Faculty Profile

Dr Vinod V

Associate Professor, Dept. of Electrical & Electronics Engineering

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Qualifications

2002 B.Tech (Electrical and Electronics Engineering), TKM college of Engineering Kollam

2013 ME (Electrical Department) IISC Bangalore.

2020 PhD (Electrical Department) IISC Bangalore

Area of Interest

Power system Protection, Relay Implementation, Micro-grid protection, HVDC protection

Professional Experience

December -2004 to June 2007, Junior Engineer, Traction, Indian Railways

June- 2007 to Nov 2008, Assistant Professor, GEC Painavu, Idukhi

Nov- 2008 to July 2019, Assistant Professor, GEC Barton Hill. Trivandrum

July 2019 to June 2022 Assistant Professor, College of Engineering Trivandrum

June 2022 to till date Associate Professor GEC Barton Hill. Trivandrum

Recently taught courses

Circuits & Networks, Electromagnetic Theory, Flexible AC Transmission, Electrical system Design, HVDC & Facts, Power system Engineering, Sustainable Engineering

Other responsibilities

Lab in charge- Electrical Machine Lab
MTECH Power system 2022 batch – Staff Advisor

Associated Projects

1. Worked as project associate - Control and Protection in Micro-grid jointly handed by IISC Bangalore and CPRI

2. Worked as project associate - Power system synchronization relay part of IISC project "Smart Energy Systems Infrastructure - Hybrid Test Bed", supported by Fund for Improvement of Science and Technology (FIST) program, DST, India

3. A test setup is built at High power lab in IISC Bangalore for fault insertion and protection coordination study. Hardware implementation

	of a support vector machine classifier based relay is implemented in this setup as part of my PhD thesis. 4. NaMPET (National Mission on Power Electronics Technology) phase-III project titled "Design, Development and Testing of a Support Vector Machine based relay for islanding detection and Automated Synchronization" at College of Engineering, Trivandrum (25 Lakhs-ongoing)- Chief Investigator

Innovations in Teaching and Learning

	An open software is developed for power system simulation in Visual C# platform. The main features of the developed software are mentioned below. a.) Y-Bus matrix of any system in both polar and rectangular form b.) Load flow study include the performance of different numerical methods c.) Short circuit analysis including sequence diagram plot

Membership in Professional Organizations:

1	IEEE

Important Publications:

1	Sangeeth Balu **(**MTECH Power system 2020 batch) and Vinod V " High Impedance Fault Detection using multi domain feature with Artificial Neural Network , " Electric Power Components and Systems Taylor and Francis **(SCIE Indexed)**
2	Shivani H Nair, Devika M K, Aswin Raj, Bensen Bernard (Btech students 2022 batch) , Vinod V and Sunil kumar P R " Improving distance relay performance for heavily distorted voltage and current by accurate signal reconstruction using Extended Kalman Filter"- IOP Science Measurement Science and Technology **(SCIE- Indexed)**
3	Roshan Alex (MTECH Power system -2021 batch**)** , V Vinod, RM Shereef, "SVM-based anti-islanding protection for DER near a modern industrial premise", Electrical Engineering Springer (2022). https://doi.org/10.1007/s00202-022-01670-w **(SCI- Indexed)**
4	Vinod V and U J Shenoy,"Design and implementation of an adaptive relay based on curve-fitting technique for micro-grid protection" , "International Journal of Emerging Electric Power Systems" https://doi.org/10.1515/ijeeps-2021-0311 **(SCIMago, Scopus Indexed)**
5	Vinod V and U J Shenoy, "Implementation of Support Vector Machine Based Relay Coordination Scheme for Distribution System with Renewables," IEEE Journal of Emerging and Selected Topics in Industrial Electronics DOI: 10.1109/JESTIE.2020.3014875**. (SCIE-Indexed)**
6	Vinod V and U J Shenoy, "Protection scheme for maintaining coordination time interval among relay pairs in micro-grid by employing centralized master controller," IET Generation, Transmission & Distribution Vol.14, Iss. 2, Jan 2020, pp.234-244. **(SCI-Indexed)**

Conference

	1. Vinod V and U J Shenoy, "An adaptive relay based on curve fitting technique for micro-grid protection," IEEE International conference on Power Electronics, Smart Grid and Renewable Energy (PESGRE 2020), January 2-4, 2020 , Cochin, India. 2. Vinod V and U J Shenoy, "Optimized Section-Wise Relay Coordination based on Coordination Time Interval using Standard Curves with Centralized System," 2019 IEEE

PES Innovative Smart Grid Technologies Europe (ISGT 2019), September 29 - October 2, 2019, Bucharest, Romania.

3. Vinod V and U J Shenoy, “An Algorithm for Microgrid Protection using Z-Bus matrix formulation in a Central Master Controller," Fifth International Conference for convergence of Technology (I2CT 2019), March 29-31, 2019, Pune, India.

4. Vinod V and U J Shenoy, “Adaptive Relay in Microgrid-Hardware Implementation with User Interface," 20th National Power Systems Conference (NPSC-2018).

5. Vinod V and U J Shenoy, “ Design and Development of high performance Integrated protective scheme for AC traction," 2013 Innovative smart grid Technologies IEEE conference Asia (ISGT Asia- 2013)

6. Vinod V and U J Shenoy, “ Detection of ground fault in distribution line interconnected with DGs," IEEE PEDES 2016 , 14 to 17 December 2016

7. Aparna Joshi, Raeeza Khathoon, Pv Angel Peter, V Vinod, A computationally less expensive fault detection technique in VSC-HVDC system using wavelet decomposition and support vector machine classifier, 2022 IEEE International Conference on Power Electronics, Smart Grid, and Renewable Energy (PESGRE)

8. Parvathy Saji, Ashiq Muhammed, V Vinod, Estimating The Effect of Axial Displacement on Equivalent Circuit Parameters of Transformer Winding Using Finite Element Method, 2021 IEEE 5th International Conference on Condition Assessment Techniques in Electrical Systems (CATCON)

9. Thomas, A., & Vinod, V. (2022, September). Accurate compensation of heavily saturated and distorted Current Transformer output using Unscented Kalman Filter Algorithm. In 2022 IEEE Global Conference on Computing, Power and Communication Technologies (GlobConPT) (pp. 1-6). IEEE.

10. Saji, P., Muhammed, A., & Vinod, V. (2022, September). An Efficient Method to Localize and Quantify Axial Displacement in Transformer Winding Using Support Vector Machines. In 2022 IEEE Global Conference on Computing, Power and Communication Technologies (GlobConPT) (pp. 1-6). IEEE.

11. Meera, A., Vinod, V., Rajeev, T., & Joseph, A. (2022, September). Design, Development and Testing of a Support Vector Machine based Relay for Islanding Detection. In 2022 IEEE Global Conference on Computing, Power and Communication Technologies (GlobConPT) (pp. 1-6). IEEE.