

REGISTRATION AND CERTIFICATION

- Maximum seats: **30** (selection based on merit and first come, first serve basis)
- Registration Fee: ₹1000 +18% GST Extra
- For NITK students/faculty no GST charges
- Online registration form link: <https://forms.gle/oP1pcaBtdq9EVTDg8>
- Please fill the Google form with the requested details and upload the scanned copies of the certificate, resume, and declaration form along with NOC (from the Project supervisor/HoD/Head of the institution) by **15th June 2024**.
- The applications will be screened, and the candidates will be selected on merit. The selection committee's decision will be final in the selection of candidates.
- The selected candidates will be informed by email on or before **16th June 2024**
- The selected candidates will have to acknowledge participating in the workshop through a return email (on or before **20th June 2024**), failing which the waitlisted candidates may be called to attend the workshop.
- Certificates will be provided to the participants after the successful completion of the workshop.
- Selected participants will be accommodated in Institute guest house/hostel rooms (if available) with lunch under the funds approved by SERB (as per norms).

IMPORTANT DATES

Last date of registration: **15/06/2024**

List of selected students: **16/06/2024**

Last date to accept the offer: **20/06/2024**

Participants: Eligibility Criteria

- PG/Ph.D. students/scholar**, Faculty working in any AICTE approved University / Institution within India and Employees from Industry are eligible to apply.
- Relevant areas of specialization include (but are not limited to): Electric Vehicles/Power Electronics/Electrical Drives/Power and Industrial Drives/Power Systems and related domains.
- The applicants should produce a declaration form and a "No Objection Certificate (NOC)" from the Supervisor/Head of the Department/Head of the Institute, allowing their student/Faculty to undergo training in the workshop if selected.

CHIEF PATRON & CHAIRMAN

Prof. B. Ravi
Director, NIT Karnataka

CO-CHAIRMAN

Dr. Debashisha Jena
HoD, Dept. of E & E Engg.,
NIT Karnataka

ADDRESS FOR CORRESPONDENCE

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SERB CRG Project Sponsored

One Week High-End Workshop on

SUITEV: Smart Universal Infrastructure for Efficient Electric Vehicle Charging– Simulations and Validations

[Physical Mode]

(24th to 30th June 2024)



Event Organizers:

Dr. B. Dastagiri Reddy
Dr. Prajof P,
Dr. Dharavath Kishan,
Dr. Kalpana R,
Dr. Arun Dominic

Organized by:

Department of Electrical and Electronics Engineering, National Institute of Technology Karnataka, Surathkal, Mangalore, Karnataka.

Venue: Dept. of Electrical and Electronics Engineering, NITK Surathkal, Mangaluru – 575025

Accommodation: A limited number of rooms in NITK Guesthouses/Hostels are available on a First Come, and First Served basis. THE HOST INSTITUTION SHALL BEAR the boarding and lodging within the NITK premise only (from the SERB fund). If unavailable, the participants need to make self-arrangements for their stay outside the NITK premises, which the organizers do not bear.

About the Institute

National Institute of Technology Karnataka (NITK), Surathkal (formerly KREC), is one of the institutes of National importance in our country funded by MHRD, the Government of India. Since its inception in 1960 as the Karnataka Regional Engineering College, the Institute has established itself as a premier centre engaged in imparting quality technological education and supporting research and development activities. NITK has carved a niche for itself among the best technical institutes in India and is consistently ranked among the top 10 technological institutions.

About the Department

The Department of Electrical and Electronics Engineering was established in the year 1960. The department offers an undergraduate B.Tech. Program in Electrical and Electronics Engineering. The postgraduate (M.Tech.) program in Power and Energy Systems was introduced in 1992, and research

programmes leading to Ph.D. degrees started in 2003. It has a well-qualified and experienced faculty team actively engaged in research and development activities. The department is continuously fulfilling its role of producing qualified Electrical Engineer Engineers suited for the current industrial growth scenario. Many of our Ph.D. graduates have taken up faculty positions in other NITs and IITs.

About the Workshop

Today, most electric vehicles are gaining more attention in the electrical sector. Electric vehicle charging infrastructure plays a major role in the advancements of EV technology. Modern charging infrastructure simplifies power control and conversion and ensures high efficiency. They also increase the power density of the system, help make intelligent and optimized decisions, and are utilized in generating high-quality gating signals. Hence, a workshop on an electric vehicle charging infrastructure shall be helpful to potential Ph.D./M.Tech students and faculty.

This workshop shall focus on a recent trend in electric vehicle charging infrastructure, power electronic systems, and their real-time control implementation using an DSP/FPGA-based controller. Hands-on simulation and implementation sessions on the latest charging infrastructure will be included in this workshop. Overall, this workshop shall serve to be an excellent platform for upgrading the participants' knowledge in the domain of electric vehicle charging.

Objectives of the Workshop:

- a. To impart knowledge about various electric vehicle charging and their real-time control implementation.
- b. To explain the fundamentals of the latest DSP/FPGA controller, its programming, and interfacing aspects for power electronic systems.
- c. To impart hands-on training to set up the electric vehicle charging and validation.

Course Contents:

- Electric Vehicle Charging Technologies.
- Control of Power Electronic Converters.
- Basics of DSP/FPGA-based Controller.
- Wired and Wireless Charging Infrastructure and Control.
- Multiport Converters for EV charging and Renewable Energy Integration.
- BMS for EVs
- Speed control of motor-drive

Resource Persons

Subject experts from prestigious academic institutions (like IITs, NITs, etc.), R&D organizations, and industries will deliver the workshop content. The event organizer and student volunteers will mentor the hands-on sessions.