

Name of Faculty Dr. P. Vijay Babu
 Designation Asst. Professor
 Nature of Job/Appointment Regular
 Date of Joining 01 - 12 - 2021
 E-mail vijaybabup_eee@cbit.ac.in



Education Qualifications	Name of the Degree	Class
PDF	Post Doc (Singapore Institute of Technology, Singapore)	Pursuing
Ph. D	Doctor of Philosophy, Ph.D (Power Systems)- IIT (BHU) Varanasi	Awarded
PG	M. Tech. (Power Systems)- NIT Kurukshetra	Distinction
UG	B. Tech. (EEE)	Distinction

Work Experience

Teaching	06 Years
Research	09 years
Industry	--
Others	--

Area of Specialization

Machine Learning, Soft computing Techniques, Power Quality, Power Systems, smart grid, microgrid

Professional Memberships

Member of Institute of Electrical and Electronics Engineering (IEEE)
 ID: 93363316

Responsibilities held at Institution Level

MATLAB COORDINATOR

Responsibilities held at Department Level

1. POWER SYSTEM LAB INCHARGE
2. DEPARTMENT MENTORING INCHARGE

Research Guidance

B,TECH PROJECTS-02

1. Got 2nd Best paper award in "IEEE National Conference on Cognizance of Applied Engineering and Research" held at Panjab University, Chandigarh.
2. International Travel Support (ITS) from science and engineering research board, department of science and technology (DST), Government of India
3. Student Housing Support from IEEE PES general meeting 2017
4. Ministry of Human Resource and Development (MHRD) Scholarship during Post Graduation (2012-2014)
5. Ministry of Human Resource and Development (MHRD) Doctoral fellowship (2014-2019)

Awards Received

Courses Handled at Under Graduate / Post Graduate Level.

Electrical Machines II, High Voltage Engineering, Basic electrical engineering

No. of Papers Published

National Journals – 01 International Journals – 14
 National Conference – 02 International Conference – 20

Projects Carried out

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Patents

Technology Transfer

Invited Speaker

Successfully delivered an expert session on "Distribution Energy System optimization using GAMS" during the two weeks online Faculty Development Programme on "AI and EV Synergy: Driving the Evolution of Next-Gen Smart Energy Systems (AI-EVS-2025)" organized by Electronics & ICT Academy, NIT Patna and NIT Agartala under the "Scheme of financial assistance for setting up of Electronics and ICT Academies (Phase- II)" by the Ministry of

Electronics and Information Technology (MeitY), Government of India from 7th July 2025 – 18th July 2025. His expert session was scheduled on July 15, 2025 from 9:30 am to 11:30 am

No. of Books/Chapter Published with details

1. Pamshetti, Vijay Babu, Anil Kumar Annamraju, Mallala Balasubbarreddy, and Ravi Ponnala. "Optimal integration of renewable based distributed generation into distribution networks in presence of plug in electric vehicles: a multi objective framework." In *Renewable Energy for Plug-In Electric Vehicles*, pp. 157-178. Elsevier, 2024.
2. Prasad, P. Siva, M. Sushama, and P. Vijay Babu. "Stochastic Optimal Allocation of Photovoltaic-Based DG and DSTATCOM in Distribution System Considering Uncertainties of Loads and Solar Irradiance." In *International Conference on Sustainable Technology and Advanced Computing in Electrical Engineering*, pp. 287-297. Singapore: Springer Nature Singapore, 2023.
3. Pamshetti, Vijay Babu, V. V. S. N. Murty, S. P. Singh, and Ashwani Kumar Sharma. "Multi-objective stochastic Volt/VAR optimization in AC-DC hybrid distribution network considering soft open point." In *Renewable Energy Towards Smart Grid: Select Proceedings of SGESC 2021*, pp. 295-308. Singapore: Springer Nature Singapore, 2022.
4. Murty, V. V. S. N., P. Ramakrishna, Vijay Babu Pamshetti, and Ashwani Kumar. "Optimal Placement of Micro-Phasor Measurement Units in Active Distribution Systems Using Mixed-Integer Programming." In *Renewable Energy Towards Smart Grid: Select Proceedings of SGESC 2021*, pp. 421-432. Singapore: Springer Nature Singapore, 2022.
5. Vijay Babu Pamshetti, V V S N Murty, S P Singh and Ashwani Kumar Sharma (2022) Multi-objective Stochastic Volt/VAR Optimization in AC-DC Hybrid Distribution Network Considering Soft Open Point. *Renewable Energy Towards Smart Grid. Lecture Notes in Electrical Engineering*, vol 823. Springer, Singapore. https://doi.org/10.1007/978-981-16-7472-3_23
6. Murty V.V.S.N., Ramakrishna P., Pamshetti V.B., Kumar A. (2022) Optimal Placement of Micro-Phasor Measurement Units in Active Distribution Systems Using Mixed-Integer Programming. In: Kumar A., Srivastava S.C., Singh S.N. (eds) *Renewable Energy Towards Smart Grid. Lecture Notes in Electrical Engineering*, vol 823. Springer, Singapore. https://doi.org/10.1007/978-981-16-7472-3_34
7. Vijay Babu Pamshetti, S. P. Singh. Integrated Operation and Planning Model of Renewable Energy Sources with Flexible devices in Active Distribution Networks, Book entitled "Flexibility in electric power distribution networks", CRC press Taylor & Francis Group. eBook ISBN 9781003122326. 2021
8. Vijay Babu Pamshetti, S. P. Singh. Role of energy storage system in integration of renewable energy technologies in active distribution network. Book entitled "Energy Storage in Modern Power System", Wiley-Scrivener, Scrivener Publishing house, Beverly, MA 01915-6106, USA eBook ISBN 9781119760337

