



ISTITUTO ITALIANO  
DI TECNOLOGIA

PHD Neurosciences, curriculum "Neurosciences and Neurotechnologies, XXXVII cycle

Project title: **Cellular mechanisms underlying sensory information processing**

Group: Dr. T. Fellin

Optical Approaches to Brain Function Laboratory, Istituto Italiano di Tecnologia (IIT)

We invite applications for one PhD position focusing on the application of causal optogenetic approaches to dissect the neural circuits underlying the processing of sensory information. The project will focus on the cellular mechanisms that underlie the encoding and the decoding of sensory information in the rodent somatosensory cortex. State-of-the-art techniques are available for the execution of this project including *in vivo* patch-clamp recordings, two-photon GCaMP imaging, two-photon optogenetics, and behavioral analysis. Candidates must hold a graduate degree in biology, physics, bio-engineering or a related discipline and be highly motivated and creative individuals who want to work in a dynamic, multi-disciplinary research environment. Research activities will be carried out in the Optical Approaches to Brain Function Laboratory supervised by Dr. Fellin at the Istituto Italiano di Tecnologia. For reference to recent work please see: Antonini et al *eLife*, 2020, Vecchia et al. *Cur. Biol.* 2020, Zucca et al. *Cur. Biol.* 2019, Forli et al. *Cell Reports* 2018; Zucca et al. *eLife* 2017; Panzeri et al., *Neuron* 2017; Beltramo et al., *Nat. Neurosci.* 2013.

Applications (full CV and statement of research interest) should be sent by email to Dr. Tommaso Fellin ([tommaso.fellin@iit.it](mailto:tommaso.fellin@iit.it)).

**Deadline for application:** June 2021