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Montepio

ImageJ
Image Processing and Analysis in Java

icy

ORGANIZATION:
Pedro Quelhas, INEB, Porto | Maria Lázaro, INEB, Porto |
Paula Sampaio, IBMC, Porto | Susana Carrilho, INEB, Porto

b.IMAGE
Bioimaging Centre for Biomaterials and Regenerative Therapies

WORKING WITH IMAGEJ AND ICY: HANDS ON IMAGE ANALYSIS FOR MICROSCOPY

14-16 APRIL 2014 | atmosfera m
Rua Júlio Dinis, nº 158/160
4050-012 Porto, Portugal

www.bimage.ineb.up.pt

Working with ImageJ and ICY: Hands on image analysis for microscopy

This hands-on workshop is directed to users working on biology and biomedicine that require objective analysis of microscopy image data. ImageJ, its distribution Fiji and ICY are widely-used public-domain software for microscopy image analysis. ImageJ/FIJI are based on an open source architecture, which enables functionality extensibility using plugins and Macros. ICY is an open source software that is compatible with ImageJ plugins but which enables other functionalities.

In this context, we will focus on the basic operation of both ImageJ/FIJI and ICY as well as several plugins for the solution of common issues in image analysis such as segmentation, particle analysis, co-localization, deconvolution, spot count and particle tracking. A tutorial on ImageJ/FIJI plugin programming will also take place together with scripting and graphical programming for ICY.

ORGANIZATION:
Pedro Quelhas, INEB, Porto | Maria Lázaro, INEB, Porto | Paula Sampaio, IBMC, Porto | Susana Carrilho, INEB, Porto

Speakers:

Daniel Sage
Head Software developer at Biomedical Imaging Group (BIG) at Ecole Polytechnique Fédérale de Lausanne (EPFL). Working with ImageJ/FIJI for microscopy image analysis and teaching.

Fabrice de Chaumont
Researcher at the quantitative analysis unity at the Pasteur Institute, Paris. Responsible for Icy's kernel architecture, software code and website.

Stephane Dallongeville
Researcher at the quantitative analysis unity at the Pasteur Institute, Paris. Responsible for Icy's kernel architecture and software code.

PROGRAMME

FRIDAY, APRIL 11

Extra Sessions

11:00 - 13:00
Basic ImageJ introduction course on interface interaction and basic image operations given
Pedro Quelhas

Auditorium B, IBMC.INEB

14:30 - 18:00
Image processing and analysis with ImageJ/Fiji
Gabriel Martins

Main Auditorium, IBMC.INEB

MONDAY, APRIL 14

ImageJ Plugin Programming tutorial

Daniel Sage, Ecole Polytechnique Fédérale de Lausanne

Location: Atmosfera m
Rua Júlio Dinis, nº 158/160 | 4050-012 Porto, Portugal

08:45-09:00 Welcome

PLUGIN DESIGN 1

09:00-09:30 ImageJ Java class API and framework

09:30-11:00 Pixelwise operations

11:00-11:30 Coffee break

11:30-13:00 Digital Filters

13:00-14:00 Lunch

PLUGIN DESIGN 2

14:00-15:30 Directional Image Analysis and Wavelets

15:30-16:00 Coffee break

16:00-17:30 Deconvolution

TUESDAY, APRIL 15

Microscopy Image Analysis Workshop

Daniel Sage, Ecole Polytechnique Fédérale de Lausanne

Location: Atmosfera m
Rua Júlio Dinis, nº 158/160 | 4050-012 Porto, Portugal

08:45-09:00 Welcome

FIJI LEVEL 1

09:00-09:30 Bioimage informatics - Introduction to the field

09:30-11:00 Basic image processing and image analysis for microscopy

11:00-11:30 Coffee break

11:30-13:00 Scripting ImageJ/Fiji

13:00-14:00 Lunch

FIJI LEVEL 2

14:00-15:30 Image restoration

15:30-16:00 Coffee break

16:00-17:30 Quantitative image analysis

WEDNESDAY, APRIL 16

Microscopy Image Analysis Workshop

Fabrice de Chaumont and Stephane Dallongeville, Pasteur Institute

Location: Atmosfera m
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ICY LEVEL 1

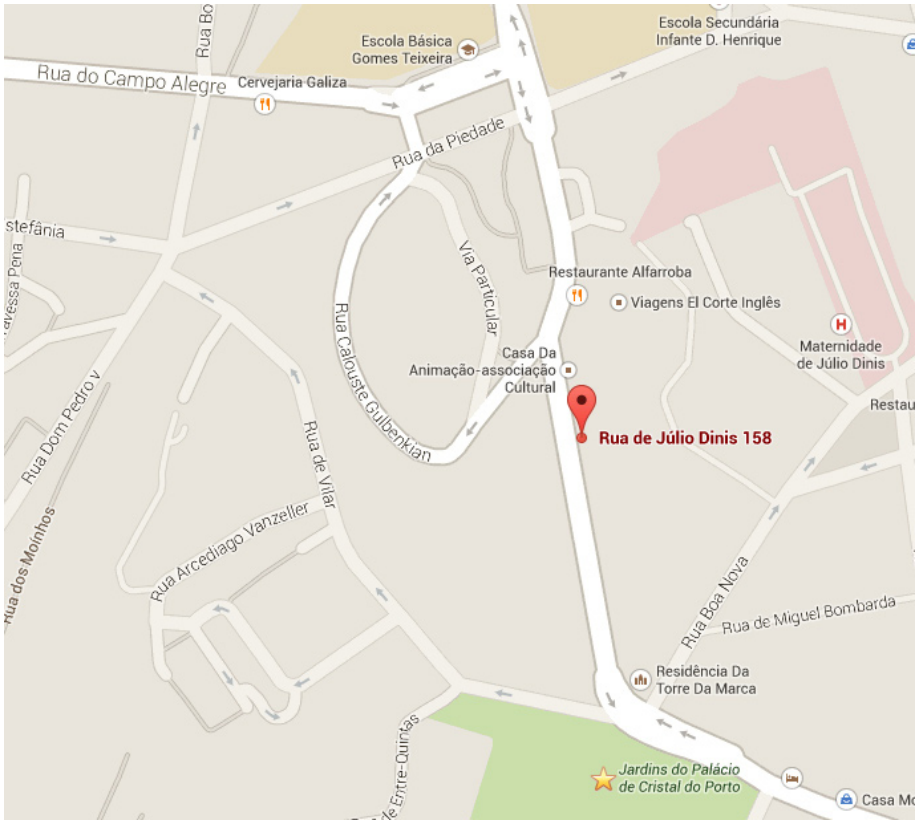
09:00-09:30	ICY - Interface and differences from ImageJ
09:30-11:00	ICY - spot counting
11:00-11:30	Coffee break
11:30-13:00	ICY - tracking
13:00-14:00	Lunch

ICY LEVEL 2

14:00-15:30	ICY - Scripting
15:30-16:00	Coffee break
16:00-17:30	ICY - Graphical programming

Venue location:

Workshop 14-16 APRIL



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