

Instruct-ERIC course

Biophysics, structural mass spectrometry, and X-ray techniques

Dates: May 24 – 27, 2021

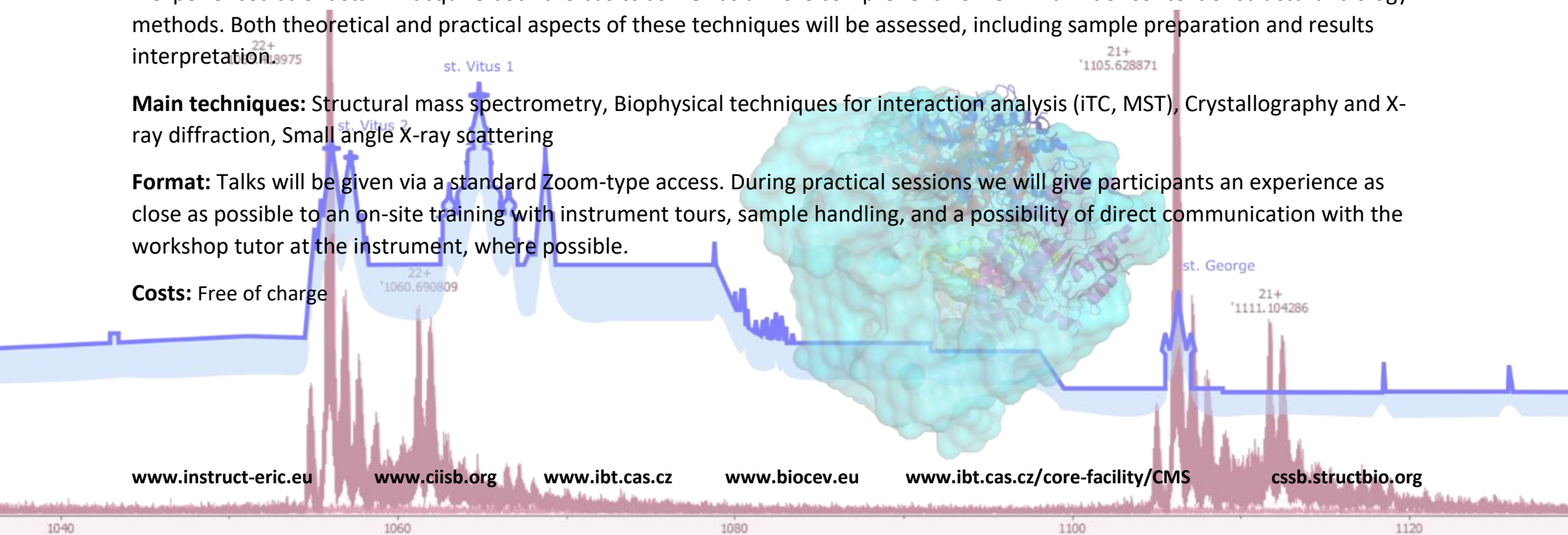
Venue: online from INSTRUMENT-CZ, Institute of Biotechnology of the Czech Academy of Sciences, Vestec

Aim: The course will provide basic and applied training in a range of selected methods of integrative structural biology. Young or inexperienced scientists will acquire both the basics as well as a more comprehensive view in a wider context of structural biology methods. Both theoretical and practical aspects of these techniques will be assessed, including sample preparation and results interpretation.

Main techniques: Structural mass spectrometry, Biophysical techniques for interaction analysis (iTC, MST), Crystallography and X-ray diffraction, Small angle X-ray scattering

Format: Talks will be given via a standard Zoom-type access. During practical sessions we will give participants an experience as close as possible to an on-site training with instrument tours, sample handling, and a possibility of direct communication with the workshop tutor at the instrument, where possible.

Costs: Free of charge



Preliminary programme (Prague, CEST time):

May 24 – Mass Spectrometry

13:00-15:00: Tutorial chemical crosslinking + sample preparation tips and tricks

15:30-17:30: Data interpretation + special application

May 25 - Biophysics

13:00-15:00: Review of experimental techniques for interaction analysis

15:30-17:30: Practical use of selected techniques – ITC and MST

May 26 – Small angle X-ray scattering

13:00-15:00: SAXS – biological macromolecules in solution

15:30-17:30: Selected application – tour + practical session

May 27 – Crystallography

13:00-15:00: Macromolecular crystallography

15:30-17:30: Practical session – crystallization robot, crystallization microseeding, X-ray diffraction with crystal dehumidifier

Confirmed speakers/tutors:

Petr Pompach (IBT); Jiří Pavlíček (IBT); Jan Stránský (IBT); Tatsiana Charnavets (IBT); Petr Novák (Institute of Microbiology of the Czech Academy of Sciences); Petr Kolenko (FNSPE, Czech Technical University in Prague), Pawel Kania (NanoTemper Technologies, Poland), Haydyn Mertens (EMBL Hamburg); (Terese Bergfors, Uppsala University)

To apply: Contact Jan Dohnálek (jan.dohnalek@ibt.cas.cz) or Magdalena Schneiderová (magdalena.schneiderova@ibt.cas.cz) with a brief professional CV (maximum 2 pages), a motivation letter, and one letter of recommendation from a supervisor or a senior scientist.

Application deadline: April 26, 2021