TIFR Centre for Interdisciplinary Sciences
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Colloquium

Matched communication production and reception systems in a bushcricket

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Crickets and bushcrickets (Order: Orthoptera, Suborder: Ensifera) rely heavily on acoustic communication to find their mates. Males of the pseudophylline bushcricket species Onomarchus uninotatus, produce an unusually low frequency pure tone call despite coming from a family of broadband, high frequency callers. We investigated the tuning of the acoustic system and found evidence of low pass filtering at the level of ear structure and band pass filtering at the level of female behavioural responses to the male call. Each of these systems is precisely spectrally tuned to match the male calling frequency; several aspects of this convergent evolution between sound production and reception systems are novel and constitute the first described system of their kind in the animal kingdom. We will discuss these in the context of the ecological pressures faced by these insects in their tropical rainforest habitat in the Western Ghats.

Wednesday, Dec 16th 2015

4:00 PM (Tea/Coffee at 3:45 PM)

Seminar Hall, TCIS