Room 406AB: Sunday, February 16

12:30 PM – 2:00 PM
HORIBA

Introducing the InverTau Confocal FLIM Platform and Novel Applications Using the FLIMera Lifetime Camera
Fluorescence Lifetime Imaging Microscopy (FLIM) is an advanced imaging technique that measures the decay rate, or "lifetime," of fluorescent molecules in a sample, and provides a temporal dimension for added contrast to fluorescent intensity. This unique approach makes FLIM especially valuable for studying complex biological and chemical environments, as it provides insights that are independent of fluorophore concentration.

With FLIM's booming demand, researchers are in need of faster acquisitions to accurately capture biological dynamics, and more affordable instrumentation so that FLIM can be accessible to more nuanced applications. To address these needs, Horiba has introduced the InverTau confocal laser scanning FLIM platform that provides high-end specifications at low-end pricing along with the FLIMera first-to-market SPAD array camera that is capable of true TCSPC on per pixel basis providing FLIM data at video-rates.

In this presentation we will review the specifications of the new InverTau confocal FLIM system and how it applies to common FLIM applications such as protein-protein interactions (FRET), diffusion studies (FCS), molecular environmental sensitivity (pH, ion concentration, oxygen levels, etc.), and non-invasive label free imaging.

We will also review the FLIMera TCSPC camera and discus novel applications using this first of its kind device including real-time monitoring of blood flow using TD-NIRS, contaminant analysis via light scatter, and imaging opaque substances using time-slicing techniques.

Speaker
Ross Keyashian, North American Fluorescence Imaging Product Manager, HORIBA