrical Engineering, Vol. 1106, pp. 51–58). Springer, Singapore. **https://doi.org/10.1007/978-981-99-7954-7_6**

7. Vijay, R. (2023). Clonal assortment optimization procedure to unravel cost-effective power dispatch problem. In *Soft Computing Applications in Modern Power and Energy Systems* (Lecture Notes in Electrical Engineering, Vol. 975, pp. 39–53). Springer, Singapore. **https://doi.org/10.1007/978-981-19-8353-5_4**

8. Vijay, R., & Deepika, B. (2021). Computational modelling and governing of stand-alone hybrid electric power generation system. In *Intelligent Systems* (Algorithms for Intelligent Systems, pp. 311–325). Springer, Singapore. **https://doi.org/10.1007/978-981-16-2248-9_31**

9. Vijay, R., & Tejasree, M. (2020). Optimal scheme and power controlling aspects in shipboard system. In *Innovations in Electrical and Electronics Engineering* (Vol. 626, pp. 367–379). Springer, Singapore. **https://doi.org/10.1007/978-981-15-2256-7_36**

10. Vijay, R., & Ravichandran, C. S. (2016). Enriched biogeography-based optimization algorithm to solve economic power dispatch problem. In *Proceedings of the Fifth International Conference on Soft Computing for Problem Solving (SocProS 2015)* (Lecture Notes in Electrical Engineering, Vol. 437, pp. 875–888). Springer, Singapore. **https://doi.org/10.1007/978-981-10-0451-3_78**

Organized:

Details of Short-Term Training Programs/Faculty Development Programs/Seminars/Workshops. Other Training (**Attended and/or Organized**).	1. Acted as an organizing committee of the International Conference on Renewable Energy, Green Computing & Sustainable Development organized by CVR College of Engineering, Hyderabad held on 22nd and 23rd December 2023.
	2. Acted as an organizing committee of the International Conference on Recent Challenges in Engineering Science & Technology, organized by Ramachandra College of Engineering, Andhra Pradesh, held on 9th and 10th April 2021.
	3. Acted as an organizing committee of the AICTE-sponsored 1st International Online Conference on Recent Trends in Electrical,

Electronics, Communication, and Instrumentation Engineering at CVR College of Engineering, Hyderabad, on 27th and 28th December 2021.

4. FDP on Control Systems at Anna University Regional Campus, Coimbatore, India in Dec 2013.

5. FDP on Special Electrical Machines at Anna University Regional Campus, Coimbatore, India in June 2013.

6. Third National Conference on "Intelligent Computing & Control for Engineering Applications" on 27th and 28th March 2013 at Regional Campus Coimbatore, India.

7. A two-day workshop on "PSO and Its Variants: Concepts and Basic Implementation in MATLAB" at Anna University Regional Campus, Coimbatore, India, on 23rd and 24th Nov 2012.

8. Two-day Hands-on Training on MATLAB Programming and its application in Image Processing at Karpagam College of Engineering, Coimbatore, India, on 28th and 29th Sep 2012.

Attended:

1. Faculty Development Programme on "Entrepreneurship FDP on Energy Conservation Domains of Engineering and Technology" conducted by Centre for Faculty & Professional Development, Anna University, Chennai from 11.9.2023 to 25.9.2023.

2. Academy Online FDP on "Design Thinking" at KPR Institute of Engineering and Technology from 2020-10-19 to 2020-10-23.

3. Online Elementary FDP on "RENEWABLE ENERGY FOR INDUSTRIAL & DOMESTIC APPLICATIONS" at Jawaharlal Nehru Technological University, Anantapur. College Of Engineering, Pulivendula, from 06/09/2021 to 10/09/2021.

4. Online FDP on "Artificial Intelligence" at National Institute of Technology Puducherry from 2020-9-21 to 2020-9-25.

5. Technology-Based Entrepreneurship Development Program on AI & ML sponsored by DST at SR Engineering College, Warangal from 18th Jan 2021 to 27th Feb 2021.

