MINI-COLLOQUIA
IEEE ELECTRON DEVICES SOCIETY
Indian Institute of Information Technology Design and Manufacturing, Kancheepuram

Centenary journey of FET towards humanity

Date : 13-09-2025

This special colloquium commemorates the 100-year journey of the Field-Effect Transistor (FET), tracing its evolution from foundational principles to its pivotal role in modern technology. The event will spotlight major milestones and innovations in FET development, highlighting its impact across computing, healthcare, communication, and sustainable solutions—underscoring its enduring contribution to society.

Organizing Institute

Indian Institute of Information Technology Design and Manufacturing Kancheepuram is a Centre of Excellence for technical education and research established by the Ministry of Education, Government of India to pursue design and manufacturing oriented engineering education and research and to promote the competitive advantage of Indian products in global markets. The institute has several centers of excellences like Teaching Learning Centre, Incubation Centre, Smart Manufacturing, Semiconductor Materials and Devices lab, Microelectronics and VLSI lab, Bio-inspired lab, Photovoltaics Lab, etc. with cutting edge research facilities and advanced tools in the respective domains.

Organizing Team

The organizing team comprises passionate faculty members and enthusiastic student volunteers, deeply engaged in the FET centenary theme. Their expertise spans foundational device physics, advanced FET architectures, and practical applications. Participants will gain both theoretical insights and hands-on experience, supported by state-of-the-art labs equipped with industry-standard tools such as Sentaurus TCAD, COMSOL Multiphysics, Cadence Virtuoso, MATLAB, and Python, enabling advanced modeling, simulation, and impactful learning.

Past event details: **https://bit.ly/IEEE-EDS-SBC-IIITDM-KANCHEEPURAM**

Outcome of the Event

The purpose of this Mini Colloquium is to engage the technical community in understanding the centennial progress of Field-Effect Transistors (FETs) and their impact on modern electronics. Participants will gain exposure to the evolution of FET technologies, current advancements, and future directions through research-driven discussions and expert insights.

(i) Explore the historical and technological evolution of FETs over the past 100 years
(ii) Understand the latest advancements in nanoscale and emerging FET architectures
(iii) Learn about real-world applications of FETs in sustainable and human-centric technologies
(iv) Enhance research perspective and career opportunities in the semiconductor industry

Tentative Schedule

Day/ Time	9:00 AM- 9:30 AM	High Tea	9:45 AM- 11:00 AM	11:15 PM- 12:30 PM	Networking Lunch	02:00 PM- 03:15 PM	03:15 PM- 03:30 PM
Events	Inauguration Ceremony		Lecture-L01	Lecture-L02		Lecture-L03	Open House Discussion Validatory

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Registration Process

Registration is open to all UG/PG/Ph.D. students, academicians, and industry professionals working in the fields of semiconductor devices, nanoelectronics, and related areas. There are no registration fees to attend this fully sponsored IEEE EDS event. The Mini Colloquium will be conducted in physical mode at the IIITDM Kancheepuram campus, Chennai.

Institute Website: https://www.iiitdm.ac.in/

For Registration

Scan the QR:

Open the Registration Link: https://forms.gle/esJvbfrXJN1N8u139

IEEE EDS IIITDM Student Branch Chapter: https://bit.ly/IEEE-EDS-SBC-IIITDM-KANCHEEPURAM

Tentative Distinguished Lecturers

Prof. Nazek El-Atab, Assistant Professor, ECE
King Abdullah University of Science and Technology (KAUST), Saudi Arabia

Prof. Nazek El-Atab leads the Smart, Advanced Memory devices and Applications (SAMA) Lab at KAUST. Her research focuses on smart multifunctional devices, flexible electronics, and in-memory sensing and computing. She has authored over 100 publications, holds 10 U.S. patents, and has received several prestigious awards, including the L'Oréal-UNESCO For Women in Science Fellowship and MIT Technology Review's Innovators Under 35.

Prof. Durga Misra (New Jersey Institute of Technology (NJIT), USA)

Prof. Durga Misra is a distinguished researcher in nanoelectronics and low-power device technologies, with a strong focus on the societal impact of FETs, IoT applications, and sustainable electronics. He is widely recognized for his ability to connect semiconductor advancements to practical and humanitarian applications. His lectures will cover "Nanoelectronics to Nanotechnology: More Moore and More than Moore" and "Self-Heating in FinFETs and Its Impact on Logic Circuits."

Prof. Manoj Saxena, Associate Professor, Department of Electronics
Deen Dayal Upadhyaya College, University of Delhi, India

Prof. Manoj Saxena is a Senior Member of IEEE and currently serves as Secretary of the IEEE EDS Delhi Chapter. He has authored over 200 technical papers and his research spans analytical modeling, design, and simulation of advanced MOSFET architectures, Tunnel FETs, and novel device concepts. He is also a reviewer for leading journals including Solid-State Electronics and IEEE TED/EDL. He has received the IEEE EDS Outstanding Volunteer Award for his contributions to the community.

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