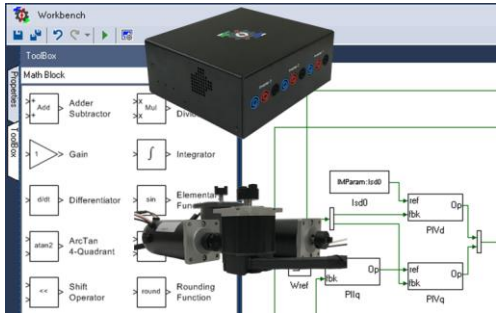
PSG COLLEGE OF TECHNOLOGY
COIMBATORE

National Level Hands-On Workshop

Electric Motor Design Strategies & Control Implementation

15 - 16, June 2023



Organized by PSG College of Technology

In association with Sciamble Corp., USA

Dept. of Electrical and Electronics Engineering
PSG College of Technology
Peelamedu, Coimbatore – 641 004
Tamilnadu.

ABOUT THE WORKSHOP

The idea of electrification is expanding in wide spectrum of application ranging from two wheelers, four wheelers, tramway and electric aircraft to achieve zero carbon emission. Electric motor technology is the heart of all the above engineering applications enabling the industry to meet the market demand. The increased integration of these drives and machines has triggered a quantum leap in productivity, efficiency and system performance. Guide to drives essential to electric vehicles, wind turbines, and other motor-driven systems analysis and control of Electric Drives is a practical approach. This practical, hands-on course will give you a solid introduction to this rapidly expanding field for the young design engineers and faculties.

OBJECTIVES

The Key objective of conducting the workshop on "**Electrical Motor Design Strategies & Control Implementation**" is to impart latest knowledge to young engineers and faculty members involved in electrification, motor design and provide model based real-time code generation using less expensive and real-time function using Sciamble drives lab system.

ABOUT SCIAMBLE

Technology commercialization wing and Power electronics research center from the University of Minnessota have come together to create Sciamble (University of Minnesota owned research startup) after successfully teaching in over 220 colleges from all over the world. The Sciamble Workbench platform provides model based real-time code generation, data logging software, Motors and On the fly compiler with dynamic error and warning reporting.

ELIGIBILITY

- Practicing engineers from motor and drive industries
- Faculty working in engineering colleges
- Engineers from R&D organizations
- UG/PG engineering students

WORKSHOP CONTENTS

- Recent Advance in Electric Motors
- Motor & Control: Spec. Requirement & Goals
- Key Performance Metrics for evaluation
- Torque Speed Curves, Drive cycle & Eff. Map
- Review: Traction Motor Choices
- Traction Motor Design Principles
- Characterization of Induction motor
- Induction motor V/f control
- Vector control of induction motor
- Sensorless vector control of induction motor
- Direct torque control of induction motor
- Space vector Pulse width modulation of two level three-phase inverter
- Vector control of surface PMSM
- Torque-load angle characteristics and speed control of PMSM

REGISTRATION FEE

Student	**Rs. 1,500/-**
Faculty	**Rs. 2,500/-**
Industries	**Rs. 10,000/-**

The registration fee inclusive of GST and cost towards course material, lunch and refreshment.

PAYMENT DETAILS

Net Banking
Bank Account Name: PSG Center for Non-formal and Continuing Education (PSG CNCE)
Bank Account No: 1481267367
IFSC Code: CBIN0280913
Bank Name: Central Bank of India
Branch : Peelamedu, Coimbatore -641 004

The scanned copy application form is to be sent to:

Dr. V. Balaji
Co-ordinator
Email: vbi.eee@psgtech.ac.in
Contact No: 94422 00822/97913 63065

ABOUT THE COLLEGE

PSG College of Technology was instituted in the year 1951 by PSG & Sons' Charities Trust. It is an autonomous institution, Government Aided affiliated to Anna University. The college is approved by AICTE and is ISO 9001:2015 certified. It offers a number of educational programmes in Engineering, Information Technology, Management, Science and Technology disciplines at bachelors, masters and doctoral levels on both full time and part-time basis. Most of these programmes have been accredited by the National Board of Accreditation (NBA).

The Institution has always worked closely with the Industries, with Industrial training being an inherent part of the curriculum, giving students opportunities to learn from experience.

Research and Development in the college receives special thrust, especially with the establishment of 'Centres of Excellence' with prominent industry leaders. PSG College of Technology believes in shaping the future of the nation, by building the engineering talent that is valued and respected world-wide

CHAIRMAN

Dr. K. Prakasan
Principal, PSG College of Technology

CONVENOR

Dr. J. Kanakaraj
Head, Dept. of Electrical and Electronics Engineering

ORGANISING SECRETARY

Dr. M. Sundaram, Dept. of EEE

CO-ORDINATORS

Dr. J. Chelladurai, Dept. of EEE
Dr. M. Anand, Dept. of EEE
Mr. A. Angamuthu, Dept. of EEE
Dr. V. Balaji, Dept. of EEE

Important Date to Remember:
Last date for receipt of application: 09.06.2023

The details of this workshop is available in the website: www.psgtech.edu

ABOUT THE EEE DEPARTMENT

The Department of Electrical and Electronics Engineering is one of the few disciplines that was started since the inception of the college in the year 1951. New courses were introduced subsequently and the existing ones were restructured to reflect the state of the art.

The Department of Electrical and Electronics Engineering has been playing a vital role in producing scientists and technologists of highest caliber ever since it was established in the year 1951. The department offers UG (Regular and Sandwich) programmes, PG programmes (Applied Electronics, Power Electronics & Drives, and Embedded & Real- Time Systems), and PhD programmes. The department along with its highly qualified faculty members started functioning right from inception and engages actively in teaching and research in all current areas of Electrical and Electronics Engineering.

State of art computational and experimental facilities enable the department to undertake basic and applied research and provide support to R&D organizations. The students acquire the interpersonal and communication skills from the EEE Association and promote their professional skills serving the society through technology.

ABOUT THE CEMPE

Centre for Electrical Machines and Power Electronics (CEMPE) specializes in electric motor design and its control with supporting engineering simulation and prototyping solutions. Our research themes include electric machines used in wide spectrum of applications ranging from High-Efficiency Motors, Electric Vehicles, Robots and Extreme High Temperature Motors. Our group had active grants from Ministry of Heavy Industries (MHI), Dept. of Science and Technology (DST) and other governmental organizations. We invite you to take advantage of this opportunity to learn more about our research group.

PROJECTS ON TRACK AT CEMPE

Design of:

- Energy Efficient Motor as per IEC Standards
- Electric Motor for High-Temperature Environments
- EV Motors
- Switched/Synchronous Reluctance motor

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APPLICATION FORM

Name (in Block Letters):……

Designation & Dept. :……

Organization :……

Address for :……

Communication : ……

……,…

Mob No. :……

Email Id :……

Net banking Reference No. & Bank: ……

……

Amount in Rs.:……

DECLARATION BY THE CANDIDATE

The given information is true to the best of my knowledge. I agree to abide by the rules and regulations governing the programme. If selected, I shall attend the course for the entire duration.

Place:

Date: Signature of the candidate