

Mathematical Models in Medicine

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

August 7 – August 8, 2023

Workshop Venue:
WPI Conference Room, 8th Floor

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

Organizers:

- Doron Levy (U. Maryland)
- Norbert J. Mauser (WPI c/o U. Wien)
- Benoît Perthame (LJL, Sorbonne University, Paris)

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Monday – August 7, 2023

- 9:50–10:00 Norbert Mauser (WPI c/o Uni Wien) : *Opening Remarks*
- 10:00–10:45 Thomas Stiehl (Aachen Uni)
Mechanistic modeling of stem cell dynamics during inflammation, aging and cancer
- 10:45–11:15 COFFEE BREAK
- 11:15–12:00 Luca Gerardo-Giorda (Johannes Kepler Uni, Linz)
Digital Twins in Computational Medicine
- 12:00–13:30 LUNCH
- 13:30–14:15 Morten Andersen (Roskilde Uni)
Blood Cancer (MPN) Progression and Treatments Clarified by Mathematical Modeling
- 14:15–15:00 Benoît Perthame (LJLL, Sorbonne Uni, Paris)
Analysis of Mechanical Models of Living Tissues and Free Boundary Problems
- 15:00–15:30 COFFEE BREAK
- 15:30–16:15 Peter Roth (Veterinary Medical Uni, Vienna)
Computational Medicine: Computer Science in Veterinary Medicine
- 16:50–17:00 Walter Berger (Medical Uni, Vienna)
Unusual Mode of Action for Usual Pharmacoon
- 19:00 DINNER

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- 9:15–10:00 Michael Bergmann (Medical Uni, Vienna)
Short Term Primary Tumor Culture to Understand the Response to Therapy in Colorectal Cancer
- 10:00–10:45 Doron Levy (Uni Maryland)
Mathematical Models for Immunotherapy
- 10:45–11:15 COFFEE BREAK
- 11:15–12:00 Johnny Ottesen (Roskilde Uni)
A Mathematical Modeling Approach to Clonal Architecture of Hematopoietic Cancers and its Impact on Stem Cell Dynamics, Disease Progression and Treatment Efficiency
- 12:00–14:00 LUNCH
- 14:00–14:45 Anna Marciniak-Czochra (Heidelberg Uni)
Transcriptomics-structured population models: From data to models and model-based data analysis
- 14:45- DISCUSSION & CLOSING
- 16:00–17:15 RIVER CRUISE (leaving Schwedenplatz)