6. Online Faculty Development Programme on AI Techniques to Electrical Engineering at JNTU, Hyderabad from 06/07/2020 to 10/07/2020.

7. Certificate Course on "Patent Search and Drafting" at College of Engineering, Guindy Campus, Anna University, Chennai, India, from 25th to 29th June 2019.

8. Faculty Development Programme on "Data Visualization and Machine Learning using Python at CVR College of Engg, Hyderabad, India, from 9th to 13th April 2018.

9. Faculty Development Programme on "Applications of Power Electronics in Renewable Energy Systems" at CVR College of Engg, Hyderabad, India, from 20th Nov to 4th Dec 2018.

10. Faculty Development Programme on "Theory of Computation" at Anna University Regional Campus, Coimbatore, India from 15th to 21st May 2017.

11. Training Program on "Fundamentals of Solar (Photovoltaic) Energy Conservation and Hands-on Workshop on Diverse Applications" at PSG College of Technology, Coimbatore, India, on 1st October 2014.

NPTEL Courses Completed:

1. Introduction To Internet of Things (Computer Science)
2. Introduction To Soft Computing (Computer Science)
3. Introduction to Smart Grid
4. DC Microgrid
5. Teacher and Teaching in Higher Education

Coursera Courses Completed:

1. Photovoltaic solar energy
2. Wind Energy
3. Electric Vehicles and Mobility
4. Energy: The Enterprise
5. Introduction to solar cells
6. Natural Gas
7. Safety in the Utility Industry
8. Electric Power Systems

Details of Journal Publications/ Conferences (**National and International**)

International Journals :

1. **Vijay R.**, Jesica S., Vinay U., Nishitha V.D., *"Electric Automobile Route Scheduling with Time Setting Using Machine Learning Methods,"* **Journal of Transportation Engineering, Part A: Systems**, **Taylor & Francis**, 2025. ISSN: 1556-8334. (Accepted for Publication) (JCR IF: 3.9) **(SCIE Indexed)** https://doi.org/10.1080/15568318.2025.2586217

2. **Vijay R.**, & Parameshwari, *"An Analytical Study of Fuel Cell Technologies for Green Energy Generation,"* **Asian Journal of Electrical Sciences**, Vol. 14, No.1, pp. 15–22, 2025. https://doi.org/10.70112/ajes-2025.14.1.4258

3. **Vijay R.,** "Economical Modelling and Manufacturing of a Prosthetic ARM," *Wireless Personal Communications, Springer*, Vol. 130, No.3, pp. 1819–1832, 2023, ISSN: 0929-6212, JCR IF – 2.2 **(SCIE Indexed)** https://doi.org/10.1007/s11277-023-10357-9

4. **Vijay R.**, "Quorum sensing centered bacterial horde algorithm for global optimization", *Concurrency and Computation Practice and Experience, Wiley,* Vol. 35, No.8, e7627, 2023, ISSN: 1532-0634, JCR IF – 2. **(SCIE Indexed)** https://doi.org/10.1002/cpe.7627

5. **Vijay R.**, "Performance enrichment in optimal location and sizing of wind and solar PV centered distributed generation by communal spider optimization algorithm", *COMPEL-The international journal for computation and mathematics in electrical and electronic engineering*, Vol. 41, No.5, pp. 1971-1990, 2022, ISSN:0332-1649, JCR IF – 0.7. **(SCIE Indexed)** https://doi.org/10.1108/COMPEL-12-2021-0495

6. **Vijay, R.**, "Quorum sensing driven bacterial swarm optimization to practical dynamic power ecological emission economic dispatch", *International Journal of Computational Methods*, Vol. 15, No. 3, pp. 1850089-24, 2018, ISSN (print): 0219-8762, ISSN (online): 1793-6969, JCR IF – 1.7. **(SCIE Indexed)** https://doi.org/10.1142/S0219876218500895

