



# NIMBioS

National Institute for Mathematical  
and Biological Synthesis



## NIMBioS Interdisciplinary Seminar

**Dr. James Degnan**

**Dept. of Mathematics and Statistics**

**Univ. of Canterbury**

**3:30 p.m.\*, April 10, 2012**

**NIMBioS, Blount Hall, 1534 White Ave, 4<sup>th</sup> floor**

### **“Modeling hybridization: Gene trees in species networks”**

Over the last few years, many methods have been developed to infer species relationships (species trees) from trees inferred from molecular data (gene trees). Several of these methods assume a particular model, called the multispecies coalescent, which typically assumes that all incongruence between gene trees and species trees is due to incomplete sorting, in which the most recent common ancestor of two gene copies is more ancient than their most recent ancestral population. As species tree methods mature, it is becoming possible to simultaneously model other sources of incongruence as well, such as hybridization and gene duplication. Although closely related species are likely to have incomplete lineage sorting as a source of incongruence, some groups, such as plants, fish, and insects, are particularly likely to experience hybridization as well. I will report on some recent efforts to model gene tree probabilities when species relationships are not tree-like due to hybridization and discuss some open problems in this area.



*\*Join us for refreshments in the NIMBioS Lobby on the 4th floor at 3 p.m.*

For more information about this and other NIMBioS Seminars, visit <http://www.nimbios.org/seminars>

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