



## CALL FOR PAPERS Special Issue on Adaptive Optics

### Guest Editors:

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For over 40 years, adaptive optics systems and technology have advanced. While the early applications were ground-based infrared astronomy and high-power directed energy, the recent developments in lower cost components and faster signal processing allows adaptive optics to be used in free-space laser communications, optical microscopy, intra-cavity adaptive optics and beam reshaping in lasers, optical coherence tomography, and high resolution retinal imaging. In particular, virtually all ground-based telescopes larger than 8 meters require adaptive optics to take full advantage of the large apertures for imaging extra-solar planets and stellar structures surrounding black holes.

Spinoff technologies such as high speed, high resolution wavefront sensors are used in conjunction with other optics for routine optical testing as well as supporting the advancements in LASIK and other photorefractive surgeries.

For these reasons this special issue will bring together a collection of peer-reviewed papers that describe the current international state of affairs in adaptive optics research and point the way for the next generation of evolutionary developments or revolutionary breakthroughs.

We therefore invite authors that are engaged in research in this area, or who can report about their recent results or applications, to submit papers to this special issue.

### Themes

- Astronomical adaptive optics
- Directed energy programs and results
- Free-space laser communications
- Atmospheric compensation in general
- Adaptive optics in microscopy
- Intra-cavity adaptive optics
- Adaptive beam reshaping
- Optical coherence tomography
- Adaptive optics in retinal imaging and other vision science
- Wavefront sensors
- Deformable mirrors
- Control systems design
- Other applications(including clinical applications of AO)

### Dates

- The closing date for submitting papers is **31 January 2012**.
- The submission of the revised papers after reviews will be the end of April 2012.
- The papers will be published in a special issue of *Journal of Modern Optics* in 2012

All submissions should be made at *Journal of Modern Optics* ScholarOne Manuscripts™ site: <http://mc.manuscriptcentral.com/tmop>

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