

## **Seminar**

**How intermixing populations evolve into distinct biological species: insights from a theoretical model**

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One of the most interesting questions in evolutionary biology is how different species emerge - in particular, whether speciating populations need to be geographically separated in order to evolve distinctive traits and 'reproductive isolation' (lack of viable hybrid offspring), or whether speciation can occur in spite of exchange of individuals between populations. I will first provide a broad overview of important ideas and open questions in speciation, and then focus on a theoretical model of two populations which occupy partially separated habitats or niches. The main goal of our analysis is to understand how factors such as natural selection within niches, migration between niches and mating preferences shape trait differences and speciation. We will also explore the significance of the genetic architecture of traits under selection and elucidate how the extent of genetic variation can impact evolutionary outcomes.

***Tuesday, Dec 20<sup>th</sup> 2016***

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

***Seminar Hall, TCIS***