

Friday, July 26

9:00–10:00: PLENARY

Jinzhi Lei, “Evolutionary dynamics of cancer: From epigenetic regulation to cell population dynamics”

Z-110, Pavillon Claire-McNicoll (streaming in Z-220 and Z-210)

10:00–10:30: BREAK

10:30–12:30: MINISYMPOSIA

Z-110: Mathematical Modelling of Neuronal Networks

- 10:30–11:00: Cheng Ly, “Mathematically Describing how Firing Rate Heterogeneity Modulates in Cortical Networks”
- 11:00–11:30: Christina Hamlet, “Computational modeling of the effects of mechanosensory feedback on swimming lamprey”
- 11:30–12:00: Jennifer Crodelle, “Modeling visual circuit development of mice through synaptic plasticity”
- 12:00–12:30: Pamela Pyzza, “Idealized Models of Insect Olfaction”

Z-200: Validation of mathematical models in immunology and cancer

- 10:30–11:00: Heiko Enderling, “Mathematical oncology approaches to identify optimal dose, time and target of cancer radiation therapy for robust immune activation”
- 11:00–11:30: Susan Massey, “Quantifying drug distribution and response dynamics in experimental glioblastoma”
- 11:30–12:00: Meghan Ferrall-Fairbanks, “Tracking Single Cell Chronic Myelomonocytic Leukemia Diversity Across Patients”
- 12:00–12:30: Angela M Jarrett, “Modeling of preclinical studies of breast cancer response to evaluate therapeutic regimens”

Z-205: Structured population models for disease transmission dynamics

- 10:30–11:00: Francesca Scarabel, “A FLEXIBLE NUMERICAL METHOD FOR THE BIFURCATION ANALYSIS OF STRUCTURED POPULATION MODELS”
- 11:00–11:30: Chadi Saad-Roy, “Underlying strain space structure and influenza A eco-evolutionary dynamics”
- 11:30–12:00: Biao Tang, “Modelling Antibody-Dependent Enhancement (ADE) between DENV and ZIKV”
- 12:00–12:30: Jane Heffernan, “Waning and herd immunity”

Z-209: Quantitative approaches to unravel immune function and immunity

- 10:30–11:00: Reinhard Laubenbacher, “A multi-scale mathematical model of the innate immune response to respiratory fungal infections”
- 11:00–11:30: Tyler Cassidy, “Innate Immune System Regulation in Health and Disease”
- 11:30–12:00: Amber Smith, “Predicting Viral Loads, Host Response, Pathology, and Disease Severity During Influenza”
- 12:00–12:30: Judith Mandl, “Cell migration in immunity”

Z-210: Dynamics of immune system functions at the cellular and molecular level

- 10:30–11:00: Alan Perelson, “Regulation of T cell expansion by antigen”
- 11:00–11:30: Hassan Jamaledine, “Quantifying immunosuppression by type 1 regulatory T cells in simultaneous autoimmune disorders”
- 11:30–12:00: Catherine Byrne, “Understanding the drivers of Epstein-Barr virus shedding with HIV-1 coinfection”
- 12:00–12:30: David Schneider, “Using phase space to map the trajectory of infections”

Z-215: Mathematical Modelling of Cancer Therapy

- 10:30–11:00: Wing Cheong Lo, “Modeling immune system in application to studying IBD and TB infection”

- 11:00–11:30: Leili Shahriyari, “Mathematical modeling the process of tumorigenesis”
- 11:30–12:00: Dae Wook Kim, “Systems model reveals the sources of the inter- and intraspecies variability in drug efficacy”
- 12:00–12:30: Jae Hyoung Hong, “Analyzing the sleep patterns of shift workers using the mathematical model”

12:30–13:30: CLOSING REMARKS

No location given, likely Z-110