Department of Biomedical Engineering
UNIVERSITY OF WISCONSIN–MADISON

Spring 2026
Seminar Series

Expanding the optical bag of tricks for (neuro)biology

Fabian Voigt, PhD
Postdoctoral Researcher
Branco Weiss Fellow (2024–2029)
Biolabs 2072
Engert Laboratory
Harvard University

Seeing is believing, and thus optical imaging techniques are extremely useful to study brain structure and function. I will present several projects aimed at providing the neuroscience community with better imaging instrumentation: These range from open-source light-sheet microscopes for imaging cleared tissue to novel multi-immersion microscope objectives that take inspiration from scallops and astronomical telescopes. In addition, I will present recent projects aimed at rapid 3D tracking of freely behaving fish larvae and for increasing the light-collection efficiency of single objective light-sheet microscopes.

About the Speaker

Fabian Voigt studied Interdisciplinary Sciences at ETH Zurich and received his PhD in 2019 from the University of Zurich. During his PhD work in the laboratory of Fritjof Helmchen, he developed the mesoscale selective plane illumination (mesoSPIM) Initiative, a global open science project aiming to provide the imaging community with better light-sheet microscopes for imaging cm-sized cleared tissue samples. Since 2021, Fabian Voigt is a postdoctoral fellow in the lab of Florian Engert at Harvard University and working on improving whole-brain imaging techniques in larval zebrafish. In 2024, he received a Branco-Weiss Fellowship that provides support for starting an independent lab.

Monday, April 20 at Noon
1003 Engineering Centers (Tong Auditorium)