

Biophysics, Biology and Biophotonics IV: the Crossroads

Saturday 2 February 2019

This conference is no longer accepting submissions.

Late submissions may be considered subject to chair approval. For more information, please contact [Stephanie Kaiser](#).

Important Dates

[SHOW](#) | [HIDE](#)

Abstract Due:
25 July 2018

Author Notification:
1 October 2018

Manuscript Due Date:
11 January 2019

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Call for Papers

B³C Conference addresses application of biophotonics at the forefront of biology, biophysics and physical biology emphasizing areas where optical techniques provide key insights as well as the biological principles of light-tissue interactions and optical diagnostic and therapeutic technologies. Cutting edge biophotonics technologies have emerged as powerful experimental tools of fundamental biology and biophysics. Optical techniques are uniquely suited to study molecular, structural and functional processes in live cells and whole organisms in vivo as well as molecular interactions in vitro. Continuing progress depends on the following three key elements: (i) The development of advanced optical tools to address specific problems of critical importance in biology and biophysics. (ii) Collaboration among life scientists, physical biologists and biophotonics experts. (iii) Studies into the biological principles of light-tissue interactions and fundamental understanding of the underlying biological principles of optical diagnostic and therapeutic technologies. The goal of this Conference is to bring together life scientists, physicists, and optical engineers in order to foster exchange of ideas in all three elements. The Conference welcomes talks from experts in biophotonics as well as life sciences and physical biology.

Papers are solicited on (but not restricted to) the following areas:

- Biological principles of optical diagnostic and therapeutic technologies
- Macromolecular crowding and its implications for molecular processes
- Optics in genomics, epigenomics, and chromatin biology
- Organization and function of higher order chromatin structure addressed by optical tools
- Imaging of nanoscale organization of living cells in biology and medicine
- Imaging, sensing and sequencing single molecules and single cells
- Optical techniques in single molecule enzymology
- Optics and cancer microenvironment, cell migration and metastases
- Optics and biological soft condensed matter physics
- Optical molecular biophysics
- Optical trapping and optical tweezers to study intracellular molecular dynamics
- Cytome, molecular architecture and functionality of the cell system addressed by optical tools
- Cellular biomechanics.