



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 Dipankar Bandyopadhyay

Professor, Dept. of Chemical Engineering
Indian Institute of Technology Guwahati

On “‘Still Life’ of Flexible Surfaces”

Date: 15th February, 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. Sushobhan Avasthi

Indian Institute of Science, Bangalore

Abstract of the Webinar

Natural or artificial ‘flexible’ surfaces such as paper or PDMS have been extensively used in the modern devices. In this talk, we explore the usage of such surfaces in developing low-cost sensors, which are eventually translated into an array of frugal diagnostic devices such as enzyme detectors, immunosensors, breath sensors, tremor detectors, among others. In the process, the real-life examples of product design are brought in to show the utility of the understanding of such paradigms in the realm of point-of-care (POC) frugal diagnostics. Importantly, the vision of improving quality of global health requires a large number of POC facilities with decision making capabilities, accessible even for the ‘last mile’ population. In this direction, there is an urgent need to develop such POC devices specific to many biomarkers in various body fluids such as serum, sebum, urine, saliva, or tear. In addition to this, a complete healthcare solution can be thought of through the integration of such POC technologies with the IoT enabled software for analysis, trained manpower for the usage of such IoT enable devices at the level of primary care, and a health management system. In bits and pieces, we are able to join many of these dots, which will also make their appearance at the various places of this talk to highlight the necessity of art, science, and technology for the improvement of the quality of human ‘still life’.

Information about the speaker

Dr. Dipankar Bandyopadhyay is a Professor in the Department of Chemical Engineering at IIT Guwahati and serves as the Head at the Centre for Nanotechnology and at the School of Health Sciences & Technology.

He obtained his B.Sc degree in Chemistry and B.Tech in Chemical Engineering from Calcutta University. After completion of M.Tech from the Department of Chemical Engineering at IIT Kanpur, he served ANSYS - Fluent India Private Limited for more than 3 years as a CFD Engineer before completing PhD from IIT Kanpur. He has also served as visiting faculty at Yeungnam Univerisity at South Korea under the WCU Program, and KTH Sweden under the Erasmus Mundus program.

Dr. Bandyopadhyay’s research areas encompass Thin Film Dynamics, Soft-matter Physics, Liquid Crystals and Smart Materials, Droplet and Digital Microfluidics, Health Care Point-of-Cater-Testing Devices, MEMS Theranostics, Microrheology, Clean energy, Harvesting, Computational Fluid Dynamics, Stability and Instability of Fluidic systems, Complex Fluids, Microrheology, among others.