Quantitative Imaging: From Acquisition to Analysis

A lecture and hands-on laboratory course on quantitative optical microscopy & image analysis at Cold Spring Harbor Laboratory

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Lecturers: Nathan Shaner, Anna Jost, Jonas Ries, Kristin Branson, Reto Fiolka

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Applications due January 31, 2020

Combining careful image acquisition with rigorous computational analysis allows extraction of quantitative data from light microscopy images that is far more informative and reproducible than what can be seen by eye. This course will focus on advanced quantitative fluorescence microscopy techniques used for imaging a range of biological specimens, from tissues to cells to single molecules. The course is designed for quantitative cell and molecular biologists, biophysicists and bioengineers.

We provide a thorough treatment of the complete process of quantitative imaging, from the photons emitted from the sample to the extraction of biologically meaningful measurements from digital images. Material is covered in lectures, discussion groups and hands-on quantitative exercises using commercial microscopes and open-source image analysis tools.

meetings.cshl.edu/qi20