

2016 NCTS

Summer Course in Mathematical Biology

Aug.1-26 (every Monday-Wednesday)

Lecture Room B, 4th Floor, The 3rd General Building,
National Tsing Hua University, Hsinchu

(i) Aug.1-3, 2016

Professor Feng-Bin Wang (Chang Gung University)
Reaction-diffusion equations modeling interactions of populations in bounded habitats

1. Theory of monotone dynamical system and its applications
Time: 11:00-12:00, 14:00-16:00, August 1, 2016
2. Theory of uniform persistence and its applications
Time: 10:00-12:00, 14:00-15:00, August 2, 2016
3. Reaction-diffusion equations in river ecosystems
Time: 10:00-12:00, 14:00-15:00, August 3, 2016

(ii) Aug. 8-10, 2016

Professor Chang-Hong Wu (National University of Tainan)
The spreading of invasive species determined by free boundary problems

1. Some fundamental results of free boundary problems for parabolic equations
Time : 11:00-12:00, 14:00-16:00, August 8, 2016
2. Some free boundary problems arising in ecology I
Time : 10:00-12:00, 14:00-15:00, August 9, 2016
3. Some free boundary problems arising in ecology II
Time : 10:00-12:00, 14:00-15:00, August 10, 2016

(iii) Aug. 15-17, 2016

Professor Yaping Wu (Capital Normal University)
Stability of traveling waves for nonlinear evolutionary equations

1. Spectral theories on linear differential operators
Time : 11:00-12:00, 14:00-16:00, August 15, 2016
2. Abstract results on the existence and analyticity of Evans functions
Time : 10:00-12:00, 14:00-15:00, August 16, 2016
3. Extension of Evans function theories and nonlinear stability theories.
Time : 10:00-12:00, 14:00-15:00, August 17, 2016

(iv) Aug. 22-24, 2016

Professor Jui-Pin Tseng (National Chengchi University)
Collective dynamics for network systems coupled with delays

1. Introduction to the sequential contracting approach
Time: 11:00-12:00, 14:00-16:00, August 22, 2016
2. Synchronization in nonlinearly coupled network systems with delays.
Time: 10:00-12:00, 14:00-15:00, August 23, 2016
3. Multistability in nonlinearly coupled network systems with delays.
Time: 10:00-12:00, 14:00-15:00, August 24, 2016

Organizers:

Sze-Bi Hsu (National Tsing Hua University)
Je-Chiang Tsai (National Chung Cheng University)
Feng-Bin Wang (Chang Gung University)

