

Master Project, spring or fall semester 2023



Title: **Characterisation of the lake snow in Lake Geneva**

Supervisors: Dr. Natacha Tofield-Pasche

Objectives: To analyse the spatio-temporal dynamics of the settling particulate matter (lake snow) in Lake Geneva

Abstract: Holographic microscopy has emerged as a tool for in situ imaging of microscopic organisms and other particles in the lacustrine environment. The submersible camera LISST-Holo2 is performant for profiling particles ranging from 25 μm to 2500 μm , and suitable to identify phytoplankton, small zooplankton, organic and inorganic particles. The aim of this project is to characterize the lake snow in Lake Geneva, and to investigate the influence of the Rhone River plume on the flocculation and sedimentation of settling particles.

Task:

1. Take regularly vertical profiles particles size, concentration and images at high resolution from the LÉXPLORE platform
2. Characterize the spatiotemporal variations of particles sizes and shapes under various seasons and meteorological conditions

Required: Good programming and data analysis skills

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