



## **Professor Outi Supponen**

«My mission is to encourage diversity and inspire talented students from all backgrounds to fulfill their ambitions in science and engineering.»

# Multiphase Fluid Dynamics

## Institute of Fluid Dynamics

Our group seeks to better understand various small-scale multiphase fluid phenomena, such as bubble and droplet dynamics. One of our goals is to control bubble oscillations in order to exploit their energy-focusing qualities in biomedical and engineering applications. We combine ultra-high-speed measurements with physical modelling to deliver better explanations and predictions for a wide spectrum of fast and complex fluid flows.

### Focus

- Experimental fluid dynamics
- Cavitation and bubbles: nucleation, dynamics and collapse
- High-speed liquid flows and shock waves
- Biomedical acoustics and ultrasound contrast agents

### Tools and methods

- Ultra-high-speed imaging
- Optical and acoustical flow diagnostics methods
- Medical ultrasound

Further details online:

[www.ifd.ethz.ch/research/group-supponen](http://www.ifd.ethz.ch/research/group-supponen)

