

Workshop:

Neurophotonic: "Brain Physics. From Physiology to Computing and Complex Systems"

Chairs:

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The main goal - Session

"Neurophotonic" will cover advances in optical technology applicable to study of the brain and their impact on the basic and clinical neuroscience applications with the special focus on the development of breakthrough optical technologies of transcranial photostimulation of the lymphatic system of the brain and his meninges:

- Cerebral blood flow
- Cerebral lymphatics
- Blood-brain barrier

- Brain oncology
- Brain trauma
- Neurodegenerative diseases
- Stroke

Topics

The scientific program of the conference covers, but is not limited to, the following:

- New trends in neurophotonic;
- Sleep and Brain health
- Mathematical methods and modeling of patho- and physiology of cerebral vessels;
- Photoacoustic imaging and in vivo cytometry
- Multiphoton imaging
- Optogenetics
- Raman, NIR, MIR and THz imaging of brain tumor margins
- Nonlinear analysis of electrical activity of brain
- Modeling of photostimulation of lymphatic drainage function of the brain
- Machine learning for the analysis of brain