

Workshop on Recent Progress on the Reaction-diffusion Equations Arising in Biology

Objective

Reaction-diffusion equations have been widely used as major mathematical tools in modeling various phenomena and dynamics in biology, and enormous progresses on their theories and applications have been made in the past few years. The goal of this workshop is to bring together experts in the field of reaction-diffusion equations to report their recent research development, exchange mutual ideas and engage collaborations.

Details

Date : 16 - 17 May 2019 (Thursday - Friday)

Venue : Room Y303, Core Y, PolyU

Speakers

<i>Daihai He</i>	Hong Kong Polytechnic University, Hong Kong
<i>Sze-Bi Hsu</i>	National Tsing-Hua University, Taiwan
<i>Yoshitsugu Kabeya</i>	Osaka Prefecture University, Japan
<i>Yong-Jung Kim</i>	KSIAT, Korea
<i>Adrian Lam</i>	Ohio State University, USA
<i>Fang Li</i>	Sun Yat-sen University, China
<i>Wan-Tong Li</i>	Lanzhou University, China
<i>Yuan Lou</i>	Ohio State University, USA
<i>Kimie Nakashima</i>	Tokyo University of Marine Science and Technology, Japan
<i>Wei-Ming Ni</i>	University of Minnesota, USA
<i>Linlin Su</i>	Southern University of Science and Technology, China
<i>Xuefeng Wang</i>	Southern University of Science and Technology, China
<i>Zhian Wang</i>	Hong Kong Polytechnic University, Hong Kong
<i>Wen Yang</i>	Wuhan Institute of Physics and Mathematics, CAS, China
<i>Shoji Yotsutani</i>	Ryukoku University, Japan
<i>Feng Zhou</i>	East China Normal University, China

All are welcome

Workshop on
**Recent progress on the reaction-diffusion
equations arising in biology**

16 – 17 May 2019

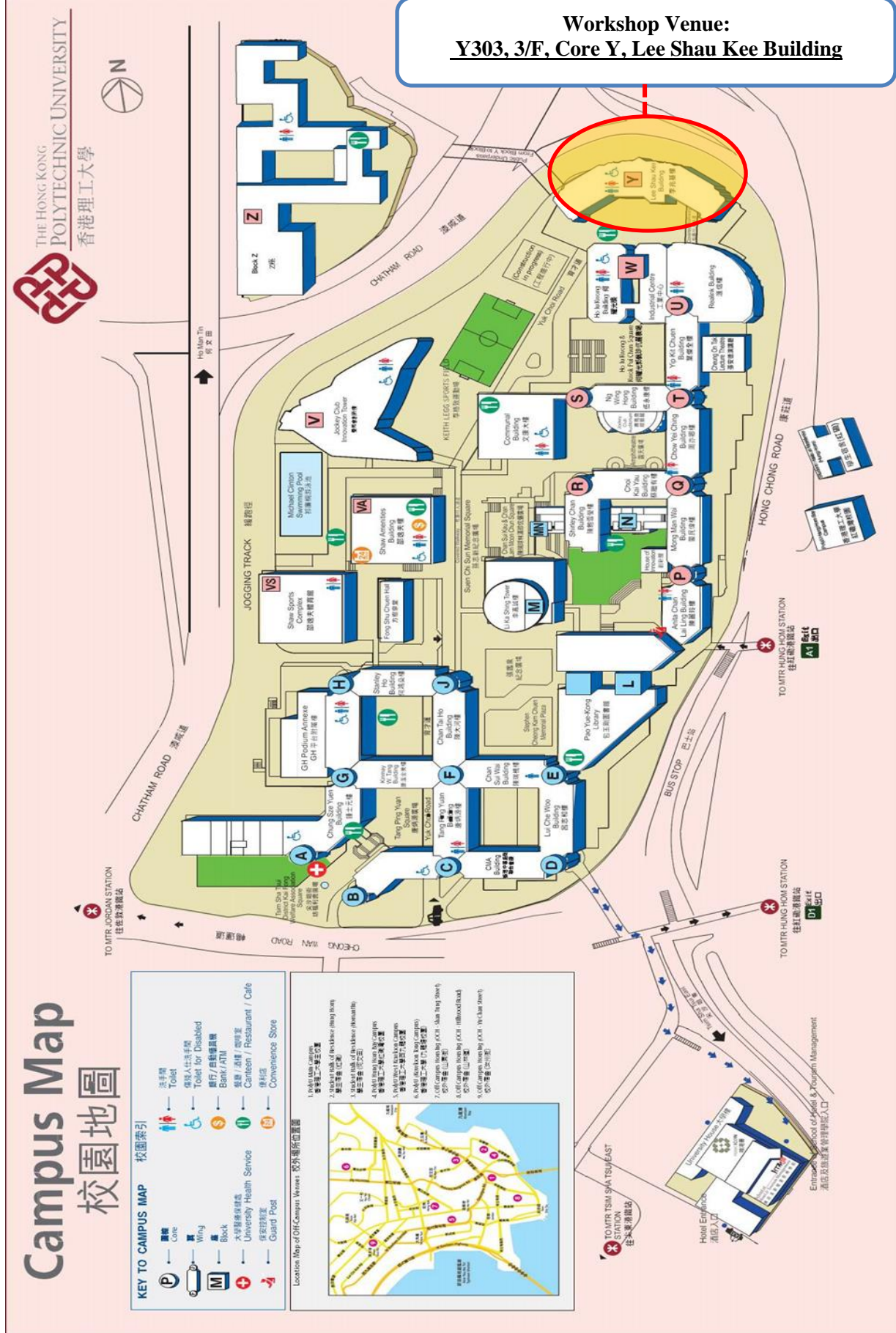
Sponsors:

