

第2回 MEE SEMINAR

MATHEMATICAL ECOLOGY & EVOLUTION

2009年6月30日(火) 14:40~16:10

明治大学生田キャンパス第二校舎A館：A207

小田急小田原線 「生田駅」から徒歩10分

又は「向ヶ丘遊園」駅北口から「明治大学正門前」行きバスで10分終点下車

詳しくは、http://www.meiji.ac.jp/koho/campus_guide/ をご覧下さい

June 30, 2009. 14:40~16:10

Meiji Univ. Ikuta campus A207

Adaptive dynamics and its application to a predator-prey system

Zu Jian
(Meiji University)

Abstract:

The theory of adaptive dynamics provides a framework for modeling evolution by natural selection in complex ecological systems, where fitness depends on the frequencies of the interacting phenotypes. This framework links population dynamics to evolutionary dynamics and extends the fundamental idea of frequency dependent selection from evolutionary game theory, with special emphasis on dynamical phenomena such as the origin and divergence of new lineages by evolutionary branching. The general theory of adaptive dynamics yields algorithms that can readily be applied to analyze concrete ecological settings. In my talk, I will firstly introduce some basic theory of adaptive dynamics, and then I will discuss the evolution of phenotypic traits in a community comprising the populations of predator and prey, where prey population is subject to Allee effect. Some intriguing phenomena, such as evolutionary branching, evolutionary suicide and evolutionary cycle will emerge in the predator-prey system subject to Allee effect.

参加自由です。皆様のお越しをお待ちしております。

MEEセミナー世話人：若野友一郎 <joe@math.meiji.ac.jp>
中橋渉 <n_wataru@isc.meiji.ac.jp>