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

1. 5-day Online FDP on the theme "Inculcating Universal Human Values in Technical Education" organized by All India Council for Technical Education (AICTE) from 19th December to 23rd December 2022
2. Five Days Online Workshop on "Microgrid: Issues, Challenges, and its Mitigation" organized by the Department of Electrical Engineering, NIT, Uttarakhand from 25th November - 29th November 2022.
3. FDP on "iATP(indigenous Automatic Train Protection) system - KAVACH" from 2022-09-05-2022-09-10 to 2022-09-12-2022-09-16 at INDIAN RAILWAY INSTITUTE OF SIGNAL ENGINEERING AND TELECOMMUNICATIONS
4. FDP on 'Applications of Power Electronics to Electric Vehicles and Hybrid Energy Storage Systems' organized by

NIT Warangal and CVR college of engineering during 21-30 march, 2022.

5. Short Term Course on "Microgrid Issues, Challenges and Solutions in Smart Grid" Organized by: Department of Electrical Engineering, NIT Uttarakhand (8th – 12th March 2021)
6. Short Term Course on 'RTDS Training Course', organized by Dept. of Electrical Engineering, IIT (BHU) Varanasi during May 6- May 10, 2019.
7. Short Term Course on 'Research Methods and Skills' organized by Teaching Learning Cell, IIT (BHU) during Dec 04- 05, 2015.
8. Workshop on Electrical Energy Distribution from 6-9 Nov. 2015 jointly organized by Dept. of Electrical Engineering, IIT(BHU), Varanasi & Central Power Research Institute (CPRI) Bangalore.
9. Short Term Course on Economic Operation of Power Systems with MATLAB and GAMS from July 6-10, 2015 at Dept. of Electrical Engineering, National Institute of Technology Kurukshetra, Haryana.

Details of Journal Publications/
Conferences (National and International)

International Conference :

1. Aljafari, Belqasem, Vijay Babu Pamshetti, and Sudhakar Babu Thanikanti. "Maximizing techno-economic-environmental benefits of renewable energy allocation with smart inverter in distribution system: A two-layer stochastic optimization framework." *International Journal of Green Energy* 22, no. 8 (2025): 1436-1453.
2. Yuvaraj, T., K. R. Devabalaji, Sudhakar Babu Thanikanti, Vijay Babu Pamshetti, and Nnamdi I. Nwulu. "Integration of electric vehicle charging stations and DSTATCOM in practical indian distribution systems using bald eagle search algorithm." *IEEE access* 11 (2023): 55149-55168.
3. Singh, Shailendra, Vijay Babu Pamshetti, Amit Kumar Thakur, S. P. Singh, and Hoay Beng Gooi. "Profit maximization in ADN through voltage control and DR management with networked community micro-grids." *IEEE Transactions on Industry Applications* 59, no. 3 (2023): 2706-2719.
4. Shailendra Singh, Vijay Babu Pamshetti, A. K. Thakur, S. P. Singh. Real-Time Conservation Voltage Reduction and Control in Smart Micro-Grid Application. *IEEE Transactions on Industry Applications*, JANUARY. 2023 (early access)
5. Vijay Babu Pamshetti, Shailendra Singh, A. K. Thakur, S. P. Singh, T. Sudhakar Babu, Nishant Patnaik, and G. Hari Krishna. "Cooperative Operational Planning Model for Distributed Energy Resources with Soft Open Point in Active Distribution Network." *IEEE Transactions on Industry Applications* (2022).
6. Vijay Babu Pamshetti, Shailendra Singh, A. K. Thakur, S. P. Singh. Multi-Stage Coordination Volt/VAR Control with CVR in Active Distribution Network in presence of Inverter-Based DG Units and Soft Open Points. *IEEE Transactions on Industry Applications*, Volume: 57, issue-3, pp.2035-2047 May-June 2021
7. Vijay Babu Pamshetti, S. P. Singh. Coordinated Allocation of BESS and SOP in High PV Penetrated Distribution Network Incorporating DR and CVR Schemes. *IEEE Systems Journal* 2021; (early access)
8. Shailendra Singh, Vijay Babu Pamshetti, A. K. Thakur, S. P. Singh, Multi-Stage Multi-Objective Volt-VAR Control for Smart Grid-enabled CVR with Solar PV Penetration. *IEEE Systems Journal* Volume: 15, issue-2, pp.2767-2778 June 2021
9. Vijay Babu Pamshetti, Shailendra Singh, S. P. Singh. Combined Impact of Network Reconfiguration and Volt-VAR control devices on Energy Savings in the presence of Distributed Generation. *IEEE Systems Journal*. Volume: 14, Issue: 1, pp.995-1006 March 2020
10. Vijay Babu Pamshetti, Shailendra Singh, S. P. Singh. Reduction of energy demand via conservation voltage reduction considering network reconfiguration and soft open point. *International Transactions on Electrical Energy Systems*. DOI: 10.1002/2050-7038.12147. Volume: 30, Issue: 1, e12147. January 2020

