

Adaptive Optics and Wavefront Control for Biological Systems V

Sunday - Monday 3 - 4 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

Wavefront engineering has greatly expanded the capability of optical microscopy and measurements in biological systems. Recent breakthroughs in measuring and controlling optical wavefront have led to many important applications, including deep tissue microscopy with improved imaging quality and depth, optical tweezers with sophisticated shape and momentum distribution, and three-dimensionally patterned optogenetic excitation. This conference will bring together leading experts in a variety of research fields that employ innovative wavefront control technologies for biomedical applications.

Technical papers concerning the following aspects of adaptive optics are appropriate for submission and consideration:

- adaptive optics for microscopy, optical coherence tomography and ophthalmology
- guide-star probes for wavefront measurement and light guiding in biological tissues
- imaging neural connectivity and function in brain tissue
- focusing light through scattering tissues (optimization, transmission matrix)
- channel de-mixing for endoscopy
- wavefront shaping for photoacoustic and acousto-optical imaging
- applications of time-reversal in biological imaging, optical phase conjugation
- mesoscopic effects and their applications to imaging and light delivery (open channels, memory effect, .)
- shaped beams for light sheet and structured illumination microscopy
- coherent optical adaptive techniques
- computed optical imaging techniques
- wavefront shaping devices (deformable mirrors, spatial light modulators, active lenses).