



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

One of the major challenges in any device technology is to achieve scalable batch-processing capabilities. For most of the traditional on-chip devices, microelectronic technology has been considered as an indispensable route for fabrication towards miniaturization incorporating scalability, speed and volume production, which eventually reduces the production cost. However, implementation of photolithography directly on the soft materials, which are essential candidates for flexible electronics, is not straight forward due to the compatibility issue. Our research group actively involves in the development of various electronic devices using solution based soft materials like polymer dielectrics, polymer piezoelectric materials, reduced graphene oxide (rGO) etc. by adapting microelectronic technology to realize miniaturized high resolution device structure. First portion of this talk will disclose the methodology to address these challenges in general. The second portion will cover the more specific issues related to the fundamental blockage of organic thin film transistor technology toward circuit implementation.

Information about the speaker

Soumya Dutta is an Associate Professor in the Department of Electrical Engineering, IIT Madras. Apart from his publications in journals, proceedings, and books, he is holding several patents. He is a recipient of several awards or recognitions like “Young Scientist Award” by European Materials Research Society, “ICTP-TRIL fellowship”, “Unlock Ideas” award by LAM Research, USA, etc. His current research interests are in various electronic and optoelectronic devices such as thin film transistors, solar cells, photo-transistors, etc. based on organic semiconductors and halide perovskite materials, AMOLED display, polymer-based SAW devices, and rGO-based nano-electromechanical system (NEMS) devices.

Webinar by



Dr. Soumya Dutta

Department of Electrical Engineering
Indian Institute of Technology Madras
on

**“Technological and Fundamental
Challenges in Soft Material-based
Devices: A Journey through Our Research
Activities at IIT Madras”**

Date: 10th October, 2023

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. Bikas C. Das

Indian Institute of Science Education and
Research, Thiruvananthapuram