

Mathematical Models in Cancer

Wolfgang Pauli Institute, Vienna
www.wpi.ac.at

August 1 – August 2, 2019

Workshop Venue:
"SkyLounge", 12th floor OMP1

Fakultät f. Mathematik, Univ. Wien
Oskar Morgenstern Platz 1, 1090

Organizers:

- Michael Bergmann (Medical University, Wien)
- Marie Doumic Jauffret (INRIA, Paris)
- Doron Levy (U. Maryland & NCI)
- Norbert J. Mauser (WPI c/o U. Wien)

Opening: Thursday, 1 Aug 2019, 9h00

Workshop: Mathematical Models in Cancer

Wolfgang Pauli Institute, Vienna

August 1 – August 2, 2019

Venue : SkyLounge OMP1

Thursday, 1 August

- 9:00–9:10 **Norbert Mauser** (WPI c/o Uni Wien): *Opening Remarks*
- 9:10–9:50 **Marcello Delitala** (Politecnico di Torino)
Combination Therapies and Drug Resistance in Heterogeneous Tumoral Populations
- 9:50–10:30 **Alexander Tolios** (Medical University of Vienna)
Predicting Healthy and Cancerous Tissue Samples by Applying Predictive Modeling Techniques on Epigenetic Markers
- 10:30–11:00 COFFEE BREAK
- 11:00–11:40 **Svetlana Bunimovich** (Ariel University)
Mathematical Model of CRC Lung Metastases Growth Patterns
- 11:40–12:20 **Dietmar Pils** (Medical University of Vienna)
Network Analysis for Hypothesis Generation, Target Definition, and (Multiomics) Data Integration
- 12:20–14:00 LUNCH
- 14:00–14:40 **Olivier Saut** (CNRS, INRIA Monc Bordeaux)
Early Evaluation of Cancer Treatment Using Modeling and AI
- 14:40–15:20 **Gergely Szakacs** (Medical University of Vienna)
Treasure Hunting in the NCI60 Anticancer Drug Screen Database
- 15:20–15: COFFEE BREAK
- 15:45–16:25 **Thomas Eder** (University of Veterinary Medicine, Vienna)
Benchmarking Differential ChIP-Seq Tools

Workshop: Mathematical Models in Cancer

Wolfgang Pauli Institute, Vienna

August 1 – August 2, 2019

Friday, 2 August

- 9:00–9:40 **Tommaso Lorenzi** (University of St. Andrews)
Dissecting the Evolutionary Dynamics of Cancer Cell Populations in Fluctuating Environments
- 9:40–10:20 **Walter Berger** (Medical University of Vienna)
Contribution of Immune Mechanisms to the Anticancer Activity of Platinum Drugs
- 10:20–10:40 COFFEE BREAK
- 10:40–11:20 **Sophie Hecht** (Imperial College, London)
An Individual-Based Model for Inter-Kinetic Nuclear Movement
- 11:20–12:20 **Michal Komorowski** (Polish Academy of Sciences)
Making Sense of Signaling Complexity
- 12:20–14:00 LUNCH
- 14:00–14:40 **Diane Peurichard** (INRIA, Paris)
Modelling adhesion-independent cell migration: how cells can cross biological barriers
- 14:40–15:20 **Jörg Menche** (CeMM Research Center for Molecular Medicine, Vienna)
From Protein-Protein to Drug-Drug Interactions
- 15:20–15:45 COFFEE BREAK
- 15:45–16:25 **Michael Bergmann** (Medical University of Vienna)
Interplay of Therapy and Tumor Microenvironment in Human Colorectal Cancer
- 16:25–16:30 **Doron Levy** (U. Maryland & NCI): *Closing Remarks*