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THEORETICAL
SCIENCES

TATA INSTITUTE OF FUNDAMENTAL RESEARCH

ICTS Biophysics Seminar

Title : Traffic rules in neurons

Speaker : Sandhya Koushika, (DBS-TIFR)

Date : Thursday, 19th October, 2023

Time : 11:30 AM (IST)

Abstract : Cargo movement in neurons is essential to maintain the architecture and function of the nervous system. We asked if there are rules for cargo traffic in neurons. We identify that cargo type, number of motors, and environment are all critical for both transport in general & choice of transport paths. Through an interdisciplinary collaboration, we learnt that traffic jams occur naturally in healthy neurons in part due to physical crowding analogous to what we see on Indian roads. Movement of vehicles on roads, by ants and cargo within neurons all appear to share some of the same traffic rules. These rules have implications in neurodegenerative disease. I will also share experiences in setting up interdisciplinary collaborations

Venue : Chern Lecture Hall (ICTS)