



北京国际数学研究中心
BEIJING INTERNATIONAL CENTER FOR
MATHEMATICAL RESEARCH

International Workshop on Systems Learning of Single Cells



For updates on the latest schedule and talk abstracts, please scan QR code above.

Time: June 30 - July 2, 2025

Venue: Lecture Hall, Jiayibing Building, Jingchunyuan 82, Peking University Campus

**Beijing International Center for Mathematical Research (BICMR),
Peking University**



Scientific Committee

Weinan E (Peking University)
Pingwen Zhang (Wuhan University and Peking University)
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China

Schedule

Sunday, June 29th

Time	
14:00-18:00	Conference Check-in (Lobby, Building No.1, Zhongguanyuan Global Village)
18:00-	Welcome Dinner for speakers

Monday, June 30th, Jiayibing Building, PKU Campus

Time	Speaker	Title	Host
8:45-9:00	Welcome Speech		Lei Zhang
9:00-9:30	Herbert Levine	Epigenetic competition can reshape cell fate landscapes	
9:30-10:00	Albert Goldbeter	Cellular oscillators: From periodic behavior to multi-rhythmicity	
10:00-10:30	Group Photo, Tea Break		
10:30-11:00	Nathan Lewis	Eavesdropping and modulating intercellular communication driving autistic neurodevelopment and vocalization using single cell omics	Tianshou Zhou
11:00-11:30	Luonan Chen	AI for Dynamical Systems Biology	
11:30-12:00	Alexander Hoffmann	Dynamic control of B-cell epigenetic heterogeneity	
12:00-14:00	Lunch +Poster Session		
14:00-14:30	Alex Mogilner	Building mathematical model of cell leading edge from multiplex data	Xiaoqiang Sun
14:30-15:00	Yanlan Mao	Coping with Mechanical Stress	
15:00-15:30	Cheng-Ming Chuong	Tissue Patterning in the Developing Skin: Single-Cell Analyses Reveal New Insights into Periodic Patterning and Feather Length Regulation	
15:30-16:00	Tea Break		
16:00-16:30	Sungrim Seirin-Lee	How Does the Geometry of a Cell Change Our Life? From a Simple Insight to the Development of Imaging Data-Based Mathematical Modeling	Da Zhou

16:30-17:00	Smita Krishnaswamy	Inferring and Characterizing Cellular and Neural Dynamics with Deep Dynamic and Agent-based Models
17:00-17:30	Jin Wang	Uncovering underlying physical principles and driving forces of cell cycle and cell differentiation/reprogramming from single-cell transcriptomics
17:30	Dinner for speakers	

Tuesday, July 1st, Jiayibing Building, PKU Campus

Time	Speaker	Title	Host
9:00-9:30	Philip Maini	Modelling cranial neural crest cell migration	Peijie Zhou
9:30-10:00	Arthur Lander	TBD	
10:00-10:30	Tea Break		
10:30-11:00	Fengzhu Sun	Bulk expression deconvolution using single cells	Minghua Deng
11:00-11:30	Guowei Wei	Mathematical AI for Biosciences	Hao Ge
11:30-12:00	Jianhua Xing	Building biophysical models from single cell data	
12:00-13:30	Lunch +Poster Session		
14:00-14:30	Jae Kyoung Kim	Advancing Static and Time-Series Data: Signal Selection, Causality, and Spatial Dynamics	Federico Bocci
14:30-15:00	Ritambhara Singh	3D DNA organization predictions for single-cell datasets using deep learning	Ruibin Xi
15:00-15:30	Ahmed Mahfouz	Learning from single-cell and spatial genomic data	
15:30-16:00	Tea Break		
16:00-16:30	Yvan Saeys	Towards trustworthy and explorable embeddings of single-cell omics data	Federico Bocci
16:30-17:00	Yihan Lin	Decoding functional heterogeneity in cancer and stem cells	Weitao Chen

17:00-17:30	Zexian Zeng	Towards Spatial Multi-Omics - Immunology and Therapeutic Target Identification	
18:00	Banquet for speakers		

Wednesday, July 2nd, Jiayibing Building, PKU Campus, Lightning Talks

Time	Speaker (Affiliation)	Host
09:00–09:08	Lei Zhang (Peking University, China)	Qing Nie
09:08–09:16	Xiufen Zou (Wuhan University, China)	
09:16–09:24	Jinzhi Lei (Tiangong University, China)	
09:24–09:32	Chunhe Li (Fudan University, China)	
09:32–09:40	Suoqin Jin (Wuhan University, China)	
09:40–09:48	Jiajun Zhang (Sun Yat-sen University, China)	
09:48–09:56	Lihua Zhang (Wuhan University, China)	
09:56–10:11	Tea Break	
10:11–10:19	Federico Bocci (Radboud University, Netherlands)	Jinzhi Lei
10:19–10:27	Peijie Zhou (Peking University, China)	
10:27–10:35	Xinfeng Liu (University of South Carolina, USA)	
10:35–10:43	Yongtao Zhang (Notre Dame, USA)	
10:43–10:51	Shangqin Chen (Indiana University South Bend, USA)	
10:51–10:59	Yanxiang Zhao (George Washington University, USA)	
10:59–11:07	Qixuan Wang (UCR, USA)	
11:07–11:22	Tea Break	
11:22–11:30	Ping Wu (University of Southern California, USA)	Xiufen Zou
11:30–11:38	Huijing Du (University of Nebraska-Lincoln, USA)	
11:38–11:46	Wing-Cheong Lo (City University of Hong Kong, China)	
11:46–11:54	Daniel Bergman (University of Maryland, USA)	
11:54- 12:14	Weitao Chen (UCR, USA)	
13:00–17:00	Free Discussion & Departure	

