



## 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



#### Dr. Arun Tej Mallajosyula

Department of Electronics and Electrical Engineering,  
Indina Institute of Technology Guwahati  
on

**“On the path to realizing flexible resistive random-access memories”**

Date: 14<sup>th</sup> May, 2024

Time: 7:30 PM to 8:30 PM

Visit [www.iitk.ac.in/scdt/webinars.html](http://www.iitk.ac.in/scdt/webinars.html)  
to access the zoom link to join the  
webinar.

The event will be chaired by

**Dr. Sandip Mondal**

Indian Institute of Technology Bombay

## Abstract of the Webinar

Resistive Random-Access Memories (RRAMs) have potential applications in the fields of high-speed computing beyond von Neumann bottleneck, neuromorphic computing, reconfigurable logic circuits for digital design, high-density data storage, and physically unclonable functions (PUFs) for data security. These memories fall into the Beyond-CMOS paradigm of the IEEE International Roadmap for Devices and Systems (IRDS). Many of the commercial RRAMs are based on inorganic oxide and chalcogenide materials. In this talk, the focus will be on flexible RRAMs using perovskite memristors. In particular, the discussion will be on our group's ongoing work on the effects of characterization parameters on the memristor performance, models for such memristors, the challenge of sneak path effect and methods to mitigate the same etc.

## Information about the speaker

Dr. Arun Tej M. has done his B.E. in Electronics and Instrumentation Engineering from Andhra University in 2002 and his M.Tech. in Industrial Electronics from the National Institute of Technology Karnataka, Surathkal in 2004. He completed his PhD on carbon nanotube based bulk heterojunction organic solar cells from the Indian Institute of Technology (IIT) Kanpur in 2011. Later, he worked as a Principal Engineer at Taiwan Semiconductors Manufacturing Company (TSMC) in their Test-Chip Design Department. After a brief stint at National University of Singapore, he joined the Los Alamos National Laboratory, USA, as a Postdoctoral Associate where he worked on all-carbon as well as perovskite solar cells. Currently, he is an Assistant Professor in the Dept. of Electronics and Electrical Engineering at the IIT Guwahati.