

Use Imaris AI-Powered Filament Tracing to Understand and Compare your Filamentous Structures

A Paszulewicz¹, M Price¹

¹ Andor, An Oxford Instruments Company.

Abstract

Biology is ripe with examples of filamentous structures: plant roots and blood vessels to neurons and the endoplasmic reticulum. Each has a unique combination of segment lengths & diameters as well as branching characteristics that describe its morphology. Determination of morphological differences in these structures across experimental groups is key to insights into the function of the perturbed pathway or molecule.

In this workshop you'll learn Imaris' unique and easy-to-use AI powered detection tools for filamentous structures including neurons, microglia, blood vessels and filamentous cell structures. We will present the range of automatically generated measurements that can be used for comparing the filamentous trees or networks seen in biological images.

In this workshop we will also present how the new Imaris 10 addresses the common bottlenecks in analysis of filamentous structures, such as: large image size, high background intensity, varying diameter of vessels or neurons, and calculation speed (up to 10x faster). These improvements are supported with an innovative UI tools in a machine learning driven workflow, which guarantee that even novices quickly reach insights into their experiments. In combination with Imaris' other tools users benefit from the most comprehensive image analysis solutions available.

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.

