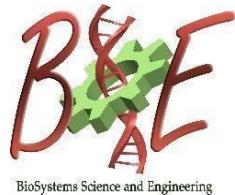




Indian Institute of Science
Centre for BioSystems Science and Engineering
BSSE Seminar



10 August 2020, 11:00 AM, Virtual

**At the boundaries of a cell – allies and invaders of the
membrane world**

Speaker: Dr. Krishnan Raghunathan
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ABSTRACT:

Cellular membranes host over ten thousand types of lipids and diverse classes of membrane-associated proteins. These molecules are often organized compositionally and structurally in a non-random fashion. Cells alter the size and physical properties of membrane structures to modulate diverse functions. Membrane organization often is disrupted in pathological conditions such as cancer and infection by bacteria and viruses. In the first part of my talk, I will discuss our work on understanding the alteration and function of membrane lipids during chikungunya virus (CHIKV) replication using complementary unbiased screens and directed approaches. In the second part, I will discuss a high-throughput approach for identifying small molecules to alter precisely membrane physical properties. These strategies will help the development of therapeutics including antivirals that modulate cellular lipids to regulate physiological functions.