



ICTS Seminar

Title : Confinement shapes and positions bacterial chromosome

Speaker : Debasish Chaudhuri, Institute of Physics, Bhubaneswar

Date : Wednesday, March 21, 2018

Time : 4:00 PM

Venue : Amal Raychaudhuri Meeting Room, ICTS Campus, Bangalore

Abstract : Recent experiments showed that chromosomes in rod-shaped bacteria has the same helicoid shape, independent of species, suggesting a generic physical mechanism. By growing E.coli in micro-channel, impact of confinement on chromosomes is investigated. We have developed a theoretical model, incorporating minimal necessary details. This allows us to predict chromosome size, positioning, morphology, and segregation -- results that show good comparison with experiments, providing better insight into the working of one of the simplest living cells.