Tuesday 17 November 2020 – 1100-1200 GMT

Deep and multiplexed 3D single molecule localization microscopy and the path towards it

SDR. CLEMENS SCHNEIDER

Bruker Nano GmbH, FM

Have you ever wondered what is going on in the regions of the sample several micrometers away from the cover slip that cannot be illuminated by your TIRF / HILO SMLM setup? The Bruker Vutara VXL SMLM system can answer this exact question for you. In this workshop, we will present the features and technology required for successful 3D single molecule localization microscopy deep inside the sample.

The second well-known limitation of standard SMLM systems is the limited number of useful dyes, which also limits the number of targets in the sample that can be detected. The Vutara VXL SMLM system has been designed and optimized for multiplexed single molecule localization microscopy. We will present a method for imaging a series of consecutive targets within a sample using single molecule localization microscopy integrated with a software-controlled automated microfluidics system for probe multiplexing. This probe multiplexing enables imaging of a virtually unlimited number of targets within a cell.

At Bruker, we strive to provide an entire super-resolution ecosystem instead of just offering a system that does the measurements. Therefore, the final highlight in this workshop is a prerecorded presentation about sample preparation for SMLM by Rob Hobson, one of our Vutara application specialists.

The workshop session will finish of with an interactive Q&A session.