



9-11 SEPTEMBER
**VIRTUAL
CONGRESS**

Organizers

Arianna Bellucci
Federica Bono
Gaia Faustini

**Under the
Auspices of:**



WORKSHOP

NEAR-INFRARED MICROSCOPY IN NEUROSCIENCE

September 8 2021

This workshop will provide an overview on the possible applications of two main IR microscopy techniques, two-photon structural microscopy on clarified brain samples and fluorescence lifetime imaging (FLIM), in the field of neuroscience. The workshop foresees an introduction on the basic principles of near IR microscopy and will offer a practical interactive guide on how to prepare samples and perform image acquisitions and analysis. Two-photon-based 3D imaging of neuronal systems and the potentiality of FLIM-based studies in live neurons will be presented.

Program

8:15-8:30

Welcome and Introduction

Prof. Stefania Mitola, Prof. Arianna Bellucci, Imaging Facility, Laboratory for Preventive and Personalized Medicine, University of Brescia

8:30 – 9:15

Two-photon excitation microscopy: basic principles.

Prof. Arianna Bellucci, University of Brescia

9:15 – 10:00

From tissue clearing to two-photon structural connectomics.

Dr. Gaia Faustini, University of Brescia

10:00 – 10:45

Fluorescence lifetime imaging (FLIM): basic principles.

Dr. Federica Bono, University of Brescia, Dr Sandra Orthaus-Mueller, ZEISS Research Microscopy Solutions

10:45 – 11:30

The potential of FLIM in neuroscience.

Dr. Federica Bono, University of Brescia, Dr Sandra Orthaus-Mueller, Zeiss

11:30 – 12:30

Practical guide to clarified brain tissue preparation, two-photon acquisition, image stitching and analysis.

Prof. Arianna Bellucci, Dr. Gaia Faustini, Dr. Cosetta Ravelli, University of Brescia.

14:30-15:30

Practical guide to FLIM acquisition and analysis.

Dr. Federica Bono, Dr. Cosetta Ravelli, University of Brescia, Dr Sandra Orthaus-Mueller, Zeiss.

REGISTRATION IS FREE OF CHARGE. A maximum of 25 participants selected from different Institutions is allowed. Participants must be registered for the 19th SINS conference.
Registration deadline: August 15 2021.
Please send registration requests to: arianna.bellucci@unibs.it