



University
of Basel

Department
Biozentrum



Swiss Institute of
Bioinformatics

BIOZENTRUM

The Center for
Molecular Life Sciences

Basel Computational Biology Seminar
21563 Current research in Bioinformatics II



Steffen Rulands

Emergent timing in development and aging

The development and maintenance of complex tissues require precise control over the timing of cellular behavior. This timing spans many orders of magnitude in both space and time, from protein-DNA interactions occurring on millisecond timescales to the decades-long progression of aging. How such precise temporal scales emerge from molecular events that are orders of magnitude faster remains a puzzle for both biologists and physicists. In this talk, I will discuss emergent biomolecular mechanisms that cells use to determine the timing of state changes. Drawing on single-cell sequencing experiments and methods from statistical physics, I will present specific examples ranging from the timing of the loss of pluripotency to the question of what sets the timescale of aging.

Speaker Information

Name: Steffen Rulands

Institute: LMU, Munich, Germany



Event Details

Date: Monday, 03 30 2026

Time: 16:15 – 17:15 h

Location: Biozentrum, U1.197

Host: Ludovico Calabrese

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