7. **Vijay, R**. & Subramanian, R.C., "Enhanced ant colony optimization to solve the optimal power flow with ecological emission", *International Journal of System Assurance Engineering and Management*, *Springer*, Vol. 9, No. 1, pp. 58-65, 2018, Print ISSN: 0975-6809, Online ISSN: 0976-4348, IF – 0.566 **(SCIE Indexed)** https://doi.org/10.1007/s13198-016-0471-x

8. **Vijay R.**, "Optimal and stable operation of microgrid using enriched Biogeography Based Optimization algorithm", *Journal of Electrical Engineering*, Vol. 17, No. 4, pp. 1-11, 2017, ISSN 1582-4594, IF – 0.88 **(Scopus Indexed - old)**

9. **Vijay, R.** & Subramanian Ravichandran C, "Scheduling practical generating system using an improved bacterial swarm optimization", *Tehnički Vjesnik*, Vol. 23, No. 5, pp. 1307-1315, 2016, ISSN (Online): 1848-6339/ISSN (Print): 1330-3651, JCR IF – 0.9. **(SCIE Indexed)** https://doi.org/10.17559/TV-20150705224051

10. **Vijay, R.** & Abhilash, M., "Elephant Herding Optimization for Optimum Allocation of Electrical Distributed Generation on Distributed Power Networks", *Asian Journal of Electrical Sciences*, Vol. 7, No. 2, pp. 70-76, 2018, ISSN:2249-6297. **(UGC Approved old)**

11. **Vijay, R.** & Nikeeth Kumar, K., "Analysis of Switching Surge Transients in Express Traction Vehicle", *International Journal of Management, Technology and Engineering*, Vol 8, No.8, pp.232-246, 2018, ISSN:2249-7455. **(UGC Approved old)**

12. **Vijay, R.** & Ravichandran C.S., "Optimal placement and sizing of distributed power sources in microgrid for power loss minimization using bat motivated optimization algorithm", *Asian Journal of Research in Social Sciences and Humanities*, Vol. 6, No. 8, pp. 252-266, 2016, ISSN: 2249-7315. **(UGC Approved old)**

13. Krishnaprasad, M., & **Vijay, R.**, "Maximizing Power Yield from Mismatched Environment in Grid-Connected PV System by Fuzzy Logic Control", *CVR Journal of Science and Technology*, Vol. 22, No.1, pp.63-69, 2022, ISSN: 2277-3916.

14. Deepika, B. & **Vijay R.**, "Energy Management of Stand-alone Hybrid Generation System", *CVR Journal of Science and Technology*, Vol 19, No.1, pp.22-31, 2020, ISSN: 2277-3916.

15. Teja Sree Mummadi & **Vijay R.**, "Optimal Design and Power Management in Shipboard System", *CVR Journal of Science and Technology*, Vol 17, No.1, pp.83-89, 2019, ISSN: 2277-3916.

16. **Vijay R**, Praveen Kumar S. & Satish G., "Performance Analysis of Evolutionary Optimization Techniques for Economic Dispatch Problem", *International Journal of Advances in Computer and Electronics Engineering*, Vol. 4, No. 2, pp. 6-16, 2019, ISSN:2456-3935.

17. **Vijay, R.**, "Optimal Allocation of Electric Power Distributed Generation on Distributed Network Using Elephant Herding Optimization Technique", *CVR Journal of Science and Technology*, Vol . 15, pp.73-79, 2018, ISSN: 2277-3916.

18. **Vijay, R.**, "Transmission Line Outage Detection and Identification by Communal Spider Optimization Algorithm", *CVR Journal of Science and Technology*, Vol . 14, pp.38-42, 2018, ISSN: 2277-3916.

19. **Vijay, R.** & Pavithra T., "Cost optimization of energy storage systems based on wind resources using gravitational search algorithm", *International Journal of Advanced Research*, Vol. 5, No. 5, pp. 41667-1680, 2017, ISSN 2320-5407.

20. **Vijay, R.** & Nithya M., "Efficient energy management system for smart grid using bacterial foraging optimization technique", *International Journal of Engineering and Computer Science*, Vol. 6, No. 6, pp. 21575-21582, 2017, ISSN: 2319-7242.

