

# International Workshop on Energy Technology and Sensor Systems

on  
July 28-30, 2020

Organised by

Indian Institute of Information Technology, Design and Manufacturing (IIITDM) Kancheepuram, Chennai, India

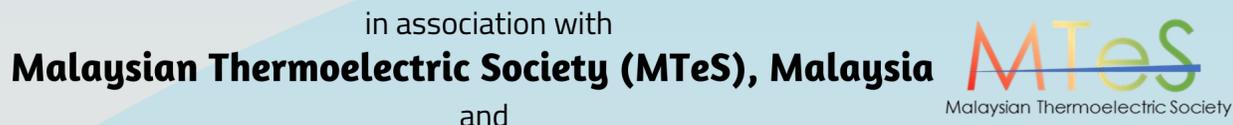
in association with

Malaysian Thermoelectric Society (MTeS), Malaysia

and

Federation of Indian Chambers of Commerce & Industry (FICCI), India

**(TENSYS-2020)**



## About the Program

Skyrocketing energy consumption driven by population growth and economic development pose serious and irreparable damages to our environment. New technologies enhancing the efficient utilization of renewable energy can significantly impact the societies around the world. Sensors and sensor systems are vital to our awareness of our surroundings and deliver safety, security, and surveillance, as well as enable monitoring of our health and environment. Micro and nanotechnology, novel materials, and smaller, smarter, and more effective electronic systems will play an important role in the future of smart sensors. In view of this, a program on 'The Energy Technology and Sensor Systems' is expected to benefit the participants not only from host countries but around, especially the faculty and scholars from engineering and science institutions, researchers from research labs, intending to broaden their knowledge and development of energy efficient sensor systems. This program is envisaged by the following two Asian institutions, Indian Institute of Information Technology Design and Manufacturing (IIITDM Kancheepuram), India and Universiti Malaya (UM), Malaysia, to enhance research collaborations as a part of ASEAN-India Science, Technology & Innovation Cooperation.

## About IIITDM Kancheepuram

Indian Institute of Information Technology, Design and Manufacturing (IIITDM Kancheepuram) is an Institute of National Importance established in 2007, by the Ministry of Human Resource Development, Government of India, to pursue design and manufacturing oriented engineering education and research and to promote the competitive advantages of Indian products in global markets. The institute offers academic and research programs that integrate engineering design, manufacturing and management with information technology. With mastery in domain specific design, engineering skills and required managerial expertise, the graduates can entrepreneur organisations involved in the design and manufacture of commercially successful electronic or mechanical products.

## About FICCI

Established in 1927, FICCI is the largest and oldest apex business organisation in India. Its history is closely interwoven with India's struggle for independence, its industrialization, and its emergence as one of the most rapidly growing global economies. A non-government, not-for-profit organisation, FICCI is the voice of India's business and industry. From influencing policy to encouraging debate, engaging with policy makers and civil society, FICCI articulates the views and concerns of industry. It serves its members from the Indian private and public corporate sectors and multinational companies, drawing its strength from diverse regional chambers of commerce and industry across states, reaching out to over 2,50,000 companies. FICCI provides a platform for networking and consensus building within and across sectors and is the first port of call for Indian industry, policy makers and the international business community.

