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GERMAN  
CANCER RESEARCH CENTER  
IN THE HELMHOLTZ ASSOCIATION



Research for a Life without Cancer

## CORE FACILITY TECH-TALK SERIES

# ZEISS Lightfield 4D

## *Real-Time 3D Insights Into Living Cells*

### LMCF CrossTalks Seminar

**Tue, 14 October 2025, 11:00–13:00**

German Cancer Research Center (DKFZ), A0.106 (ATV, Ground Floor)

#### ZEISS Lightfield 4D – Instant Volumetric High-Speed Imaging

Dr. Sven Poppelreuther, 3D System Specialist

The new ZEISS Lightfield 4D system represents a breakthrough in volumetric live-cell imaging. By capturing angular as well as spatial information, this approach enables instantaneous 3D reconstructions over time without mechanical scanning. The technique allows for high temporal resolution, reduced phototoxicity, and improved preservation of cellular dynamics. In this workshop, we will present the optical principles underlying lightfield microscopy, demonstrate quantitative workflows for 4D data acquisition and analysis, and discuss applications ranging from developmental biology to fast cellular signaling. Participants will gain hands-on experience with the system and explore how Lightfield 4D can open new avenues in dynamic biological research.

Register now for the seminar and the hands-on Lightfield 4D demo with your own samples. Enjoy finger food kindly provided by ZEISS during the seminar.

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[More Information  
& Registration](#)

