

## Unlock the Potential of your Microscopy Data using Machine Learning in Imaris

A. Paszulewicz<sup>1</sup>, M. Price<sup>1</sup>

<sup>1</sup> Andor, An Oxford Instruments Company.

### Abstract

As biologists we use classification to better understand the living world around us. Classification allows us to simplify the variations we perceive, from the extensive taxonomy of organisms to the various types of endosomes in cells to the grouping of phenotypes in our experiments.

In this workshop you'll learn how to streamline and simplify your image analysis with the machine learning tools that will learn and adjust the segmentation parameters based on what you draw on the screen. This approach is very easy, because you can just tell Imaris what you consider an object of interest and Imaris will do all the necessary steps to extract all other similar regions from the background.

We will also show you how to classify objects into different biological groups using a simple visual interface. In Imaris, you train the classifier by picking example objects you want in each group. Then the software calculates the features to define the groups and classify other objects in the image. Features include: intensity in any channel, dimension, or local density, but also the texture and intensity around the object. As a result you split all your objects into labelled groups, so they can be analysed separately and compared with one another.

For over 30 years Imaris has provided cutting-edge 3D microscopy image analysis solutions for researchers, adding new functionality every year. Learn how the new Imaris can increase your productivity in data analysis and provide you with stunning visualization and measurements ready to publish.

