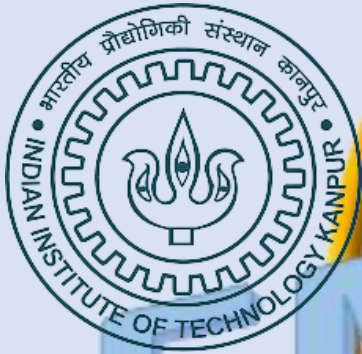


# Three-day Workshop on ELECTROMAGNETIC INTERFERENCE AND COMPATIBILITY (EMI/EMC) TECHNIQUES FOR INDUSTRIAL AND MEDICAL APPLICATIONS (HYBRID-Mode)



**Dates: 21<sup>st</sup> -23<sup>rd</sup> July 2022**

## CO-ORDINATOR

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

## Workshop Website:

<https://www.emciitk.com/emc2022/>

## Other Resources:

EMI/EMC & Electrical Safety Test Facility

<https://www.emciitk.com/>

Microwave Imaging and Material Testing (MIMT)

Laboratory, IIT Kanpur

[http://www.iitk.ac.in/mimt\\_lab/](http://www.iitk.ac.in/mimt_lab/)

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## WORKSHOP OBJECTIVE

One of the major challenges for RF engineers in today's world is minimizing 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 propose an optimum design 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 various 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 (Inclusive of all the taxes)

Personnel	Online	Offline
Industry and R&D Professionals	₹ 11900	₹ 14160
Non-IITK Faculty and Staff	₹ 3540	₹ 5900
IITK Faculty and Staff	₹ 2950	₹ 5310
Non-IITK Students	₹ 1770	₹ 3540
IITK Students	₹ 590	₹ 1180
Outside India		
Industry and R&D Professionals	\$ 200	-
Faculty and Staff	\$ 150	-
Students	\$ 50	-

All the participants are requested to pay the registration fees through SBI Collect. The details of online payment and procedure are given at the workshop website. All the participants of the workshop would be provided an e-certificate of participation.