

Online Workshop / February 04, 2025

## 4th MPS User Days – Microsystems for Physiological Cell Culture

Preliminary Program

09:30–09:35 (CET)	<b>Welcome and Short Introduction</b> <i>Florian Schmieder, Fraunhofer IWS</i>
	<b>Basics and Enabling Technologies</b>
09:35–09:50	Dynamic Micro-OCT for Enhanced Label-free Tissue Characterization <i>Dr. Hinnerk Schulz-Hildebrandt, Harvard Medical School</i>
09:50–10:05	AI-based Tissue Analysis for Automated Quantification of Imaging Biomarkers <i>Henning Höfener, Fraunhofer MEVIS</i>
10:05–10:20	Setting up an Institutional OMERO Environment for Bioimage Data: Perspectives from both Facility Staff and Users <i>Thomas Müller-Reichert/Silke Tulok, TU Dresden</i>
10:20–10:35	Implementing Digital Twins: Best Practices and Considerations for Cell and Tissue Culture <i>Bernhard Schwarze, Fraunhofer IWS</i>
10:35–10:45	Short Break
	<b>MPS Applications</b>
10:45–11:00	Non-invasive Maturity Assessment of iPSC-CMs Based on Optical Maturity Characteristics Using Interpretable AI <i>Dr. Frank Sonntag, Fraunhofer IWS</i>
11:00–11:15	OCT-based Monitoring of Artificial Collagen Membranes during Mechanical Stimulation <i>Jonas Golde, Fraunhofer IWS</i>
11:15–11:30	Establishment of Microphysiological Systems (MPS) to Evaluate new Potential Radiopharmaceuticals <i>Yuliya Dzekhtsiarova, Universitätsklinikum Dresden</i>
11:30–11:45	tbd.
11:45–12:00	tbd.
12:00–12:15	tbd.
12:15–12:25	Q&A, Discussion