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	**13 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:	Member of Electret committee – Sudhee & Sruthi -2024, Member of Campus & Stage Decoration Committee - Sudhee & Sruthi -2025
Responsibilities held at the Department Level:	Class Mentor, Class Incharge,
Research Guidance:	B.E/B.Tech Dissertations – 18, M.E/ M.Tech Dissertations – 25
Awards Received:	Got selected for "**InSc Young Achiever Award 2019**"
Courses Handled at Under Graduate / 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 (6-SCIE)**

	National Conference – **05** International Conference – **08 (Scopus)**
Projects Carried out	--
Patents	**Copyrights: 1, Patent: 1** ❖ Published a Copyright for the topic "Quorum Sensing Based Bacterial Swarm Algorithm to Solve Economic Power Dispatch Problem" from Copyright Office – Government of India on 14.10.2019 (Registration No: L-86320/2019) ❖ Indian Patent Published on "Developing and Fabricating of Low-Cost Prosthetic Arm" July 2024. (Application No: 202441053283)
Technology Transfer / Invited Speaker	➢ Recent Trends in Artificial Intelligence and its Application in Power Systems at Kongunadu College of Engineering & Technology, Trichy, Tamil Nadu, India on 16th March 2021. ➢ Basics of Optimization Techniques in Engineering at BHEL, Trichy the event was Co-organized by The Institution of Engineers (India), Tiruchirappalli Centre, Tamil Nadu, India on 2nd May 2018. ➢ PSO - Hands-on Training & its Application to Optimal Placement of PV System in DG at A Two-week AICTE sponsored Faculty Development Program on Applications of Power Electronics in Renewable Energy Systems CVR College of Engineering, Hyderabad, Telangana, India on 23rd Nov 2017. ➢ Basics of MATLAB and Programming Aspects at Hands-on Training on MATLAB Programming and its application in Image Processing Karpagam College of Engineering, Coimbatore, Tamil Nadu, India on 28th September 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. **(Scopus Indexed)** **https://doi.org/10.1109/SEFET61574.2024.10718239** 2. Vijay, R, Sai Kiran Gajwari, Andrews Gunturu & Nikitha Tadkale, "Enriched Power Yield from Photovoltaic Systems under Partial Shadowing Conditions by Velocity Grey Wolf Algorithm", 2024 IEEE 4th International Conference on Sustainable Energy and Future Electric Transportation (SEFET), Hyderabad, India, pp. 1-6, 2024. **(Scopus Indexed)** **https://doi.org/10.1109/SEFET61574.2024.10717899** 3. Vijay, R, Pusuluri Pranay, Bhavana Nendralla, Lakkepuram Shiva Pranay "Household Power Consumption Analysis using Machine Learning", 2024 IEEE 4th International Conference on Sustainable Energy and Future Electric Transportation (SEFET), Hyderabad, India, pp. 1-6, 2024. **(Scopus Indexed)** **https://doi.org/10.1109/SEFET61574.2024.10718254** 4. Vijay, R, Dharavathu, P., Gopaluni, D. A., & Jale, A. R., "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, Springer Singapore, Vol 1106, pp. 51-58, 2024, ISBN: 978-981-99-7954-7. **(Scopus Indexed)** **https://doi.org/10.1007/978-981-99-7954-7_6** 5. Vijay, R., "Clonal Assortment Optimization Procedure to Unravel Cost-Effective Power Dispatch Problem", Soft Computing Applications in Modern Power and Energy Systems. Lecture Notes in Electrical Engineering, Springer, Singapore. Vol 975, pp.39-53, 2023, ISBN: 978-981-19-8353-5. **(Scopus Indexed)**

https://doi.org/10.1007/978-981-19-8353-5_4

6. Vijay, R & Deepika B., "Computational Modelling and Governing of Stand-alone Hybrid Electric Power Generation System", Intelligent Systems. Algorithms for Intelligent Systems. Springer, Singapore, pp.311-325, 2021, ISBN: 978-981-16-2248-9. **(WoS Indexed)** https://doi.org/10.1007/978-981-16-2248-9_31

7. Vijay, R & Tejasree M., "Optimal Scheme and Power Controlling aspects in Shipboard System", Innovations in Electrical and Electronics Engineering, Springer, Singapore, Vol. 626, pp. 367–379, 2020, ISBN: 978-981-15-2256-7 **(Scopus Indexed)** https://doi.org/10.1007/978-981-15-2256-7_36

8. Vijay, R & Ravichandran, CS., "Enriched biogeography-based optimization algorithm to solve economic power dispatch problem", In Proceedings of fifth international conference on soft computing for problem solving, Springer Singapore, Vol. 437, pp. 875-888, 2016, ISBN: 978-981-10-0451-3 **(Scopus Indexed)** https://doi.org/10.1007/978-981-15-2256-7_36

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.

Details of Short-Term Training Programs/Faculty Development Programs/Seminars/Workshops. Other Training (**Attended and/or Organized**).

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.,** "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**

2. **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**

3. **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**

4. **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**

5. **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-**

<u>016-0471-x</u>

6. **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)**

7. **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)** <u>https://doi.org/10.17559/TV-20150705224051</u>

8. **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)**

9. **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)**

10. **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)**

11. 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.

12. 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.

13. 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.

14. **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.

15. **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.

16. **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.

17. **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.

18. **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.

19. **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.

20. **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.

21. **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.

22. **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.

23. **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.

24. **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.

25. **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.

26. **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.

27. **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.