

Faculty Profile

Brief Profile (Few Paragraphs)



Dr. D. G. Abhilash Krishna is an enthusiastic academic and researcher in the Department of Electrical and Electronics Engineering at RV College of Engineering, Bengaluru. He holds a Ph.D. in Electrical Engineering from NITK Surathkal and has a strong research background in power electronics, particularly in improving power quality through custom power devices and interlinking converters in hybrid microgrids. His work includes advanced control strategies such as Pseudo Derivative Feedback and CDSC-based dual vector control, contributing to reputed IEEE journals and international conferences. He is also a co-inventor on a patent focused on dynamic voltage restoration in weak AC grids. Dr. Abhilash has hands-on experience with simulation tools like MATLAB/Simulink and PSCAD, and has guided laboratory and theory courses in power electronics and electric power quality. He is passionate about developing intelligent, adaptive power electronic systems for next-generation power and energy applications.

Personal Information

- **Name:** Dr. D.G. Abhilash Krishna
- **Designation:** Assistant Professor
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Domain of Expertise

Research Focus

- **Primary Area:** Design and Control of Power Converters for grid integration, Power Quality
- **Allied Areas:**
 - DC-DC Converters for EV charging
 - BLDC/Stepper motor drive control

Academic Qualifications

- **Ph.D.:** [EE], [NITK, Surathkal], [2022]
- **M.Tech:** [Power Electronics & Drives], [VIT, University], [2015]
- **B.Tech:** [EEE], [JNTUA], [2013]

Professional Experience

Experience			
S.No	Institute/College/Industry	Job Title	Duration (From- To)
1.	RVCE	Assistant Professor	14-02-2022 to till date

Publications & Patents

Journal Publications

1. A. Karthikeyan, D.G.Abhilash Krishna, Sushant Kumar, B.Venkatesa Perumal, S. Mishra,, "Dual Role CDSC Based Dual Vector Control for Effective Operation of DVR With Harmonic Mitigation", in IEEE Transactions on Industrial Electronics, Vol. 66, No. 1, pp.4-13,2019.
2. D.G.Abhilash Krishna, A. Karthikeyan, Prabhakaran K.K, Sushant Kumar, "An Efficient Pseudo Derivative Feedback based Voltage Controller for DVR under Distorted Grid Conditions", in IEEE Journal of Emerging and Selected Topics in Industrial Electronics, vol. 2, no. 1, pp. 71-81,2021 .

Conference Papers

1. D. G. Abhilash Krishna and A. Karthikeyan, "Design and analysis of frequency adaptive CDSC-PLL for Dynamic Voltage Restorer during adverse grid conditions", in IEEE International Conference on Power Electronics, Smart Grid and Renewable Energy (PESGRE2020), Cochin, India, 2020.
2. A. Karthikeyan, Abhilash Krishna D.G, Nagamani C, "Virtual Impedance based DFCL for DVR During Downstream Faults " Accepted in 8th IEEE International Conference on Power Electronics, Drives and Energy Systems (PEDES 2018), IIT Madras, Chennai, India.
3. A. Karthikeyan, Prabhakaran K K, C. Abhilash Krishna D.G, Nagamani C, "Standalone single stage PV fed reduced switch inverter based independent control of two PMSM drive" Presented in in 40th IEEE International Telecommunications Energy Conference (INTELEC 2018), Torino, Italy.
4. A. Karthikeyan, Abhilash Krishna D.G, Suresh kurra, Prabhakaran K K, "Uncertainty and Disturbance Estimator Based Control for Transformerless DVR" Presented in 40th IEEE International Telecommunications Energy Conference (INTELEC 2018), Torino, Italy.
5. A. Karthikeyan, Abhilash Krishna D.G, Sushant Kumar, C. Nagamani, "Design and Analysis of MultiLoop Feed Forward Control Schemes for DVR under Distorted Grid Conditions" in proc 14th IEEE India Council International Conference (INDICON), IIT Roorkee, 2017.

Patents **[Filed / Published / Granted]**

1. A.Karthikeyan, B.Venkatesa Perumal, D.G.Abhilash Krishna, K. K. Prabhakaran "A dynamic voltage restoration system for weak ac grids and a method thereof ",Indian patent no. 525180 granted on 14/03/2024.

R & Grants & Consultancy Projects

Ongoing & Completed Research Projects

- **Field Oriented Control (FOC) based BLDC/Stepper Motor Drive Electronics.**
 - Funding Agency: ISRO,
 - Duration: Two Years
 - Role: Co-PI
 - Status : Ongoing

Awards & Recognitions

- Award of the appreciation, “Faculty of the Year-2024” RVCE, 2024

Teaching

Core Courses: [Current semester]

- EV-Power Train Drives (EE364TA)
- F28379D Controller for Power Electronics (MPE427SL)

Advanced/Lab Courses:

- Digital Signal Processing and Applications
- Control Systems

Professional Roles

Responsibilities

- **Academic:** Department Exam unit Coordinator and BoS Coordinator
- **Administrative:** Lab In-charge