Computational Optical Imaging and Its Applications

Guest Editors:

Prof. Dr. Xiaopeng Shao
1. School of Optoelectronic Engineering, Xidian University, Xi'an 710071, China
2. Hangzhou Institute of Technology, Xidian University, Hangzhou 311231, China

Dr. Tengfei Wu
Laboratoire Kastler-Brossel, Ecole Normale Supérieure, 75005 Paris, France

Deadline for manuscript submissions:
closed (31 July 2023)

Message from the Guest Editors

Dear Colleagues,

Computational optical imaging is an indirect method to acquire target information which may be hard to access by direct observation. On the basis of geometrical optics, computational imaging gathers more information as prior knowledge (in different cases this could be, for instance, polarization, phase, sparsity, positivity, etc.), and retrieves seemingly unreachable information by using mathematical analysis and specific signal processing algorithms. This Special Issue aims to highlight the latest advances in computational optical imaging, including novel concepts and interesting practical applications.

This Special Issue focuses on (but is not limited to) the following topics:

- Imaging through scattering media;
- Wavefront shaping and transmission matrix;
- Deep imaging inside the tissue;
- Non-line-of-sight imaging;
- Super-resolution imaging;
- Lensless imaging;
- Polarization imaging;
- Wavefront sensing;
- Adaptive optics in microscopy;
- Compressed sensing.

mdpi.com/si/143224

Special Issue