

# ICBP 2025 – Preliminary Program

## Thursday – 3<sup>rd</sup> of April 2025

08 :00 Registration / Poster Installation

08:30 Conference opening:  
**Csilla Gergely, Jürgen Popp**

### PHOTONICS FOR IMAGING 1

Raman, Fluorescence, Photoacoustic, Brillouin

Chair: **Csilla Gergely**

09:00 **Biomedical Photonics - from bench to bedside**  
**Jürgen Popp** | Leibniz IPHT Jena, Germany

09:30 **Open-source multidimensional fluorescence, phase and super-resolved microscopy and high content analysis**  
**Paul French** | Imperial College London, United Kingdom

10:00 **Morpho functional imaging of the brain**  
**Francesco S. Pavone** | LENS - Univ Florence, Sesto Fiorentino, Italy

10:30 – 11:00 **2 Selected oral communications**

Coffee break

Chair: **Jürgen Popp**

11:30 **Probing tissue biomechanics with novel Brillouin scattering spectroscopy**  
**Francesca Palombo** | University of Exeter, United Kingdom

12:00 **Photoacoustic Imaging - technical validation and emerging applications**  
**James Joseph** | University of Dundee, United Kingdom

12:30 – 13:00 **2 Selected oral communications**

13:00 – 14:30 **Lunch break**

## PHOTONICS FOR IMAGING 2

Light-sheet, Phase, Multiphoton microscopy

Chair: **Paul French**

14:30 **Viewing life without labels: advanced imaging of the preimplantation embryo**

**Kishan Dholakia** | University of St Andrews, United Kingdom

15:00 **Quantitative phase microscopy by wavefront sensing**

**Serge Monneret** | Institute Fresnel, Marseille, France

15:30 – 16:00 **2 Selected oral communications**

16:00 – 17:00 **Poster session 1.** | Coffee, Wine & Cheese

Chair: **Kishan Dholakia**

17:00 **3D imaging at different scales using single-objective Selective Plane Illumination Microscopy (SPIM)**

**Jean-Baptiste Sibarita** | IINS, Université de Bordeaux, France

17:30 **Mitigating photodamage in multiphoton light-sheet microscopy**

**Willy Supatto** | Ecole Polytechnique, Université Paris Saclay, France

18:00 - 18 :30 **2 Selected oral communications**

18 :30 **Industrial section**

# Friday – 4<sup>th</sup> April 2025

## PHOTONICS FOR DIAGNOSTICS AND THERAPY 1

Chair: **Ronald Sroka**

08:30 **Cardiovascular monitoring devices enabled by silicon photonics**  
**Yanlu Li** | Ghent University, IMEC Belgium

09:00 **Optical biosensing for diagnostics and theranostics based on oligonucleotide switches.**  
**Ambra Giannetti** | IFAC CNR, Sesto Fiorentino, Italy

09:30 **Photosensitiser free direct laser treatment of cancer**  
**Edik Rafailov** | Aston University, UK

10:00 – 10:45 **3 Selected oral communications**

Coffee break

Chair: **Isabelle Ledoux-Rak**

11:15 **Clinical investigations using hyperspectral imaging**  
**Ronald Sroka** | University Hospital München, Germany

11:45 **Nanodiamond orientation sensing for applications in soft matters**  
**Quan Li** | The Chinese University of Hong Kong

12:15 – 13:00 **3 Selected oral communications**

13:00 – 14 :30 **Lunch break**

## TISSUE, NEURO- PHOTONICS

Chair: **Balázs Rózsa**

14:30 **Coherent Raman imaging for biomedical applications**  
**Hervé Rigneault** | Institut Fresnel, Marseille, France

15:00 **Intercellular interactions probed by vibrational spectroscopy imaging, from 2D to 3D in vitro cultures of brain cells**  
**Kamilla Malek** | Jagellonian University, Kraków, Poland

15:30 **Non-invasive, multi-modal optical monitoring for (neuro-)critical care**  
**Turgut Durduran** | ICFO Barcelona, Spain

16:00 – 16:30 **2 Selected oral communications**

16:30 – 17:30 **Poster session 2.** | Coffee, Wine & Cheese

Chair: **Turgut Durduran**

17:30 **Visual restoration by 3D imaging and 3D photostimulation in large volumes in vivo**  
**Balázs Rózsa** | IEM, HAS, Budapest, Hungary

18:00 **Fast imaging of neuronal activity in freely-behaving mice using a confocal fiberscope**  
**Cathie Ventalon** | IBENS, ENS CNRS, Paris, France

18:00- 18:30 **2 Selected oral communications**

20 :00 **Gala dinner**

## Saturday – 5<sup>th</sup> of April 2025

### PHOTONICS FOR IMAGING 3

Raman, IR, Super resolution, Polarization Microscopy

Chair: **Hervé Rigneault**

09:00 **Depth-coded stimulated Raman scattering tomography for label-free dynamic and functional imaging of live cells and tissue**  
**Zhiwei Huang** | National University of Singapore

09:30 **Infrared microscopy of live-cells at the benchtop**  
**Charles Camp** | NIST, Gaithersburg, USA

10:00 – 10:45 **3 Selected oral communications**

Coffee break

Chair: **Cathie Ventalon**

11:30 **Unveiling new dimensions in tissue biopsy with 3D polarization mapping of tissues optical anisotropy composition**  
**Igor Meglinski** | Aston University, UK

12:00 **Polarized microscopy in 3D to image complex biomolecular organizations**  
**Sophie Brasselet** | Institut Fresnel, Marseille, France

12:30 – 13:00 **2 Selected oral communications**

13:00 – 14:30 **Lunch break**

## PHOTONICS FOR DIAGNOSTICS AND THERAPY 2

Chair: **Zsuzsanna Heiner**

14:30 **Label-free optofluidic sensor based on polymeric microresonators for DNA sensing**  
**Isabelle Ledoux-Rak** | LPQM, CNRS ENS Paris-Saclay, Cachan, France

15:00 **Label-free IR nanoscopy and tomography of intracellular structure**  
**Joachim Heberle** | Freie Universität Berlin, Germany

15:30 **Looking at GPCR structure, dynamics and interactions with single molecule fluorescence**  
**Emmanuel Margeat** | CBS, Montpellier, France

16:00 **Watching molecular folding and interactions at model membrane interfaces by vibrational sum-frequency generation spectroscopy**  
**Zsuzsanna Heiner** | Humboldt Universität Berlin, Germany

16:30 – 17:00 Coffee, Wine & Cheese

17:00 **Round table | General Assembly**

18:00 **Closing Ceremony – Poster prizes**

20:00 **Montpellier by night**  
Guided tour in the historical center of Montpellier