11. Shailendra Singh, S. P. Singh, Vijay Babu Pamshetti Energy Efficiency and Peak Load Management via CVR and Distributed Energy Storage in Active Distribution Grid. *International Transactions on Electrical Energy Systems*, <https://doi.org/10.1002/2050-7038.12224> Volume: 30, Issue: 3 , e12224. January 2020
12. Shailendra Singh, Vijay Babu Pamshetti, S. P. Singh. Time Horizon-based Model Predictive Volt/VAR Optimization for Smart Grid Enabled CVR in Presence of Electric Vehicle Charging Loads. *IEEE Transactions on Industry Applications* Volume: 55 , Issue: 16 , pp. 5502-5513 Nov-Dec 2019.
13. Vijay Babu Pamshetti, S. P. Singh. Optimal coordination of PV smart inverter and traditional volt-VAR control devices for energy cost savings and voltage regulation. *International Transactions on Electrical Energy Systems*. DOI: 10.1002/2050-7038.12042 Volume: 29, Issue: 7, e12042, July 2019
14. Vijay Babu Pamshetti and S. P. Singh, "Optimal placement of DG in distribution network for power loss minimization using NLP & PLS technique", *Energy Procedia* 90, 2016, pp. 441–454. Elsevier, ISSN: 1876-6102.
15. Ashwani Kumar, Vijay Babu Pamshetti, V.V.S.N. Murty, "Distributed generators allocation in radial distribution systems with load growth using Loss sensitivity approach", *Journal of the institution of Engineers (India) series B*, 2016. Volume: 98, Issue: 3, pp.275-287. DOI 10.1007/s40031-016-0242-8

