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Mathematical Biology

生物數學

許世壁 (清華大學)

The topical program of Mathematical Biology, beginning from June 3, holds biweekly seminar on every other Friday. The purpose of the seminar is to study the mathematical analysis of the biological stoichiometry in models in theoretical ecology. Ecological stoichiometry is an approach that analyzes the constraints and consequences of mass balances of multiple chemical elements in ecological interactions. It is a new concept in understanding nutrient cycling and trophic interactions in ecosystem.

The talks were given as followings:

- (i) Biological Stoichiometry (I), Stoichiometry in Producer-Grazer Systems: Linking Energy Flow with Element Cycling, given by Sze-Bi Hsu, (Tsing-Hua University), June 3, 2005
- (ii) Biological Stoichiometry (II), Competition and stoichiometry: Coexistence of two predators on one prey, given by Reoger Lih-Ing Wu, (Texas Tech. University), June 17, 2005
- (iii) Stoichiometry (III), Stoichiometric plant-herbivore models and their interpretation, given by Tzy-Wei Hwang, (Kaohsiung Normal University), July 1, 2005.

In the next few weeks we shall study the relaxation of the periodic solutions for the classical one prey-two predators systems, an application of geometric singular perturbation method.

The participants are followings:

Sze-Bi Hsu (Tsing Hua University)
Kuo-Chang Chen (Tsing-Hua University)
Ming-Chia Li (Chang-Hua Education University)
Tzy-Wei Hwang (Kaohsiung Normal University)
Reoger Wu Lih-Ing (Texas Tech. University)
Cheng-Che Li (San-John Polytech Institute)
and several Ph.D students and master students.