

UNIVERSITÄT BERN

Medizinische Fakultät Vetsuisse Fakultät Phil.-Nat. Fakultät

Microscopy Imaging Center

Stereologie Workshop

Title: Workshop on Quantitative Microscopy 2023

Date, duration: 14. - 18. August 2023, 5 days

Location: Institute of Anatomy, "Lesesaal Altbau", Entrance: Bühlstrasse 26, 3012

Bern

Lecturer(s): Jeny Nyengaard, Matthias Ochs, Christian Mühlfeld, Beat Haenni, Christina

Brandenberger, Stefan Tschanz (ANA)

Contact: Stefan Tschanz, PD Dr. med IT Eng.

Number of participants: max. 25 students

(the workshop is internationally advertised, takes place only with enough

registrations)

Target audience: This workshop is intended for students and researchers from the field of biology and

medicine interested in sampling and measurement of 3D structures. Applications involving any kind of microscopy (e.g. light microscopy, confocal laser scanning microscopy, multi-photon microscopy, electronmicroscopy) as well as non-invasive

scanning techniques like CT and NMR are welcome.

Registration:

KSL: 26045

Reward: 2.5 ECTS

Costs: 450 CHF per student

PhD students enrolled in the Graduate School for Cellular and Biomedical Sciences (GCB) can

apply for refund at the PhD program Cutting Edge Microscopy

Learning goals: This workshop provides an introduction to state-of-the-art stereology with emphasis

on its practical application in biomedicine. Experimental design, sampling, use of stereological probes, estimation of stereological parameters, and the application of statistical methods appropriate for stereology are covered. The workshop

encompasses lectures, classroom exercises with real biomedical images, and laboratory practicals demonstrating the implementation of proper sampling and

processing techniques on real bio-logical organs.



Description: Stereology provides biomedical researchers with efficient and unbiased tools to obtain real 3D

data like volume, surface, length, and number of organs, tissues, cells, and organelles from

measurements done on microscopic sections.

Participants should bring their specific projects and questions. During the workshop, there will

be ample opportunity for discussions with the instructors.

Course structure: Lectures and classroom practicals

Assessment: Introduction to own project and plenary presentation of the stereological project outline at the

end of the week