



SCDT – FlexE Centre Webinar Series

The webinars aim to bring together researchers in Flexible Electronics and allied areas from across India (and other countries) on a single platform to promote professional interaction.

Abstract of the Webinar

In this lecture, I shall cover 2D/3D semiconductors-based sensors for the sustainability of environment, healthcare and agriculture. Through rigorous translational innovation, our team has developed portable, commercial-ready, point-of-care kidney function monitoring medical devices. On the other hands, environmental (air and water) intelligent sensors are also developed. These intelligent sensors are also integrated with mobile app, operable on android and iOS network, which deploy a cloud-based decision-making system. These features enable the users to track monitoring of toxic gases and water contamination on a real-time basis to enable remote assessment, alert generation and adopting remedial measures. A strategy from lab-to-market for such indigenously developed products will be discussed.

Information about the speaker

Shaibal Mukherjee completed his PhD in Electrical and Computer Engineering, University of Oklahoma, USA in 2009 followed by his postdoctoral research work in the Center of Quantum Devices, Electrical Engineering and Computer Science, Northwestern University, USA. In September 2010, he joined IIT Indore and currently is a Professor in the Department of Electrical Engineering at IIT Indore. The Hybrid Nanodevice Research Group (HNRG) led by Shaibal at IIT Indore explores new physics of micro- and nano-structured materials, and to apply this knowledge in realizing advanced tools and devices for chemical, biological, optical, electronic and energy applications. He has published 152+ research articles in peer-reviewed journals, 115+ international conference proceedings, 13 book/book chapters and 18 patents (Granted: 14 and Filed/Published: 4). He is the recipient of various prestigious awards including “2025 Friedrich Wilhelm Bessel Research Award by Alexander von Humboldt Foundation”, “2023 Japan Society for the Promotion of Science (JSPS) Invitational Fellowship Award” and “2020 DUO-India Professor Fellowship Award”. He is a fellow of IoP, JSPS, Humboldt Foundation, RSC and IET. He is a senior member of IEEE, a regular member of Optical Society of America and Life Fellow of MRSI and Optical Society of India. He is also the Director, Co-Founder and Mentor of QuanTechL2M Innovations Pvt. Ltd. He is an Associate Editor for IEEE Sensors Journal.

Webinar by



Dr. Shaibal Mukherjee

Department of Electrical Engineering
Indian Institute of Technology Indore

on
“Intelligent Sensors: From Lab to
Market”

Date: 10th February 2026

Time: 7:30 PM to 8:30 PM

Visit www.iitk.ac.in/scdt/webinars.html
to access the zoom link to join the
webinar.

The event will be chaired by

Dr. Sudhakar Bharatan

Sri Venkateswara College of Engineering,
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