

ICTS Seminar

Title : Role of curvature and thickness in reaction-diffusion systems

Speaker : Sankaran Nampoothiri, Indian Institute of Science Education and Research Thiruvananthapuram, Kerala

Date : Tuesday, August 1, 2017

Time : 3:30 PM

Venue : Amal Raychaudhuri Meeting Room, ICTS Campus, Bangalore

Abstract : We see patterns everywhere, like spots on leopards, stripes on zebras, spots and stripes on lady beetles etc. The reaction-diffusion (RD) dynamics is one of the standard framework used in trying to understand the formation of various patterns. Recently RD equations are also being used in understanding the spatial-organization of molecules in biological membranes. In most of these studies, RD equations are analyzed on flat surfaces. On the other hand, Real-life examples show that pattern formation occurs on curved surfaces. These surfaces typically also have some thickness. Realizing the importance of curvature and thickness, we have studied their effects on patterns. The talk will be focused on understanding the combined role of curvature and thickness in RD systems.