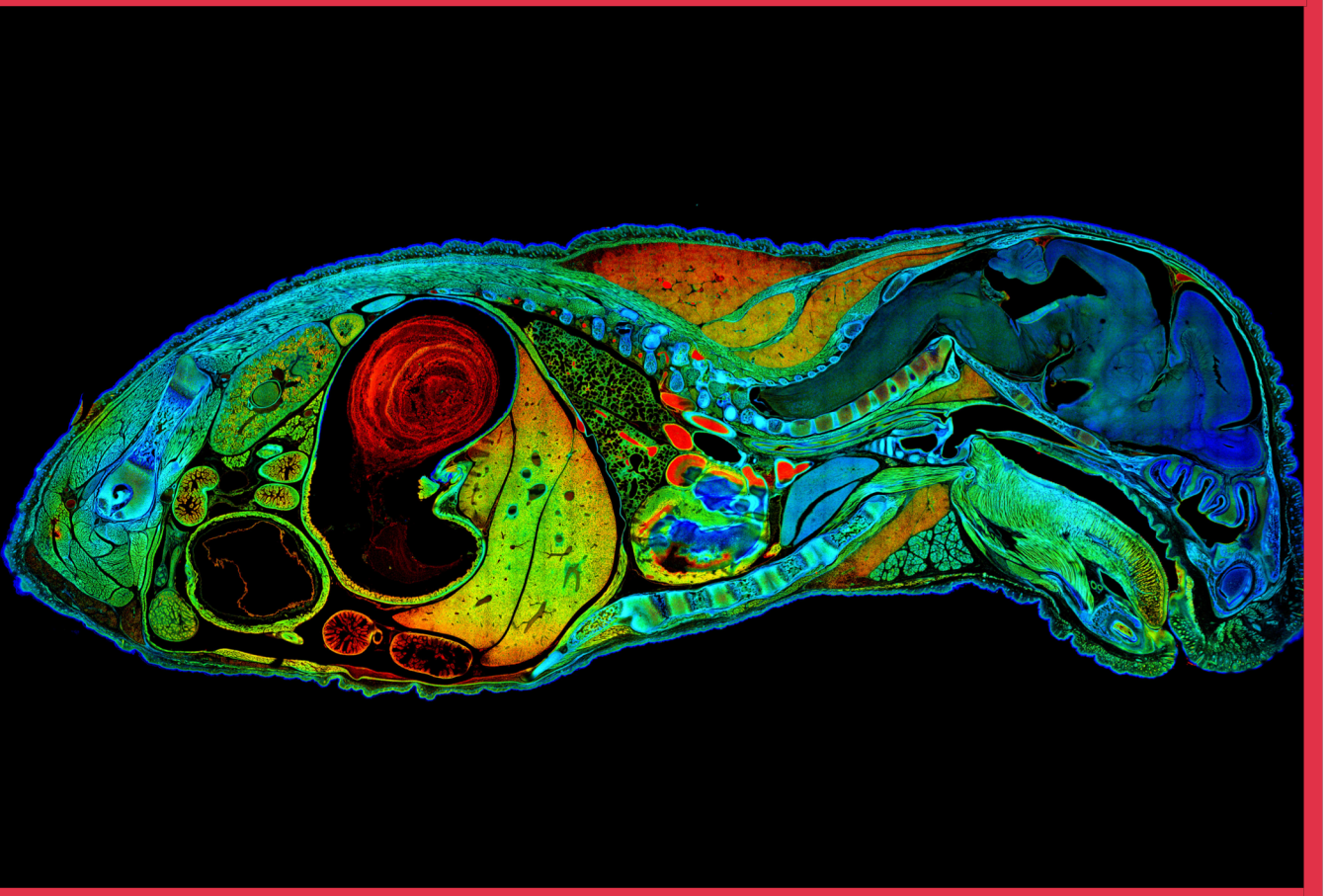
science

YORK UNIVERSITÉ UNIVERSITY

PHAS Colloquium:

Time-resolved fluorescence spectroscopy and imaging: new tools for the old light



DATE: January 22nd, 2019
TIME: 2:30 PM
LOCATION: PSE 317

SPEAKER

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Canada Research Chair in Biophotonics
McMaster University

THERE WILL BE SNACKS

ALL ARE WELCOME

ABSTRACT

Over the past two decades, optical imaging has emerged as an important tool in biomedicine, finding applications from visualization of cellular structures and intracellular processes to minimally invasive diagnosis. In addition to advances in detectors and imaging optics, a number of advanced imaging techniques have been developed to measure spectral and temporal information at each pixel: essentially performing time-laps measurement of spectroscopy and imaging. Among these techniques, fluorescence lifetime imaging (FLIM) provides sources of contrasts in the time-domain as well as information on the microenvironment of the targeted biological targets, both of which include critical information for clinical decision making. Although commercial FLIM systems are now available, a number of obstacles exist: miniaturization is required to make them compatible with existing modalities. Various new developments in spectral and temporal-domain imaging techniques will be introduced and their potential applications in minimally invasive medical diagnosis and high content cancer drug screening will be discussed.

Image Description: FLIM image of a mouse embryo.
Image Credit: Rolf T. Borlinghaus
Poster Designed By: Neil McCall (neiltmcl@my.yorku.ca)