

**The Fantastical World of Adaptive Optics (The Physics behind the Buzzwords)
Presentation by James W. Beletic**

Adaptive optics is a technology for removing the blurring effects of a propagating medium on the imaging of light. It is best known for its use in ground-based astronomy and defense applications to overcome atmospheric blurring, but is also used in retinal research to overcome the blurring of the cornea and lens of the human eye. Adaptive optics enables ground-based telescopes to achieve higher spatial resolution than achieved by the Hubble Space Telescope, and see individual cells in a living retina.

This talk will give a multimedia presentation of the physics and technology of adaptive optics, in an entertaining and yet very informative and pedagogical way. The science enabled by adaptive optics will be shown as examples.

The presentation will include computer animations and laboratory demonstrations, including fire. (Need to clear the fire demonstration with the CERN facilities department!)