## Chief Guest

**Assoc. Prof. Ir. Dr. Mohd Faizul Bin Mohd Sabri**  
President of Malaysian Thermoelectric Society

## Partner Speaker

**Mr. Nirankar Saxena**  
Deputy Secretary General, FICCI

## Presided by

**Prof. Dr. Banshidhar Majhi**  
Director, IIITDM Kancheepuram

**Prof. Dr. Saad Mekhilef**  
Dean, Faculty of Engineering, UM

## Advisors

**Assoc. Prof. Ir. Dr. Suhana Mohd Said**  
Deputy Dean (Undergraduate), UM

**Ms. Ritika Kishore**, Dy. Dir. FICCI  
**Mr. Sanjeev Kumar**, Dy. Dir. FICCI

**Dr. M. D. Selvaraj**, Dean (SR), IIITDM  
**Dr. Priyanka Kokil**, HoD ECE, IIITDM

## Convenors

**Dr. Mohd Faiz Mohd Salleh**  
faizsalleh@um.edu.my

**Assoc. Prof. Dr. Jayabal K**  
**Dr. Pandiyarasan Veluswamy**  
pandiyarasan@iiitdm.ac.in

**Registration: <https://tinyurl.com/yco7chkk>**  
**E-certificates for all the active participants**

# Program Schedule (Indian Standard Time)

## Tuesday, 28<sup>th</sup> July 2020

- 09.30 AM Inaugural Function
- 10.00 AM In search of replacement for lead free solder alloys: Sn-Cu and Sn-Ag-Cu Based Lead Free Solder Alloys with the addition of Fe and Bi  
Asst. Prof. Ir. Dr. Mohd Faizul Bin Mohd Sabri  
Department of Mechanical Engineering, Faculty of Engineering, Universiti Malaya
- 11.00 AM 2D semiconductors: Promising candidates for next generation electromagnetic radiation sensors  
Asst. Prof. Tejendra Dixit  
Department of Electronics and Communication Engineering, IIITDM Kancheepuram
- 02.00 PM Potential Unbiased YIG Resonator for Antenna Application  
Dr. Mohamadariff Bin Othman  
Department of Electrical Engineering, Faculty of Engineering, Universiti Malaya
- 03.00 PM Power Conversion and Controllers for Wind Energy System  
Asst. Prof. Vijayakumar Krishnasamy  
Department of Electronics and Communication Engineering, IIITDM Kancheepuram

## Wednesday, 29<sup>th</sup> July 2020

- 10.00 AM Emerging Neuromorphic Circuit Design  
Asst. Prof. Binsu J Kailath  
Department of Electronics and Communication Engineering, IIITDM Kancheepuram
- 11.00 AM Optimisation of Thermoelectric Technology: From Material Fundamentals to Devices  
Asst. Prof. Ir. Dr. Suhana Binti Mohd Said  
Department of Electrical Engineering, Faculty of Engineering, Universiti Malaya
- 02.00 PM Metamaterial based Microwave Sensor and its Application  
Asst. Prof. S.S. Karthikeyan  
Department of Electronics and Communication Engineering, NIT Tiruchirapalli
- 03.00 PM Versatile Thin Film Deposition Using Sputtering Technique  
Asst. Prof. Dr. Nafarizal Bin Nayan  
Microelectronic and Nanotechnology-Shamsuddin Research Centre, Institute for Integrated Engineering (I2E), Universiti Tun Hussein Onn Malaysia

## Thursday, 30<sup>th</sup> July 2020

- 10.00 AM Performance of Dye-Sensitized Solar Cell Using Size-Controlled Synthesis of TiO<sub>2</sub> Nanostructure  
Asst. Prof. Dr. Mohd Khairul Bin Ahmad  
Department of Electronic Engineering, Faculty of Electrical & Electronic Engineering, Microelectronics and Nanotechnology Shamsuddin Research Centre (MiNT-SRC), Universiti Tun Hussein Onn Malaysia
- 11.00 AM Miniaturized antenna design for high resolution imaging sensors  
Asst. Prof. Prerna Saxena  
Department of Electronics and Communication Engineering, IIITDM Kancheepuram
- 02.00 PM Textile technology for self-powered wearable application  
Dr. Pandiyarasan Veluswamy  
Department of Electronics and Communication Engineering, IIITDM Kancheepuram
- 03.00 PM Thermoelectric Technology for Self-Powered Smart Window  
Dr. Mohd Faiz Bin Mohd Salleh  
Department of Electrical Engineering, Faculty of Engineering, Universiti Malaya
- 04.00 PM Valedictory Function

All the Events will be host through Cisco [Webex](#) online platform