

Recent Advances in Optical Turbulence

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Message from the Guest Editors

Dear Colleagues,

Optical turbulence is caused by wind blowing over an aerodynamically rough region of the Earth's surface in the presence of a temperature gradient. Unfortunately, these detrimental effects have far-reaching consequences for astronomical imaging, free-space optical communications, remote sensing, laser radar, and other applications that require the transmission of optical waves through the atmosphere. Therefore, there is a need to study optical turbulence.

This Special Issue will cover a range of topics from the field, including, but not limited to, the following:

- Theoretical and experimental results of optical turbulence;
- Novel models of optical turbulence or refractive index structure parameter C_n^2 ;
- Non-Kolmogorov spectra of optical turbulence;
- Power fluctuations or phase distortions caused by optical turbulence;
- Adaptive optics and other turbulence mitigation techniques;
- Simulation of optical turbulence;
- Optical turbulence's effect on imaging, free-space optical communications, remote sensing, laser radar, positioning, quantum communications, and other applications;
- Underwater turbulence.



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