Prof. Dr. Jens Timmer



Head of the Division of Data Analysis and Modeling of Dynamic Processes in the Life Sciences – Institute of Physics – University of Freiburg

SMART-NAFLD Co-Coordinator

Role in LiSyM-Cancer

- Co-coordinator and project leader in SMART-NAFLD
- Project leader in C-TIP-HCC
- Focus on dynamic pathway modeling of cytokine and growth factor induced signal transduction to gain insights into mechanisms that are changed in fatty liver diseases

Expertise

- Development of mathematical methods for mathematical modelling especially in cell biology
- Application of these methods in close collaboration with experimental groups to answer specific biological questions
- Signaling pathways involved in liver regeneration

Degrees

- 1999, Habilitation in Physics at the Institute of Physics, Freiburg
- 1994, PhD in Physics at the Institute of Physics, Freiburg
- 1990, Diploma at the Institute of Physics, Freiburg
- Physics Studies at the Universities Oldenburg and Freiburg

Professional Experience

- Since 2005, Full Professor for Theoretical Physics and Its Application in the Life Science, Institute of Physics, University of Freiburg
- 2012 - 2020, Executive Director, Freiburg Center for Systems Biology
- 2009 - 2013, Co-Director, School Life Science, Freiburg Institute for Advanced Studies.
- 1999 - 2005, Associate Professor, Institute of Physics, University of Freiburg.
- 1998, Co-founder of The Scientific Consulting Group GmbH, split into seleon GmbH and TNI medical AG in 2007
- Research Visits at Boulder University, EPFL Lausanne, New York University, Humboldt University, Max-Planck Institute for Physics of Complex Systems Dresden, Potsdam University, University Heidelberg
- 1994 - 1998, Group Leader, Center for Data Analysis and Modelling, University of Freiburg.
- 1992 - 1994, Researcher, Department of Psychiatry, University Hospital Freiburg

Honors and Awards (Selection)

- 2011, Hector Research Award

Publications

2025-12-01	On the different flavours of practical identifiability *Current Opinion in Systems Biology*
2025-11-01	Diclofenac and acetaminophen dim the acute-phase response but amplify expression of the iron regulator hepcidin in liver cancer cells *Cell Systems*
2025-01-07	Phase separation of initiation hubs on cargo is a trigger switch for selective autophagy *Nature Cell Biology*
2024-01-12	Basal MET phosphorylation is an indicator of hepatocyte dysregulation in liver disease *Molecular Systems Biology*
2022-01-01	MSPypeline: a python package for streamlined data analysis of mass spectrometry-based proteomics *Bioinformatics Advances*