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## Adaptive optics in biological imaging: enhancing resolution and fidelity

*Thursday, 16 May 2024 10:40 (20 minutes)*

The use of adaptive optics (AO) in biological imaging has emerged as an important technique for overcoming the inherent optical aberrations present in biological specimens. We will provide an overview of the principles, applications, and recent advancements in AO technology within the realm of biological imaging. We will discuss the implementation of AO in various imaging modalities, including confocal microscopy, two-photon microscopy, and optical coherence tomography, highlighting its capability to enhance image quality and enable high-resolution imaging. Furthermore, we explore the integration of AO with adaptive lenses in imaging techniques such as light-sheet microscopy and super-resolution microscopy.

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**Session Classification:** Session 1. Advanced light control