



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.

Webinar by



Professor Dipak Kumar Goswami

Professor, Department of Physics
Indian Institute of Technology Kharagpur

On “Flexible organic electronic devices in healthcare for remote patient monitoring”

Date: 11th January, 2022

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. Shaibal Mukherjee

Indian Institute of Technology Indore

Abstract of the Webinar

With the devastating COVID-19 pandemic spreading during the last two years, the need for smart-healthcare technology to take off the pressures of health professionals and provide the patient with much comfortable yet remote monitoring medical devices becomes paramount. Aligning the flexibility of organic electronic device-based sensors has been found to provide opportunities to develop wearable medical technology, including various diagnostic interventions to replace the existing gold standards with portable, affordable, and wearable medical devices with remote monitoring capabilities. In this talk, I will take you through a technology development process for the diagnostic intervention of any pulmonary dysfunction-related diseases, such as chronic obstructive pulmonary diseases (COPD) and sleep apnea, using a flexible organic field-effect transistors-based sensor system. The talk will start with the fundamental physics of a few flexible organic electronic devices developed in our laboratory. One of these sensors has been used to develop a "smart spirometer" and a "smart mask" as internet-of-medical-things (IoMT).

Information about the speaker

Dr. Dipak K. Goswami is a professor in Physics at the Indian Institute of Technology Kharagpur (IIT Kharagpur). Prof. Goswami completed his Ph.D. degree from the Institute of Physics, Bhubaneswar, in 2004. Afterward, he worked at Northwestern University (NU), Advanced Photon Source (APS), USA, and Max Planck Institute for Metals Research (MPI-MF), Stuttgart, Germany. His areas of interest are the growth of thin films, nanostructures, and the fabrication of various organic electronic devices. Recently the group has focused on developing flexible organic electronic devices for healthcare as internet-of-medical-things (IoMT), and energy applications.