



Join us for the QCB Mini-Symposia Session 1: MINFLUX

Thursday, December 5
8:30 - 10:00 a.m. Central Time (United States)

In Person

Carl R. Woese Institute for Genomic Biology (IGB), Room 612
Coffee and pastries served

Or by Zoom

Meeting ID: 813 8952 6516 Password: 466632

One click link:

<https://illinois.zoom.us/j/81389526516pwd=Wd5mmVmNidnMoPaFqN9wP2kAbV3yUK.1>

Featured Speaker

Jonas Ries

University of Vienna

Title: MINFLUX for Dynamic Structural Cell Biology

Abstract: MINFLUX can localize single fluorophores with unprecedented precision by targeted detection with a scanned, patterned beam. In combination with switchable fluorophores, this allows for super-resolution imaging with single nanometer resolution, and has been extended to 3D and multiple colors. As MINFLUX uses the photon budget of a single fluorophore very efficiently, it is also a very promising technique for single-fluorophore tracking, improving speed, precision and track length by one order of magnitude compared to camera-based tracking.



Here, I will introduce the principle of MINFLUX and its opportunities and limitations for dynamic cellular imaging. I will then discuss how we used MINFLUX to track the stepping motion of the motor protein kinesin-1 as it walks on microtubules in living cells and will show first results on dual-color co-tracking to directly monitor conformational changes of proteins. I will discuss technical aspects of how we characterize the stability of our setup and will end by presenting a new approach to MINFLUX that we will develop into an open-source MINFLUX microscope.

NOTE: QCB plans to capture photographs and video of this event. Be aware that if you attend, you are consenting to the possibility that your image and likeness may be shared or published by QCB for education, marketing, publicity, and communications purposes.