

BIOC 062: Image Processing and Analysis

Bioimaging studies are rapidly becoming more quantitative due to enhanced imaging technologies, improved analytical and computational tools, as well as increasingly more stringent scientific scrutiny for accuracy and reproducibility. However, there is a paucity of systematic and introductory surveys easily accessible to biologists when faced with a plethora of technical issues in digital image processing and analyses. The lack of clarity on this issue, compounded by debate over the methods abundant in the niche literature, frequently leads to further confusion for those whose primary expertise is not in digital image processing. Unfortunately, erroneous or misguided application of methods in biological imaging analyses is not uncommon, and this can lead to artificial inflation or suppression of biological significance, often unintentionally. The goal of this hands-on workshop is to survey the fundamentals of how image pixel data can be used to extract biologically meaningful information. Participants will install FIJI on their own laptops and will be given ample opportunity to work on actual images for a hands-on learning experience.

Class Type: Workshop

Program: Biochemistry, Chemistry, Pharmacology, and Toxicology