

Workshop II: Mathematical Advances for Multi-Dimensional Microscopy

October 24 - 28, 2022

Scientific Overview

Developing multi-dimensional electron microscopy would have transformative impact in physics, chemistry, materials science, nanoscience and other fields. Advancing the field requires integration of state-of-the-art atomic electron tomography, ptychography, 4D scanning transmission electron microscopy and spectroscopic techniques as well as powerful computational algorithms and mathematical modeling. This workshop will provide the opportunity to present and exchange ideas, share data, and introduce new tools and develop new imaging paradigms needed in a variety of fields.

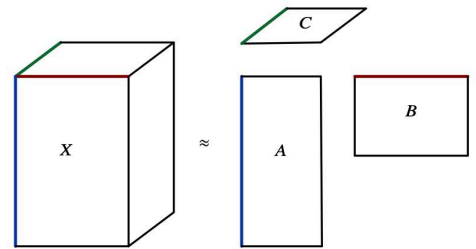
Long Program Schedule

This workshop is part of the long program on "Computational Microscopy"

- Computational Microscopy Opening Day : September 12, 2022
- Computational Microscopy Tutorials : September 13-16, 2022
- Workshop I: Diffractive Imaging with Phase Retrieval : October 10-14, 2022
- **Workshop II: Mathematical Advances for Multi-Dimensional Microscopy : October 24-28, 2022**
- Workshop III: Cryo-Electron Microscopy and Beyond : November 14-18, 2022
- Workshop IV: Multi-Modal Imaging with Deep Learning and Modeling : November 28 - December 2, 2022
- Computational Microscopy Culminating Retreat at Lake Arrowhead : December 11-16, 2022

Participation

Additional information about this workshop including links to register and to apply for funding, can be found on the webpage listed below. Encouraging the careers of women and minority mathematicians and scientists is an important component of IPAM's mission, and we welcome their applications.



Organizers

Peter Ercius (Lawrence Berkeley Laboratory), **Angus Kirkland** (University of Oxford), **Andy Minor** (UC Berkeley), **Deanna Needell** (UCLA), **Paul Voyles** (University of Wisconsin-Madison), **Yimei Zhu** (Brookhaven National Laboratory)

Speakers

Speakers to be announced.



For more information, visit the program webpage:
www.ipam.ucla.edu/CMSWS2