

# **“Gaming the system: Adaptive decision making by plants and animals”**

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**Tuesday, November 30, 2010**  
**3:30 p.m.\*, Room 403, Blount Hall, 1534 White Ave.**

*Under natural and sexual selection, organisms should approach optimal solutions to the problems that confront them, maximizing lifetime reproductive success (fitness). When genetically different organisms interact, there are often elements of both cooperation and conflict involved, and the protagonists are playing evolutionary games. When the individuals are genetically identical, conflict and its fitness costs evaporate and fitness maximization rises to the group level. Three case studies of diverse taxa making decisions about sex allocation and life history will be presented. The simultaneous-hermaphrodite chalk bass must allocate appropriately to male vs. female function while dealing with two interesting forms of sexual conflict. A small population of hermaphroditic plants must also solve the sex allocation problem, but something unexpected happens to the solution when this population is consistently pollen limited. And polyembryonic parasitoid wasps can produce very large clonal broods ideal for understanding how a balance is struck between the size of the brood and the mass of individual offspring—the classic size-number trade-off. Progress in describing these three scenarios and plans for future work will be discussed.*

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