



哈爾濱工業大學
HARBIN INSTITUTE OF TECHNOLOGY



Brandenburgische
Technische Universität
Cottbus - Senftenberg

2015 Sino-German Workshop on Multiscale spatial computational systems biology



The Sino-German Workshop on “Multiscale spatial computational systems biology” (MSCSB2015) funded by **The Sino-German Center** for Research Promotion (Grant no. GZ1203) will be held in Beijing, China on October 8-12, 2015. The MSCSB2015 is jointly held by **Harbin Institute of Technology** and **Brandenburg Technical University Cottbus – Senftenberg**.

Coordinates

A. Prof. PhD Dr. rer. nat., **Fei Liu** (Chinese coordinate), Control and simulation center, Harbin Institute of Technology

Prof. Dr.-Ing, **Monika Heiner** (German coordinate), Computer Science, Brandenburg Technical University (BTU) Cottbus – Senftenberg

Date

Arrival date: 8th Oct. 2015

Meeting date: 16:00 8th Oct. 2015 to 18:00 10th Oct. 2015

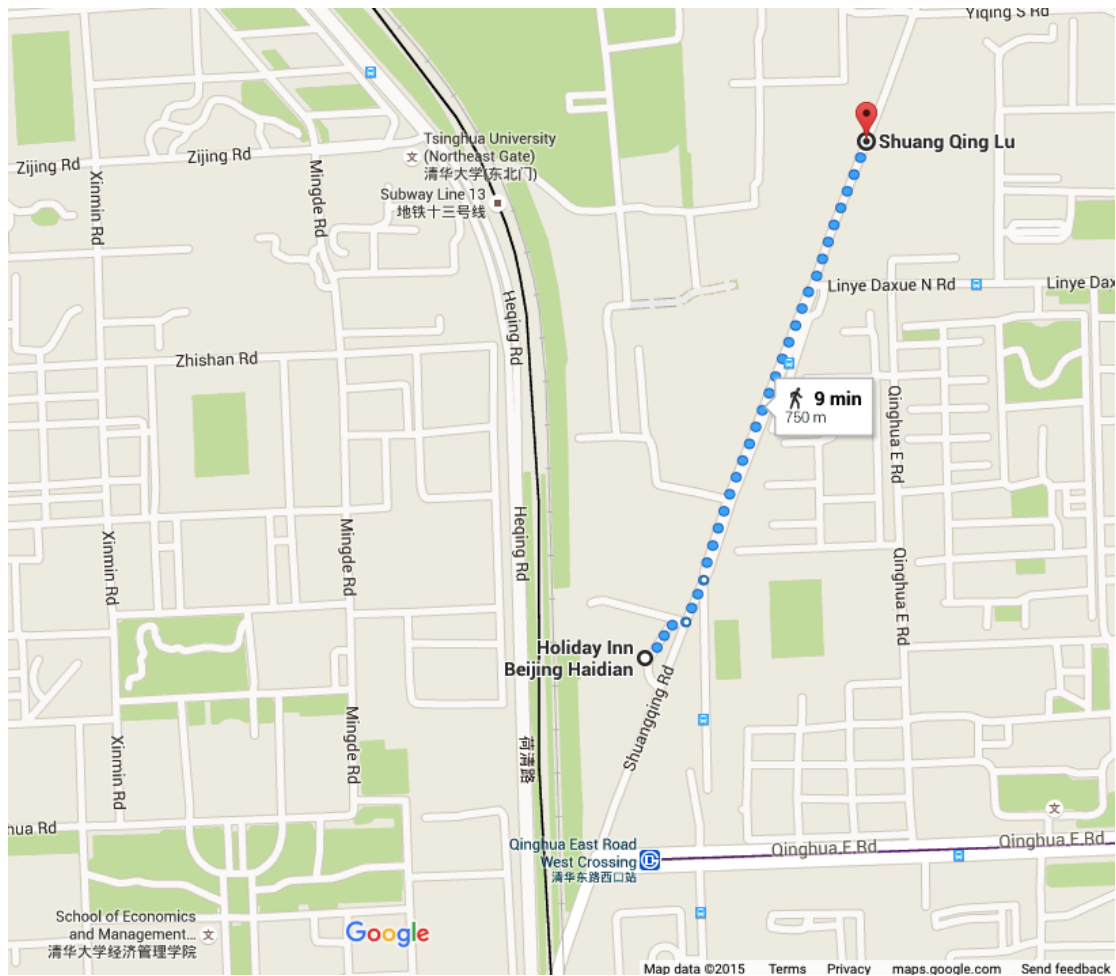
Excursion date: 11th Oct. 2015

Departure date: 12th Oct. 2015

Thursday - 8th October 2015

16:00 – 18:00 Welcome and General Introduction

All sessions will take place at
Sino-German Science Center
Shuangqing Road 63
Beijing 100085



