

The 2nd ASHBi SignAC Workshop

Integrating Single-cell Analysis and Mathematics



Date & Time: 9:00–18:00(JST) on Friday, 10 December 2021

Venue: Zoom Online Meeting*

Opening Remarks

9:00-9:05 **Taro Tsujimura**, ASHBi, Kyoto University

Keynote lecture 1: (Chair: Yasuaki Hiraoka)

9:05-10:05 **Geoffrey Schiebinger**, University of British Columbia
Towards a Mathematical Theory of Development

10:05-10:20 Meet the speaker

10:20-10:30 Break

Session 1: Genome regulation by single-cell analysis (Chair: Taro Tsujimura)

10:30-11:00 **Tomoko Nishiyama**, Nagoya University
Single-molecule approach for understanding genome architecture

11:00-11:30 **Yodai Takei**, California Institute of Technology
Single-cell nuclear architecture across cell types by integrated spatial genomics

11:30-12:00 **Hiroshi Ochiai**, Hiroshima University
Genome-wide kinetic properties of transcriptional bursting revealed by single cell Analysis

12:00-12:15 Meet the speakers from Session 1

12:15-13:30 Lunch Break

Session 2: Data science in single-cell analysis (Chair: Toshiaki Yachimura)

13:30-14:00 **Chung Chau Hon**, RIKEN IMS
An atlas of transcribed cis-regulatory elements in human single-cells for understanding genetic predispositions to diseases

14:00-14:30 **Yoshihiro Yamanishi**, Kyushu Institute of Technology
Large-scale analysis of drug-induced transcriptome data by machine learning

14:30-15:00 **Yusuke Imoto**, ASHBi, Kyoto University
Resolution of the curse of dimensionality in single-cell analysis

15:00-15:15 Meet the speakers from Session 2

15:15-15:30 Break

Session 3: Application with single-cell analysis (Chair: Takuya Yamamoto)

15:30-16:00 **Ryo Yamamoto**, ASHBi, Kyoto University
In vivo/in silico single-cell analysis of hematopoietic stem cells

16:00-16:30 **Yutaka Suzuki**, The University of Tokyo
Application of the single cell and spatial transcriptome analyses for clinical cancer specimens

16:30-16:45 Meet the speakers from Session 3

16:45-17:00 Break

Keynote Lecture (Chair: Mitinori Saitou)

17:00-18:00 **Bianca Dumitrascu**, Cambridge University
Beyond multi-modal analysis: challenges and interpretability for single cell data

Closing Remarks

18:00-18:05 **Mitinori Saitou**, ASHBi, Kyoto University

Social Interaction

18:05-19:00 Held at Spatial Chat