



Institute of Smart
Structures and Systems



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INFAB Technologies: Your Partner for MEMS & Microfluidic

Advancement in microfabrication techniques in the past few decades have made silicon-on-insulator (SOI) a suitable platform for realizing micro-electro-mechanical systems (MEMS) devices. A unique approach towards realizing a simple cantilever to complex MEMS microstructures is “SOI Micromachining”. Using this process, a range of MEMS devices such as Accelerometers, Gyroscopes, RF-MEMS switches, Thermal Actuators, Micro-mirrors, and so on, can be fabricated. In this talk I will discuss the SOI-MEMS fabrication process in detail. The success of any process or device depends on certain design rules,

I will highlight these aspects of SOI-MEMS process that need to be addressed while creating the design. Device characterization is another crucial aspect of MEMS design flow which is over looked many times and that leads to unsatisfactory outcome. I will also touch upon some of the basic characterization techniques on how to characterize these MEMS devices. The highlight of the talk will be SOI-MEMS and Microfluidic processes and the design rules developed at INFAB at CeNSE, IISc and how users/members associated with ISSS can be benefited at large.

ABOUT THE SPEAKER



Dr. Sudhanshu Shekhar

*Founder & CTO
INFAB Technologies
Bengaluru, India*

Dr. Sudhanshu Shekhar is the Founder and CTO of “INFAB Technologies”, a startup company incubated at InCeNSE, the Technology Business Incubator (TBI), at the Center for Nano Science and Engineering (CeNSE), Indian Institute of Science (IISc), Bengaluru.

The INFAB is, essentially, a foundry service aimed at making MEMS-based devices available for everyone - “From students to a practicing engineer to R&D labs to startups to MNCs engaged in MEMS-based activities”. The primary motivation is to benefit users at large by providing MEMS and Microfluidic devices at affordable cost with quick turn-around time. INFAB envisions “MEMS for Everyone”.

Dr. Shekhar is a MEMS enthusiast and he has more than 10 years of experience in MEMS. His primary research interests includes - Design and Modeling of Micro/ Nano (M/NEMS) Devices; Micro Processing Technology; Characterization (Mechanical, Electrical, Optical) of MEMS Devices; Micro-robotics: Design, Fabrication, and Manipulation of Micro-scale Robots for Biomedical Applications.

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