International /National Conferences

1. Pamshetti, Vijay Babu, Wei Zhang, Man-Fai Ng Andy, Qingyu Yan, and Kuan Tak Tan. "Enhanced Battery Degradation-Aware Scheduling for Distribution Network with Electric Vehicle Load." In *TENCON 2024-2024 IEEE Region 10 Conference (TENCON)*, pp. 1044-1047. IEEE, 2024.
2. Pamshetti, Vijay Babu, and Wei Zhang. "Combined Allocation of Renewable-Based Distributed Generation and Soft Open Point into Distribution Networks in Presence of Plug-In Electric Vehicles: A Multi-Objective Framework." In *2024 IEEE 4th International Conference on Sustainable Energy and Future Electric Transportation (SEFET)*, pp. 01-06. IEEE, 2024.
3. Pamshetti, Vijay Babu, and Wei Zhang. "Toward Optimal Multi-Microgrid Design and Operation for Enhancing Supply-Security and Reliability." In *2024 IEEE 4th International Conference on Sustainable Energy and Future Electric Transportation (SEFET)*, pp. 1-6. IEEE, 2024.
4. Annamraju, Anil, Vijay Babu Pamshetti, Ravi Kumar Avvari, Nageswara Reddy Nareddy, and C. Srinivasarathnam. "Load Frequency Control in a Renewable Rich Power Systems: An Artificial Hummingbird Optimization Based Multistage PID Control Approach." In *2024 IEEE International Conference on Smart Power Control and Renewable Energy (ICSPCRE)*, pp. 1-6. IEEE, 2024.
5. Vijay Babu Pamshetti, V V S N Murty, S P Singh and Ashwani Kumar Sharma Multi-Objective Stochastic Volt/VAR Optimization in AC-DC Hybrid Distribution Network considering Soft Open Point. *International Online Conference on Smart Grid Energy Systems and Control (SGESC-2021)*, March 19- 21, 2021, NIT Kurukshetra. India.
6. V. V. S. N. Murty Vallem, Ramakrishna Pothuraju, Ashwani Kumar and Vijay Babu Pamshetti. Optimal Placement of Micro-Phasor Measurement Units in Active Distribution Systems using Mixed Integer Programming. *International Online Conference on Smart Grid Energy Systems and Control (SGESC- 2021)*, March 19-21, 2021, NIT Kurukshetra. India.
7. Vijay Babu Pamshetti, Shailendra Singh, A. K. Thakur, S. P. Singh, Bi-Level Operational Planning of Microgrids considering Conservation Voltage Reduction. *IEEE PEDES 2020 Power Electronics Drives and Energy System*, Dec.16-Dec.19, 2020. Malaviya National Institute of Technology, Jaipur, Rajasthan, India.
8. Vijay Babu Pamshetti, Shailendra Singh, A. K. Thakur, S. P. Singh, Coordinated Operation of Battery Energy Storage and VVC devices in High-PV Penetrated Distribution Network. *IEEE PEDES 2020 Power Electronics Drives and Energy System*, Dec.16-Dec.19, 2020. Malaviya National Institute of Technology, Jaipur, Rajasthan, India.
9. Shailendra Singh, S. P. Singh, A. K. Thakur, Vijay Babu Pamshetti, Real-Time Conservation Voltage Reduction and Control in Smart Micro-Grid Application. *IEEE PEDES 2020 Power Electronics Drives and Energy System*, Dec.16-Dec.19, 2020. Malaviya National Institute of Technology, Jaipur, Rajasthan, India.
10. Devesh Shukla, Siddhi Jaiswal, Vijay P. Babu, and S.P Singh. Near Real Time Load Forecasting in Power System 21st National Power Systems Conference (NPSC 2020), Indian Institute of Technology Gandhinagar during December 17-19, 2020.
11. Vijay Babu Pamshetti, S. P. Singh. Multi-Stage Coordination Volt/VAR Control with CVR in Active Distribution Network in presence of Inverter-Based DG Units and Soft Open Points . 2020 IEEE IAS Annual meeting Oct.11-Oct.15, 2020, Detroit, Michigan USA.

12. Vijay Babu Pamshetti, Shailendra Singh, A. K. Thakur, S. P. Singh, B. Vinod. Integrated Operation of Conservation Voltage Reduction and Network Reconfiguration in PV-Rich Distribution Network considering Soft Open Point Impact . 2019 IEEE IAS Annual meeting, Sept.29-Oct.3, 2019, Baltimore, Maryland, USA.
13. Shailendra Singh, Vijay Babu Pamshetti, and S. P. Singh, "Impact of Combined Operation of CVR and Energy Storage System in Distribution Grid" 20th National Power System Conference, Trichy, India, 18- 21 Dec, 2018.
14. Vijay Babu Pamshetti, Shailendra Singh and S. P. Singh, "Distributed generators allocation in distribution system", 2017 IEEE PES General meeting, July 16-20, 2017, Chicago, IL, USA.
15. Vijay Babu Pamshetti and S. P. Singh, 'Capacitor allocation in radial distribution system for maximal energy savings'. In proc. of 19th National power system conference (NPSC), IIT Bhubaneswar 2016: pp. 1-6. DOI: 10.1109/NPSC.2016.7858945.
16. Vijay Babu Pamshetti and S. P. Singh, "Optimal Capacitor placement in RDS using combined Fuzzy & Novel loss sensitivity method", In proc. of 6th International conference on power system (ICPS), IIT Delhi, New Delhi, March.4-6 ,2016, pp. 1-6. DOI: 10.1109/ICPES.2016.7584170.
17. Vijay Babu Pamshetti and Ratna Dahiya, "Direct search approach for multiple distributed generator allocation in radial distribution system", In proc. of 6th IEEE Power India International conference, Delhi Technological university, Delhi, Dec.5-7 ,2014, pp. 1-6. DOI: 10.1109/POWERI.2014.7117686.
18. Vijay Babu Pamshetti, P. Siva Prasad, B. Ravi Teja. "Optimal reconfiguration and capacitor placement in radial distribution system for loss reduction" 38th National System Conference 2014, pp. 134-140. ISBN No: 9789351072973.
19. Vijay Babu Pamshetti and Ratna Dahiya, "Multiple distributed generator allocation by modified novel power loss sensitivity for loss reduction", IESA-2014, NIT Durgapur, pp. 258-262
20. Vijay Babu Pamshetti, V.V.S.N Murty, B. Ravi Teja and Choutai Bhavani, "Optimal DG placement in a radial distribution systems based on combined power loss sensitivity approach", in proc. of ICAER- 2013, Uiet Chandigarh pp. 129-132.

