

## **ICTS Seminar**

Title : Active torque generation in a disordered actomyosin network

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Date : Tuesday, November 21, 2017

Time : 11:00 AM

Venue : Emmy Noether Seminar Room, ICTS Campus, Bangalore

**Abstract :** In eukaryotic cells, the cell cortex is a network of actin filaments, myosin motors, and actin-binding crosslinking proteins. Apart from its central role in cell-shape control, the cortex performs an important task in cytokinetic-ring constriction during cell division. A further significant function of the actomyosin cortical meshwork is its role in the emergence of chirality at a cellular scale, by means of which an organism ultimately establishes left-right symmetry breaking at a fully developed organ scale.

In this work, we investigate how a disordered network of actin filaments, hinged by crosslinkers, and interacting with myosin motors might give rise to a net torque generation.

Apart from this, I will briefly discuss some results on microtubule self-organization, relevant in the context of the mitotic spindle formation.