

## **ICTS Biophysics Seminar (HYBRID)**

**Title** : Imagining Space

**Speaker** : Vijay Balasubramanian (University of Pennsylvania)

**Date** : Tuesday, 2<sup>nd</sup> May, 2023

**Time** : 02:30 pm (IST)

**Abstract** : Space is a concept that is fundamental to all branches of physics; it is also central to neuroscience. Indeed, animal life is defined by the ability to navigate in space. Humans think not only about physical space but also about abstract spaces that allow us to geometrize complex problems. Inside your head, the brain represents space as a pattern of neural firing, produced and maintained by neural circuits in the hippocampal formation. In this talk, I will describe a theory of the organization of these circuits and systems that build the brain's internal description of space. I will then compare the predictions of this theory to experimental data, and discuss how these systems self-organize to produce a cognitive map: a way of imagining location in physical and abstract spaces.

**Venue** : **Offline:** Emmy Noether Seminar Room (ICTS)

**Online:** Please click the below link to join the seminar.

<https://icts-res-in.zoom.us/j/89285727149?pwd=NVRTc3lLK1BpQVFxWUtkOGxabXN3Zz09>

Meeting ID: 892 8572 7149

Passcode: 020223