

## **ICTS Colloquium**

Title : Acoustic communication in crickets: Small brains, big problems, smart solutions

Speaker : Rohini Balakrishnan, Indian Institute of Science, Bangalore

Date : Monday, February 18, 2019

Time : 3:00 PM

Venue : Emmy Noether Seminar Room, ICTS Campus, Bangalore

Abstract : Crickets were among the first insects on earth to evolve communication using sound. Male crickets attract females of their species over long distances using their songs. For a female, finding a mate is a multi-step process involving signal detection, recognition and localisation. Discriminating and localising one song pattern among many can be a challenging problem and in this talk I will illustrate the different strategies that crickets have evolved to deal with these typically computationally demanding problems given their limited hardware i.e. small brains. Solutions can range from structural to physiological to behavioural and I will illustrate these with examples. In addition, competition for mates can also lead to a number of innovative behavioural strategies, including the building of sound amplifiers by tree crickets.