ABOUT KARYASHALA SCHEME

'KARYASHALA' is an effort to improve research productivity of promising PG and PhD students from universities and colleges through high-end workshops on specific themes. This program aims to provide opportunities to acquire specialized research skills. These workshops will primarily be facilitated at organizations / institutions / laboratories of national importance such as IITs, IISc, IISERs, NITs, CSIR, ICAR, ICMR etc. Karyashala is funded by Science and Engineering Research Board (SERB), Government of India, via Accelerate Vigyan scheme.

ABOUT THE INSTITUTE

The National Institute of Technology Tiruchirappalli (NIT-T), formerly known as Regional Engineering College, Tiruchirappalli (REC-T) is one of the technical institutes started by the Government of India. REC-T was imparting quality education since its inception. In 2003, the institute has been granted "Deemed to be University" status with the approval of UGC/ AICTE. The college has been conferred with autonomy in financial and administrative matters to achieve rapid development. NIT-T was registered under Societies Registration Act XXVII of 1975. The College has a total campus area of 800 acres. With the cream of engineering and management talent, encompassing exuberant students and inspiring faculty, integrated with state-of-the-art infrastructure facilities, NIT-T today has emerged as one of the premier institutions in the country. The institute has been ranked 9th place in the National Institute Ranking Framework (NIRF) in 2023 by the Govt. Of India. Also, it is the only NIT with the Prime Minister's Research Fellows (PMRF) scheme.

ABOUT THE DEPARTMENT

The Department of Electrical and Electronics Engineering, NIT, Tiruchirappalli was started in the year 1964. It offers one Undergraduate programme (B.Tech.), two Post-Graduate programme (M.Tech. in Power Systems and Power Electronics) and also research programme (M.S. and Ph.D.) in the various fields of Electrical and Electronics Engineering. After the institute became NIT, the department has grown not only in terms of student and faculty strength, but also in improving the laboratory facilities for the teaching and research purposes. The department has been ranked in the top 500 in the world by QS world ranking system 2023.

RESOURCE PERSONS

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

WORKSHOP COORDINATORS

Dr. K Sateesh Kumar

Assistant Professor Dept. of EEE NIT Tiruchirappalli-620015, India

Dr. Jose Thankachan

Assistant Professor Dept. of EEE NIT Tiruchirappalli-620015, India

High-end Workshop (Karyashala)

on

Role of wide band gap device based power converters for electric vehicles and renewable energy applications

 17^{th} to 23^{rd} March 2024

organised by



Department of Electrical & Electronics Engineering, NIT Tiruchirappalli

funded by



SERB, DST, Government of India

at



National Institute of Technology Tiruchirappalli - 620015

WORKSHOP MOTIVATION

The high-end workshop on WBG-based power converters for EV and PV applications offers a unique platform to explore cutting-edge technology. Attendees will discover the efficiency, cost-effectiveness, and regulatory support driving the adoption of WBG materials like SiC and GaN. Through collaboration and networking, professionals can leverage these advancements for competitive advantage and contribute to a greener future. This workshop promises valuable insights and professional development opportunities in a rapidly evolving field with immense potential.

EXPECTED OUTCOME

Participants will be exposed to cutting-edge semiconductor device-based power converters for EV and renewable energy applications. They learn about the design of gate drivers for SiC and GaN devices, switch selection, and the calculation of performance characteristics like efficiency for high frequency applications.

IMPORTANT DATES

Last date to Apply	$7^{th}March, 2024$
Intimation of selection	$8^{th}March, 2024$
Confirmation of participation	$9^{th}March, 2024$



WORKSHOP OBJECTIVE

- To appraise the attendees with cutting-edge semiconductor device-based power converters for EV and renewable energy applications.
- To impart essential knowledge in gate driver design for SiC and GaN devices.
- Learning objectives involve selection of WBG based power converters for EV and Renewable energy applications.
- To demonstrate the design of high frequency inductor and transformer for basic DC-DC converters.
- To illustrate the various performance characteristics for WBG based power converters.
- To bring together experts, researchers, students, and industry to explore motor design methodology as well as other allied fields related to WBG-based power converters, and thereby shoulder the responsibility towards achieving the Nation's goals- "Atmanirbhar Bharat, Make in India, and Skill India.

WHO CAN APPLY

- Only UG (Final Year), regular PG, and Ph.D. students pursuing their degree from AICTE-approved institutions within India are eligible to apply.
- The applicants should submit an undertaking form and "No Objection Certificate (NOC)" from the Supervisor/Head of the Department/ Institute, allowing their student to undergo training in the workshop if selected.
- Formats for Undertaking and NOC can be found in the registration link.

ABOUT REGISTRATION

Maximum attendees: 25 (selection based on merit and first come, first serve basis)

- There is no registration fee.
- Only selected candidates will be informed by email/phone, therefore the candidates must provide valid email ID and contact number while doing online registration.
- Candidates must acknowledge the acceptance for participation through return email, failing which the waitlisted candidates may be called for the workshop.
- Certificates will be provided to the participants after the successful completion of the workshop.
- Selected participants will be accommodated in Institute hostel rooms (if available) with catering facilities under the funds approved by SERB (as per norms).
- The participants will be eligible for the reimbursement of traveling expenses for their journey to the host institute from their hometown/home institute, both ways for the train or bus's lowest fare, as per the GoI norms.

Link for registration: https://forms.gle/qBhGg6L2uVAqqsSj7

CONTACT PERSON

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