

Public background of participants – People from Electrical OEM's, Tier 1 motor & generator manufacturers, Research organizations, Academics, Automotive OEM etc.

Technical background of participants - People who are working in Design & development of rotating machines, Research scholars & professors who are working in electrical machine design, E-vehicle drive development etc.

REGISTRATION DETAILS

- You can register online in PWSIM Website under events or offline by calling to the below number. <https://www.pwsim.com/trainings/electromagnetic-simulation-of-rotating-machine-using-jmag-software/>.
- Participation is free.
- Participants will be provided JMAG trial license for the hands-on session
- Lunch & beverages are complimentary.
- Last date for registration is July 8, 2019 (Limited entries and selection is based on first come first serve basis).
- Participants must bring a laptop along with them for better understanding and practice during the workshop.

CONTACT :

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REGISTRATION FORM

One day Hands-on Workshop on

“Electromagnetic Simulation of Rotating Machine using JMAG FEA Software”

Name: _____

Institution: _____

Designation: _____

Department: _____

Educational Qualification: _____

Specialization: _____

Communication Address: _____

Mobile No: _____

Email ID: _____

Date: _____

Place: _____

Applicant's Signature _____



SRM
INSTITUTE OF SCIENCE & TECHNOLOGY
(Deemed to be University u/s 3 of UGC Act, 1956)

pwsim
SOLUTIONS FOR ELECTRIFICATION

One day Hands-on Workshop on

Electromagnetic Simulation of Rotating Machines using JMAG FEA Software

16 July 2019

Co-ordinators

Dr. K. Vijayakumar

Professor and Head

Dr. R. Femi,

Research Assistant Professor
Department of Electrical and Electronics Engineering
SRM Institute of Science & Technology
Kattankulathur -603203.
www.srmuniv.ac.in

Mr. K. J. Haridas

Business Development Engineer
Pwsim Engineering solutions Pvt. Ltd.
Bengaluru

Speakers

Mr. Siddesh – Head of EM Dep (Pwsim)

Ms. Suma – Sr. Application Engineer (Pwsim)

Venue

Department of Electrical and Electronics Engineering
SRM Institute of Science and Technology
KATTANKULATHUR CAMPUS
CHENNAI - 603203

Time

9 AM - 6 PM

ABOUT THE INSTITUTION

SRM Institute of Science and Technology (Formerly known as SRM University) is one of the top ranking University and most premier engineering destinations in India. It is established in 1985 by the Founder Chancellor Dr. T.R. Paarivendhar. SRM IST is functioning in four campuses located at Kattankulathur, Vadapalani and Ramapuram in Tamilnadu and a fourth campus at Modi Nagar, Ghaziabad with 38,000 students and 2,600 faculty members, offering wide range of undergraduate, postgraduate and doctoral programs in Engineering, Management, Medicine & Health Sciences, Law and Science & Humanities. The Institution has moved up through international alliances and collaborative initiatives to achieve global excellence. Over 150 students sponsored to 35 foreign Universities like MIT, Carnegie Mellon, UC Davis, Warwick and Western Australia. Now the Institute enjoys an unsurpassed reputation in academic and corporate circles being the preferred manpower source for vision to be recognized as a world - class learning institution. SRM IST has been categorized as grade A University by Ministry of Human Resource Development (MHRD); Government of India. SRM IST has been accredited by NAAC with the Highest 'A++' Grade in the year 2018.

ABOUT EEE DEPARTMENT

The Department of Electrical and Electronics came into existence in the year 1992-1993 as a key entity of SRM Engineering College. Since then, there has been a consistent development in all spheres including infrastructure facilities, staff development, and student development. The EEE department has 14 laboratories with modern equipment supported by special purpose software packages like HIL, SYSTEM GENERATOR, NI LABVIEW, DIGSILENT, DSAPCE, MATLAB, PSPICE, PSIM, PSCAD, ETAP, MAGNET, POWER WORLD SIMULATOR etc. B.Tech Programme, Electrical and Electronic Engineering of Kattankulathur Campus is

Accredited by the Engineering Accreditation Commission of ABET. It has over 80 faculty members whose areas of expertise and research include power electronics and power system.

PWSIM

PWSIM is a simulation technology company which is the joint venture of ProSIM India & Powersys France assisting in design, design validation and optimization of Electric & Electronic systems. We provide Simulation products, Engineering services and Technical training. We have worked with about many customers from Industries and Academics for Automotive research etc.

JMAG

We use an electromagnetics simulation software called JMAG developed by JSOL Corporation (JAPAN) and we are also the sole distributor of JMAG in India. Having an expertise in virtual modeling that aid to understand the complex phenomena of design aspects that provides a wide information about performance of any electromagnetic devices. JMAG is a comprehensive software suite for electromechanical design & development.

OBJECTIVE

Electromagnetic field analysis and design plays an important role in manufacturing electrical machines. Many of the industries are doing the full-fledged electromagnetic design of electrical machines to get better performance and cost optimization. Electromagnetic field analysis requires the solution of Maxwell's equations, which necessitates the use of digital computers and an efficient Finite Element Analysis (FEA) software packages like JMAG. This workshop will focus on the fundamental concepts of electromagnetic design and analysis of electrical machines using JMAG FEA software. Hands on training with JMAG software

package for Finite Element Analysis will be provided. Case studies on the design validation & optimization of complex rotating Machine models will be carried out. Co-simulation of FEA model with Control circuit model will be demonstrated. This workshop introduces the role and advantages of using FEA in design & development of your Electromagnetic device.

COURSE CONTENTS

- **Introduction to JMAG Software**
About JMAG Software, Applications and Benefits
- **JMAG Express**
Template-based 2D analysis of electric motors
- **JMAG Designer 2D**
Detailed FEA analysis of Electric motors and its features
- **JMAG Designer 2D**
Training on Detailed FEA analysis for various evaluation of rotating machines such as performance characteristics [Speed vs torque/current/power], cogging torque, Loss calculation
- **Overview of Optimization**
Optimization of electric motors using FEA
- **JMAG-RT**
JMAG-Real Time simulator to create efficiency Map
- **Overview of Co-simulation**
Brief intro on co-simulation of JMAG and MATLAB
- **JMAG Designer 3D**
Converting 2D to 3D model, creating coil overhang portion, creating insulation
- **Thermal analysis**
Thermal analysis to evaluate temperature distribution, thermal hotspot of Electric motors
- **Structural Analysis**
Structural analysis to evaluate Noise and Vibration.