

Three-day Workshop on Electromagnetic Interference and Compatibility (EMI/EMC): Theory, Techniques and Applications

Dates: 12th -14th October 2023



CO-ORDINATOR

Dr. M. Jaleel Akhtar, Professor
EMI/EMC & Electrical Safety Test
Facility
Department of Electrical Engineering

Workshop Registration:

<https://emciitk.com/emc-2023/>

Contact Address:

Department of Electrical Engineering,
Indian Institute of Technology Kanpur,
Kanpur, U.P. PIN 208016,
Email: emc@iitk.ac.in

WORKSHOP OBJECTIVE

One of the major challenges for RF engineers in today's world is to mitigate electromagnetic interference (EMI) within circuits and systems due to the increasing usage of high-speed and high-frequency devices. Electromagnetic compatibility (EMC) is mainly a technique to deal with such situations, where the emphasis is to design circuit and system in such a way to minimize electromagnetic coupling and interference. The main objective of this three-day workshop is to provide the participants an insight into various techniques and procedures required for the design of electronic systems that comply with the EMC guidelines. The course would primarily focus on basic aspects of EMI/EMC standards and techniques required for industrial and medical applications. The workshop will explain the concept of effective shielding using modern procedures involving frequency selective surfaces (FSS) structures and lightweight nanocomposites. The participants would be exposed to the state-of-the-art modeling and simulation software used for EMI/EMC applications. Finally, it will be attempted to demonstrate experimental setups used for EMI/EMC applications.

INTENDED PARTICIPANTS (WHO WILL BE BENEFITED)

This program is intended for people from academia, R&D institutions, and industry working in the domains of RF, microwaves, and high-frequency digital electronics, who are dealing with the design of EMI/EMC compliant circuits and systems. The program is suitable for both professionals and graduate students who want to work in the demanding EMI/EMC sector.

Faculty and students from the Electronics and Communication Engineering, Instrumentation, and Electrical Engineering streams are encouraged to attend the workshop to gain insight into the challenging practical aspects of electromagnetic exposure and interference, as well as associated techniques for minimizing it.

WORKSHOP CONTENT

Introduction to the electromagnetic interference (EMI) and the electromagnetic compatibility (EMC) techniques, basic aspects of the EMC design, standards for EMI/EMC in various geographical regions, brief introduction of various test parameters such as radiated and conducted emissions, susceptibility, electrostatic discharge etc., modeling of non-ideal behavior of various electronic circuits and components from EMI/EMC point of view, conducted emissions, the line impedance stabilization network (LISN), radiated emissions, antennas and testing procedures relevant for EMC applications, basic concept of effective shielding, usage of frequency selective surface (FSS) and advanced composites based shielding for modern RF applications and electronic instruments.

REGISTRATION FEE (Exclusive of all taxes)

Personnel	*Offline Workshop Fee	*Online Workshop Fee
Industry and R&D Professionals	₹ 15000 + 18% GST	₹ 10000 + 18% GST
Non-IITK Faculty	₹ 8000 + 18% GST	₹ 5000 + 18% GST
IITK Faculty	₹ 5000 + 18% GST	₹ 3000 + 18% GST
Non-IITK Students	₹ 4000 + 18% GST	₹ 2000 + 18% GST
IITK Students	₹ 2000 + 18% GST	₹ 1000 + 18% GST

*The Offline workshop fee includes three days of tea/coffee breaks, a workshop dinner, and a registration kit.

*Participants may have the option to avail accommodation in IITK campus based on availability, with the cost being borne by the participants themselves.

All the participants are requested to pay the registration fees through SBI Collect. The details of online payment are given at the workshop website. <https://emciitk.com/> All the participants of the workshop would be provided an e-certificate of participation.