

## ICTS Postdoc/Graduate Student Seminar Series

Title : Coupled public goods games

Speaker : Amit Chandra Vutha, ICTS-TIFR, Bangalore

Date : Friday, February 3, 2017

Time : 11:15 AM

Venue : Emmy Noether Seminar Room, ICTS Campus, Bangalore

Abstract : Public goods games explore conflicts between cooperation at the systemic level and selfishness at the level of the individual. The underlying game-theoretic principles that govern their dynamics form interesting objects of study from a mathematical standpoint. After reviewing some basic terminology, we show that coupling public goods games in specific ways can lead to outcomes that cannot be described by standard public goods games. As an application, we study populations of myrmecophytes, or ant-plant mutualisms that can transition between various forms of cooperation based on environmental cues. More generally, we explore the notion of equivalence between two systems of coupled public goods games and look to classify these systems into subtypes that characterize unique behavior.

Note: This will be an ongoing biweekly seminar series (Fridays, 11:15 am) by the ICTS postdocs and graduate students