Introduction to Image Analysis with ImageJ/Fiji

21.-24. Oct. 2014

ImageJ/Fiji is an open source, community based image analysis / processing software that can serve as a powerful tool for handling your microscope data. Being freeware, it is available to everyone – provided one can figure out how to use it. We are here to help you with that.

This October the Biooptics facility invites you to an introductory course on Image Analysis using **ImageJ/Fiji**.

What are the topics?

- Theory and application of the most widely used image analysis approaches
- Introduction to the general use of the Fiji software
- Hands-on training using the most important tools in Fiji/ImageJ on real life processing / analysis tasks
- Basic introduction to Macro programming
- Image acquisition with pitfalls and hints

What will you learn?

As an attendee, you will benefit in a number of ways. We will provide you with:

- A better understanding of the parameters of an image
- A broad overview of available tools for processing and analysis
- An understanding which kind of statistical data can be extracted from a given type of image.
- A bundle of do's and don'ts and useful tricks that make working with Fiji easier and allow you to avoid known pitfalls that can compromise your results
- A thorough, practical approach using Fiji, supported by a deeper understanding of imaging techniques.

Who should apply?

We encourage everybody who is doing imaging and wants to gain more insight into using Fiji/ImageJ as a versatile tool for his/her research to join this course.

Previous experience with ImageJ/Fiji is helpful but not needed.

The course is restricted to 12 participants. Please register until **October, 5th 2014** by answering to: **microscopy@imp.ac.at**

Students are expected to attend all lectures. Please ask your PI to confirm his/her agreement once you have been admitted.

The time schedule:

	Tuesday 21.10.	Wednesday 22.10.	Thursday 23.10	Friday 24.10.
Morning	• **Introduction into Image processing** *Theory* • **Fiji basic image handling** *Hands-on*	• **Filtering** *Theory* • **Application of filters in image correction and segmentation** *Theory with hands-on*	• **Counting, measuring, getting numbers** *Hands on*	• **Introduction to macro scripting, batch processing** *Hands on* • **Image displays** *Theory with Hands on* • **Image acquisition and pitfalls** *Theory* • **Discussion**
Afternoon	• **Basic image handling 2 – Image properties and dimensions** *Theory with hands-on*	• **Creating objects - segmentation and binarization** *Hands-on* • **Image registration and color shift correction** *Theory with hands-on*	• **Quantification and colocalization** *Theory with hands-on* • **Object tracking in movies** *Theory with hands-on*	

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