DEPARTMENT OF BIOCHEMICAL ENGINEERING & BIOTECHNOLOGY

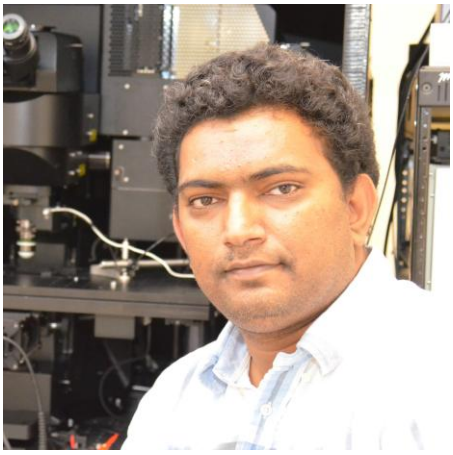
Indian Institute of Technology Delhi

2018 Seminar Series

4th January 2018
4-5 PM

MAPPING THE BRAIN STRUCTURE-FUNCTION AT SUB-CELLULAR RESOLUTION

Block I-223, Seminar room, DBEB



By,
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Abstract: One of the biggest challenges of modern neuroscience is to reconstruct the complete repertoire of distinct types of neurons in brain, and how these building blocks integrate in space and time to generate a functional brain. Such an integrated understanding of the brain function is a prerequisite for developing rational treatment approaches for various brain disorders such as Autism Spectrum Disorders, Alzheimer's and Schizophrenia. However, despite the impressive progress over the last decades, achieving these goals faces steep challenges, partly due to the lack of enabling tools. In this talk, I will present our recent efforts on the development and applications of imaging and experimental approaches to contribute towards these goals. Specifically, I will discuss our novel light microscopy implementations, genetic, histological and computational approaches for rapid high-resolution mapping of intact brain architecture. I will conclude by discussing our ongoing efforts for mapping an entire post-mortem human brain.

For additional information, contact Seminar coordinator D. Sundar at sundar@dbeb.iitd.ac.in