Machine learning: Pendulum test mass stabilisation in the inertial system

Area: Experiment, measurement data acquisition and processing, theory, machine learning

Motivation: Basic research for GW detectors to make GWs observable at lower frequencies. The topic will be pursued in the SFB1723 (subject to change) as a doctoral thesis.
Goal: Demonstration that a free-swinging 5-mm-long pendulum oscillates significantly less than a quarter of the wavelength of light at 1550 nm due to active isolation of the vacuum tank.