Volumetric bioluminescence imaging of cellular dynamics with deep learning based light-field reconstruction

LUIS-FELIPE MORALES-CURIEL

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12:30

Blue Lecture Room

In fluorescence microscopy, an external source of excitation light is required for photon emission and thereby sample visualization. Even though fluorescence imaging has provided a paradigm shift for cell biology and other disciplines, the sample might suffer due to high excitation light intensities, and spurious signals originating from autofluorescence. Bioluminescence imaging, on the contrary, does not need an external source of light for photon emission and visualization, bypassing the effects of autofluorescence, phototoxicity and photobleaching. Here, we present a protocol for imaging the dynamics of high photon starved samples, employing deep learning approaches to achieve non-invasive, high quality, autofluorescence-free imaging.

After the lecture a networking session with pizza will take place at the picnic area, outside ICFO. An opportunity to meet and talk with colleagues in an informal setting.

Participation is open to all ICFOnians.

Participants interested in also attending the networking session should register here

BioTalks series is designed to share new & ongoing research results among Bio-physics research groups at ICFO, acquire knowledge on tools and cutting-edge techniques and create a space to bring together researchers from different groups.

Hosted by: Prof. Dr. Michael Krieg