

Diving into Structure and Dynamics: Learn how to use Imaris' Spatial Statistics in Fixed and Live Samples

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Abstract

The spatial distribution of biological objects in relation to others is often closely related to their function. Modern microscopy techniques can provide spatial resolution to aid in defining the distribution and interaction of cell populations and proteins. In this workshop we will present selected tools to report and analyze:

- 1) attraction to a tissue of interest compared to a random distribution,
- 2) distribution of a signal around an object of interest,
- 3) automated distance measurements and
- 4) overlap between biological objects.

In addition, we will show how Imaris allows investigation of cell dynamics by providing an easy method to synchronize measurements based on "events" independently defined for each object. For example, in a movie of dividing cells where divisions happen at different times you can define the event as when a cell divides and then plot synchronized measurements in time relative to the cell division event. Events can be as well defined as a start of an interaction between cells or a start of the movement.

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