21. **Vijay, R.** & Sowmya R., "Optimal sitting of PV-Wind-Energy storage system integrated micro grid using artificial bee colony optimization technique", *International Journal of Innovative Research in Computer and Communication Engineering*, Vol. 5, No. 5, pp. 9640-9652, 2017, ISSN (Online): 2320-9801/ISSN (Print): 2320-9798.

22. **Vijay, R.** & Durga Devi J., "Optimal placement and sizing of Wind-PV integrated power generation by ant colony optimization technique", *International Journal of Recent Trends in Engineering & Research*, Vol 3, No. 5, pp. 481-492, 2017, ISSN (Online): 2455-1457.

23. **Vijay, R.** & Priya V., "Anti-islanding protection of distributed generation based on social spider optimization", *International Journal of Advanced Engineering Research and Science*, Vol. 4, No. 6, pp.32-40, 2017, ISSN (Online): 2456-1908/ISSN (Print): 2349-6495.

24. **Vijay, R.** & Ravichandran C.S., "A detailed investigation on conventional and meta-heuristic optimization algorithms for economic power scheduling problems", *International Journal of Engineering Trends and Applications*, Vol. 3, No. 4, pp. 40-53, 2016, ISSN: 2393-9516.

25. **Vijay, R.** & Ravichandran C.S., "Quorum sensing based bacterial swarm optimization on test benchmark functions", *International Journal of Research and Innovation in Engineering Technology*, Vol. 2, No. 12, pp. 27-38, 2016, ISSN: 2394-4854.

26. **Vijay, R**, Antrut Jaffrin, R., & Ravichandran, C.S., "Optimal placement and sizing of solar constructed DG using SSO technique", *International Journal of Computer Science Trends and Technology*, Vol. 4, No. 3, pp. 333-342, 2016, ISSN: 2347-8578.

27. **Vijay, R**, Jeeva, M., & Ravichandran, C.S., "Optimal location of distributed energy resources in microgrid for power loss minimization using bat inspired algorithm", *SSRG International Journal of Electronics and Communication Engineering*, pp. 101-106, 2016, E-ISSN: 2348-8549.

28. **Vijay, R**, Shangavi, S.M., & Ravichandran, C.S., "A shuffled frog leaping algorithm for optimal capacitor placement and sizing in unbalanced distribution system", *SSRG International Journal of Electronics and Communication Engineering*, Special issue, pp.140-144, 2016, E-ISSN: 2348-8379.

29. **Vijay, R.**, "Intelligent bacterial foraging optimization technique to economic load dispatch problem", *International Journal of Soft Computing and Engineering*, Vol. 2, pp.55–59, 2012, ISSN: 2231-2307.

Details of the ICT Videos Developed

Created and managed an educational YouTube channel, Power Systemz, dedicated to simplifying complex topics in Electrical Engineering, including power system operation and control, generation, economic operation, and computational methods. The channel has valuable learning resources for students and researchers worldwide. Continue to develop and share high-quality video lectures to educate and update the academic community on emerging technologies in Electrical Engineering.

[**https://www.youtube.com/@powersystemz**]

Subject Playlists Created

✓ **Basic Electrical Engineering / Basic Electrical and Electronics Engineering / Electric Circuit Analysis**
   https://tinyurl.com/basiceee

✓ **Power System Operation and Control https://tinyurl.com/eepsoc**

✓ **Computational Methods in Power Systems / Advanced Power System Analysis / Power Systems II**
   https://tinyurl.com/cmpspsa

✓ **Power System Generation and Distribution https://tinyurl.com/powersyst**

✓ **Economic Operation of Power Systems https://tinyurl.com/eeeops**

Scopus Profile

https://www.scopus.com/authid/detail.uri?authorId=57191579779

Google Scholar

https://scholar.google.co.in/citations?user=4g1gpRQAAAAJ&hl=en

Vidwan Profile

https://vidwan.inflibnet.ac.in/profile/251468