The AMSS-PolyU Joint Research Institute
The Hong Kong Polytechnic University

Organizer:

Yuan Lou The Ohio State University
Zhian Wang The Hong Kong Polytechnic University

Campus Map



Guideline for Ground Transportation

The transportation from Hong Kong/Shenzhen airport to the **Harbour Plaza Metropolis hotel** or **Best Western PLUS Hotel Kowloon**. **Note both hotels are nearby The Hong Kong Polytechnic University within the walking distance.**

If you are traveling from the Hong Kong International Airport, there are four options available:

- **By Urban taxi (Red color)**, which costs approximately HK\$ 280. This option is recommended.
- **By Airport Bus A21** (HK\$ 33 per person): Following the sign after getting out the exit (i.e. pick up area) in the arrival hall and then follow the sign to find the bus station to take the Airport Bus A21. If your hotel is **Harbour Plaza Metropolis hotel**, then please get off the bus **at the terminal station Hung Hom** and then walk to the Harbour Plaza Metropolis hotel in about 10 minutes. If your hotel is **Best Western PLUS Hotel Kowloon**, then please get off the bus **at the 17th (the last third) stop Granville Road (Chatham Road South)** which is right front of the hotel. Highly recommend if you want to save money and have a sightview of the Hong Kong. It takes about 50 minutes.
- **By Hotel-Link Shuttle Bus** (HK\$ 150 per person): When you get out the exit in the Arrival Hall, please approach Counter B01 which is opposite to EXIT B and then show your hotel information to the staff. After purchasing the ticket there, please follow the instruction of the staff to get on the shuttle bus which takes you to the Harbour Plaza Metropolis hotel directly.
- **By Airport Express** (HK\$ 100): First take the airport express train to Kowloon station. After getting out the exit at Kowloon station, then follow the sign to take free transit bus K1 to the hotel directly. This option is not recommended since it is a little complicated.

If you are traveling from the Shenzhen International Airport, then

- Please take taxi (or airport shuttle bus) to Fu Tian border station (福田关 □). After cross the border control, take the East Rail Line train (which is also the only train) to terminus Hung Hom. Please get out from EXIT C at Hung Hom station and then walk to the Harbour Plaza Metropolis hotel, or EXIT D at Hung Hom station and walk to Best Western PLUS Hotel Kowloon, or EXIT A1 to Hong Kong Polytechnic University.

Schedule**Time: 16 May 2019 (Thursday)****Venue: Room Y303, 3/F, Core Y, Hong Kong Polytechnic University**

Day 1	16 May 2019 (Thursday)
08:40-9:00	On-site Registration
Session Chair	Yuan Lou
09:00-09:55	Wei-Ming Ni (Keynote speaker) , University of Minnesota From the logistic equation to consumer-resource systems in population dynamics
10:00-10:30	Daihai He , Hong Kong Polytechnic University Applications of Likelihood-based inference with non-mechanistic and mechanistic models in infectious disease modeling
10:30-11:00	Coffee and Tea Break
Session Chair	Zhian Wang
11:00-11:30	Sze-Bi Hsu , National Tsing-Hua University A reaction-diffusion system modeling the intraguild predation and internal storage
11:35-12:05	Yoshitsugu Kabeya , Osaka Prefecture University Structure of solutions to nonlinear elliptic equations having the inverse square potential
12:10-14:00	Lunch
Session Chair	Xuefeng Wang
14:00-14:30	Yong-Jung Kim , KAIST Random dispersal models for biological phenomena
14:35-15:05	King-Yeung Lam , The Ohio State University Asymptotic spreading of interacting species with multiple fronts
15:10-15:40	Fang Li , Sun Yat-sen University The dynamics of a Fisher-KPP nonlocal diffusion model with free boundaries
15:40-16:10	Coffee and Tea Break
Session Chair	Yoshitsugu Kabeya
16:10-16:40	Wan-Tong Li , Lanzhou University Fast propagation for reaction diffusion equations
16:45-17:15	Kimie Nakashima , Tokyo Univ. of Marine Science and Technology Uniqueness and Multiplicity of Indefinite Nonlinear Diffusion Problem in Population Genetics
17:20-17:50	Linlin Su , Southern University of Science and Technology Uniqueness and multiplicity investigation for a reaction-diffusion model in population genetics
18:00-20:00	Banquet (all speakers are invited)

Schedule

Time: 17 May 2019 (Friday)

Venue: Room Y303, 3/F, Core Y, Hong Kong Polytechnic University

Day 2	17 May 2019 (Friday)
Session Chair	Wan-Tong Li
09:00-09:30	Xuefeng Wang , Southern University of Science and Technology Remarks on Krein-Rutman Theorems and PDE applications
09:35-10:05	Wen Yang , Wuhan Institute of Physics and Mathematics, CAS On the uniqueness of equilibria in the Keller-Segel model
10:10-10:40	Shoji Yotsutani , Ryukoku University Solutions structure of a stationary limiting equation to a SKT cross-diffusion system- weak competition case
10:40-11:00	Coffee and Tea Break
Session Chair	King-Yeung Lam
11:00-11:30	Feng Zhou , East China Normal University On Gaussian curvature equation with nonpositive curvature
11:35-12:05	Zhian Wang , Hong Kong Polytechnic University Global dynamics of the diffusive Lotka-Volterra competition system with resource-dependent diffusion and advection
12:10-14:00	Lunch
14:00-16:00	Free Discussion

Note: Campus free WIFI name without passport: **Wi-Fi.HK via PolyU**