

CALL FOR PAPERS

COMPUTATIONAL IMAGING XVIII

CONFERENCE SPECIAL SESSION — SUBMISSIONS INVITED

Recent Progress in Computational Microscopy

Microscopy is currently experiencing an exciting era of new methodological developments with computation at its core. The recent progress in compressive imaging, numerical physical models, regularization techniques, large-scale optimization methods, and machine learning are leading to a faster, quantitative, and reliable microscopic imaging. The combination of computational methods being developed may be seen as example of a new paradigm of rapid, comprehensive, and information-rich computational microscopy. This session will explore cross-cutting themes in several modalities such as optical, neutron, x-ray, and electron microscopy and will promote transfer of ideas between investigators in these areas.

CONFERENCE HOT TOPICS

Submissions that address computational imaging aspects of:

- Multi-sensor fusion
- Microscopy
- Scientific imaging
- Mobile imaging
- Autonomous sensing and imaging
- Machine learning for reconstruction
- Time-space and high-and imaging dimensional imaging

CONFERENCE TOPICS ONGOING*

Algorithms and methodologies

- Model-based imaging and compressed sensing
- Multiscale image processing and modeling
- Statistical learning and analysis methods

Key problem areas

- Tomography, transmission, and emission
- Microscopy, light, EM, and non-classical
- Optical coherence imaging
- Synthetic aperture radar
- Coded aperture and compressed sensing

Current and future applications

- Consumer imaging and computational photography
- Super-resolution and enhancement
- Medical imaging and image-guided surgery
- Non-destructive evaluation for additive manufacturing

* See conference webpage for detailed listing of subtopics.

ABOUT THE SYMPOSIUM

A week of interconnected imaging science events including:

- Short courses taught by international experts
- 17 conferences—from Autonomous Vehicles to VR to Image Quality
- Opportunities for Students and Young Professionals
- 3 engaging Plenary Talks
- Joint sessions to increase knowledge across areas
- 3D Theater, Demonstration Session, Exhibition, Receptions, and more

CONFERENCE WEBSITE

A complete list of conference topics and details for submission is found on the conference webpage: bit.ly/EI2020_COIMG

SUBMISSION OPTIONS

Presentation + proceedings paper: Submit a 1,000-word structured abstract (template provided). Accepted authors write 4-6 page paper for inclusion in the Open Access conference proceedings.

Presentation-only: Submit a 500-word short abstract. Accepted authors present work, but do not write a proceedings paper.

Journal-first paper: Submit a full, journal-ready paper, for Open Access publication in the selected journal (provides journal citation) and inclusion in the conference proceedings. Authors present their papers at EI. Select either the *Journal of Imaging Science and Technology* (JIST) or *Journal of Perceptual Imaging* (JPI).

SUBMISSION DEADLINES

Early decision: 15 July 2019

JIST- /JPI-first: 15 July 2019

Regular submission: 30 September 2019

FINAL PROCEEDINGS MANUSCRIPT DEADLINE

Typical length: 4-6 pages

- **FastTrack viewing** (available online at EI): 25 November 2019
- **Post-EI viewing:** 10 February 2020

To register or learn more, visit
www.ElectronicImaging.org