Hotel address

Holiday Inn Beijing Haidian
Building A, No. 89 Shuangqing Road, Haidian District,
Beijing 100085, P.R.China

Friday - 9th October 2015

SESSION 1:

Session chair: Fei Liu

8:30 – 9:00 Adelinde Uhrmacher, David Gilbert, Future - Trends - Open Issues in Systems Biology, Position Statements;

9:00 – 9:30 M. Adelinde Uhrmacher, The role of languages in spatial, multi-level modeling and simulation

9:00 – 10:00 Ziding Zhang, Understanding Plant Immunity through Integrative Network Analysis

10:00 – 10:30 Coffee break

SESSION 2:

Session chair: Monika Heiner

10:30 – 11:00 Rui Jiang, Identification of disease-causing single nucleotide variants in exome sequencing studies

11:00 – 11:30 Christian Klukas, New approaches for analyzing multi-channel image data and post- processing of phenotypic data

11:30 – 12:00 Björn Sommer, Immersive Cell Exploration and Membrane Modeling

12:00 – 14:00 Lunch

SESSION 3:

Session chair: Taijiao Jiang

14:00 – 14:30 Monika Heiner, From Petri Nets to Partial Differential Equations

14:30 – 15:00 Fei Liu, Colored Petri nets for multiscale systems biology

15:00 – 15:30 Mary-Ann Blätke, A Framework for Modular Biomodel Engineering

15:30 – 16:00 Coffee break

SESSION 4:

Session chair: David Gilbert

16:00 – 16:30 Gang Guo, Monte Carlo simulation of anomalous diffusion and its accuracy analysis

16:30 – 17:00 Jens Krüger, Molecular Simulations using Workflows and Science Gateways

17:00 – 17:30 Zujian Wu, An integrated qualitative and quantitative biochemical model learning framework using evolutionary methodologies

17:30 – 18:00 Discussion

Saturday - 10th October 2015

SESSION 5:

Session chair: Ziding Zhang

8:30 – 9:00 Ming Chen, Future - Trends - Open Issues in Systems Biology, Position Statement;

9:00 – 9:30 Benjamin Kormeier, Visualization of biological networks based on a data warehouse

9:30 – 10:00 David Gilbert, Model checking for multiscale biological systems

10:00 – 10:30 Coffee break

SESSION 6:

Session chair: Heinz Koepl

10:30 – 11:00 Dechang Xu, Design & Simulation of Synthetic BioSensor for Dioxin

11:00 – 11:30 Fiete Haack, Exploring the spatio-temporal dynamics of WNT/Beta-Catenin Signaling in-silico and in-vitro

11:30 – 12:00 Ming Chen, Genome-wide multilevel spatial interactome model of rice

12:00 – 12:30 Hoehme, Stefan, Multiscale modeling of liver regeneration

12:30 – 14:00 Lunch

SESSION 7:

Session chair: M. Adelinde Uhrmacher

14:00 – 14:30 Xin Lai, Mathematical modelling of the communication between alveolar macrophages and epithelial cells during Legionella pneumophila infection

14:30 – 15:00 Thomas Buder, Mathematical model for pilocytic astrocytoma growth and progression provides clinical decision support

15:00 – 15:30 Taijiao Jiang, Modeling influenza virus evolution in big data era

15:30 – 16:00 Coffee break

SESSION 8:

Session chair: Ming Chen

16:00 – 16:30 Heinz Koepl, Stochastic multi-scale models of biomolecular networks

16:30 – 17:00 Herajy Mostafa, Efficient Simulation of Hybrid Petri Nets

17:00 – 17:30 Fangting Li, The cell cycle model in budding yeast

17:30 – 18:30 Wrap-up, Discussion, Future cooperation between China and Germany