

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 top 500 by QS world ranking system 2023.

WORKSHOP COORDINATORS

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For more details, visit <http://www.nitt.edu>

High-end Workshop (Karyashala)

on

Design and Selection of Traction Motors and Drives for Electrified Transportation

11th to 17th 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

Electric machines play a major role in moving towards a sustainable and zero-emission transportation system. Due to the inherent features like four-quadrant operation and suitable torque-speed characteristics, electric machines are a perfect candidate to replace the traction demands of the automotive sector. Challenges still remain in terms of power density, safety and performance parameters. There is a need to create awareness about performance requirement of traction motors and develop interest in researchers towards developing novel designs to match these targets.

ABOUT THE WORKSHOP

The objective of this workshop is to appraise the attendees with current trends and advancements in electric drive-train and motor selection for electrified transportation. Also, the workshop aims to provide a hands-on experience in motor design using software and to bring together experts, researchers, students and industry to target for high efficiency traction motors with applications in land, air and sea as well as other allied areas related to electrified transportation.

IMPORTANT DATES

Last date to Apply	4 th March, 2024
Intimation of selection	5 th March, 2024
Confirmation of participation	6 th March, 2024



WORKSHOP OBJECTIVE

- To appraise the attendees with current trends and advancements in electric drive-train for electrified transportation
- To impart essential knowledge in motor selection for electric traction applications
- Learning objectives involve detailed electromagnetic design of traction motors using finite element analysis software
- Design examples of induction motor, permanent magnet synchronous motor and switched reluctance motor
- Provide hand-on training to the attendees covering motor design and hardware demonstration of the drive system

RESOURCE PERSONS

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

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 Application Form (via google form) and a "No Objection Certificate (NOC)" from the Supervisor/Head of the Department/Institute, allowing their student to undergo training in the workshop if selected
- NOC format can be found in 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 wait-listed 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 guest house/hostel rooms (if available) with catering facilities under the funds approved by SERB (as per norms)
- The participating students will be eligible for TA reimbursement 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/WAw3y2g8PVw9tjgC7>

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