



**Systems Biology  
Seminar Talk**

**A journey into single-  
cell heterogeneity and  
its implications in  
human diseases**

Inaugural lecture  
by  
Jun.-Prof. Dr. Chengzhe Tian



**05.02.2024  
14:00 CET**

**Lecture Hall 0.106  
Allmandring 31  
Stuttgart**

**Abstract:**

Non-genetic cell-to-cell heterogeneity is ubiquitous and plays a critical role in human diseases. Time-lapse microscopy coupled with fluorescent live-cell reporters enables direct monitoring of pathway activities in single cells over time. It thus serves as an ideal tool to dissect the molecular origins of cell-to-cell heterogeneity and their implications for long-term cell fates, especially in the disease settings. I have worked in this area during the past decade, making contributions in both the experimental and the computational aspects. In my inaugural lecture, I will discuss two of my published studies on mammalian immune signaling and melanoma skin cancer. I will also briefly describe my future research directions during my Junior Professorship.

**CV:**

since 2023	Junior-Professor, Institute for Cell Biology and Immunology, University Stuttgart, Germany
2022 – 2023	Project Scientist, CeMM Research Center for Molecular Medicine of the Austrian Academy of Science
2017 – 2022	Postdoc, University of Colorado Boulder, USA
2014 – 2017	Ph.D. Biophysics, University of Copenhagen, Denmark
2011 – 2013	M.Sc. Computational Biology and Bioinformatics, ETH Zurich and University of Zurich, Switzerland
2007 – 2001	B.Sc. Chemistry and B.Sc. Computer Software, Peking University, China