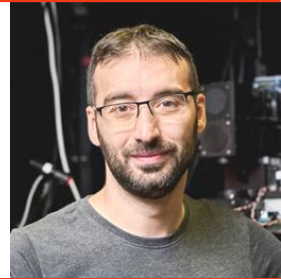


Einladung zum Physiologischen Seminar

Dr. Luca Ravotto

Institute of Pharmacology and Toxicology – University of Zürich

<https://www.brunoweberlab.ch/team/luca-ravotto>



Imaging Concentrations in the Mouse Brain: from Photon Counting to Glucose Tracking

Two-photon microscopy combined with genetically encoded sensors provides access to the spatiotemporal dynamics of biologically relevant molecules in living animals at the single-cell level. Turning fluorescence signals into accurate concentrations, however, remains a major challenge. Fluorescence lifetime imaging microscopy (FLIM) offers a promising route toward quantitative concentration imaging but comes with challenges that span from technological limitations in counting and timing photons to auto-fluorescence contamination and misbehavior of genetically encoded sensors. In our lab, we combine novel photon-counting solutions with practical advances in data analysis and sensor design to push the speed and accuracy limits of concentration imaging in the mouse brain. Using these tools, we address fundamental questions about glucose transport and cell-specific metabolism.

Datum: **14. July 2026**

Ort: **Hörsaal H**

Gebäude: **I01-H0-1110**

Zeit: **16 Uhr c.t.**

Gäste sind herzlich willkommen!

Ansprechpartner:

Dr. Andre Zeug, Institut für Neurophysiologie, Tel: 5026

<https://www.mhh.de/cnp>