

## EYE BIOMECHANICS

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### MINI-SYMPOSIUM PROPOSAL

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#### 1 MINI-SYMPOSIUM PROPOSAL

The eye must seamlessly integrate several complex systems in order to achieve its proper function – effective capture and transmission of a visual signal to the brain. These subsystems rely on a myriad of scientific disciplines including but not limited to optics, signal analysis, bioimaging, biology, and biomechanics. The mechanical properties and microstructure of ocular tissues play a critical role in providing the appropriate environment to promote proper integration and function of these complex subsystems and thus the eye itself. The complexity of this organ requires the use of computational simulation to understand the role of ocular biomechanics on visual function. This knowledge is also necessary to improve the available tools for diagnosis and treatment of eye disease, as well as to develop novel methods to enhance vision.

This mini-symposium will be focused on bringing experts in ocular biomechanics together to disseminate state of the art tools in computational simulation of the eye. Multi-scale and multi-physics simulations will especially be encouraged in this mini-symposium, as well as representation from a wide variety of ocular diseases and/or clinical needs. While the focus of our mini-symposium will primarily be on state of the art computational simulation of the eye, we will also welcome presentations from experimental ocular research especially as it pertains their use in informing or validating computational models.