

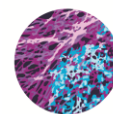
Image Analysis Support for COMPARE

Training, infrastructure and collaborative research

Jeremy Pike, Image Analyst for COMPARE

IN PARTNERSHIP:

The Universities of Birmingham and Nottingham

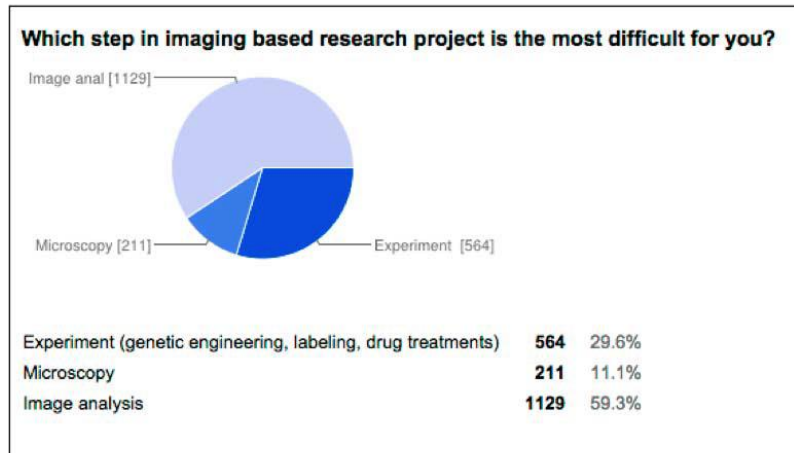


COMPARE
CENTRE OF MEMBRANE PROTEINS AND RECEPTORS

The need for image analysis support



What currently limits your imaging experiments?



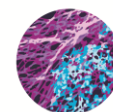
- 71 % technical knowledge and skills for image and data analysis
- 26% access to analysis hardware, software and data storage

My background

- First degree in mathematics and physics
- PhD in PSIBS program at the University of Birmingham
- Image analyst at the Cancer Research UK Cambridge Institute light microscopy facility

My position within COMPARE

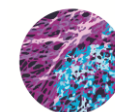
- Image analysis support:
 1. Training
 2. Analysis hardware and software management
 3. Collaborative research projects



Training

What workshops would you be interested in attending?

- 43% Introductory image analysis using ImageJ/FIJI
- 54% Specialised image analysis techniques e.g. segmentation, tracking, deconvolution, colocalization
- 57% Analysis of modality specific data e.g. STORM/PALM, light sheet, FCS, high content screening



Short small group workshops

Purpose	Software	Level	Frequency	Duration
Introduction to image analysis	Fiji/ImageJ	Beginner	Monthly	½ day
Tour of cutting edge tools	Fiji, Icy, Ilastik, KNIME	Intermediate	Bi-annual	1-2 days
Light sheet data analysis	Fiji	Intermediate	Annual	½ day
SMLM data	Fiji, SR-Tesseler	Intermediate	Annual	½ day
High content imaging	CellProfiler	Intermediate	Annual	½ day

- Courses designed for biological researchers with limited time
- Please let us know what training you need!

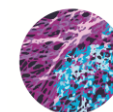


Image analysis with Fiji

- Recommended for all COMPARE researchers
- Second date on 12th July has a few places available
- Course website: <https://jeremypike.github.io/image-analysis-with-fiji/>



Image Analysis with Fiji

Introductory course for biologists

Registration:

14th June 2017, Birmingham, fully booked

12th July 2017, Birmingham

Trainers

Jeremy Pike, Image Analyst for COMPARE

Alessandro Di Maio, Experimental Research Officer for BALM

Summary

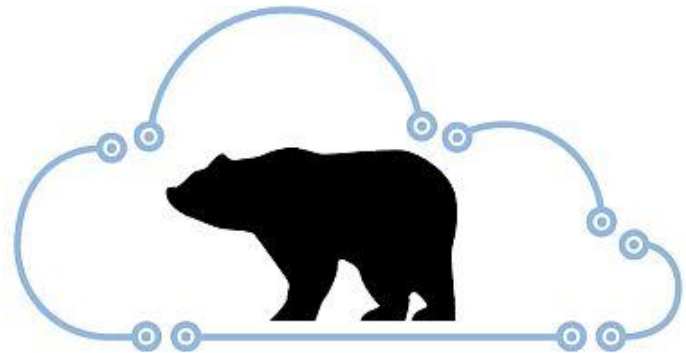
Fiji/ImageJ is a leading open-source image analysis application. This course will briefly cover introductory aspects of image processing and analysis theory, but will focus on practical sessions where participants will gain hands on experience.

Target Audience

- The course is recommended for all researchers who use light microscopy.

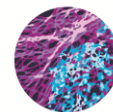
Analysis hardware for Birmingham

- 4 dedicated analysis workstations
 - 128 GB RAM
 - High end NVIDIA graphics cards
 - i7 processor with 4 Cores
- 2 BEAR cloud virtual compute nodes
 - Log on from any computer.
 - Run common applications
 - 128 GB RAM
 - 20 CPU cores
- Large compute node
 - 1TB RAM
 - 20 CPU cores
 - Possible GPU capacity



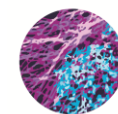
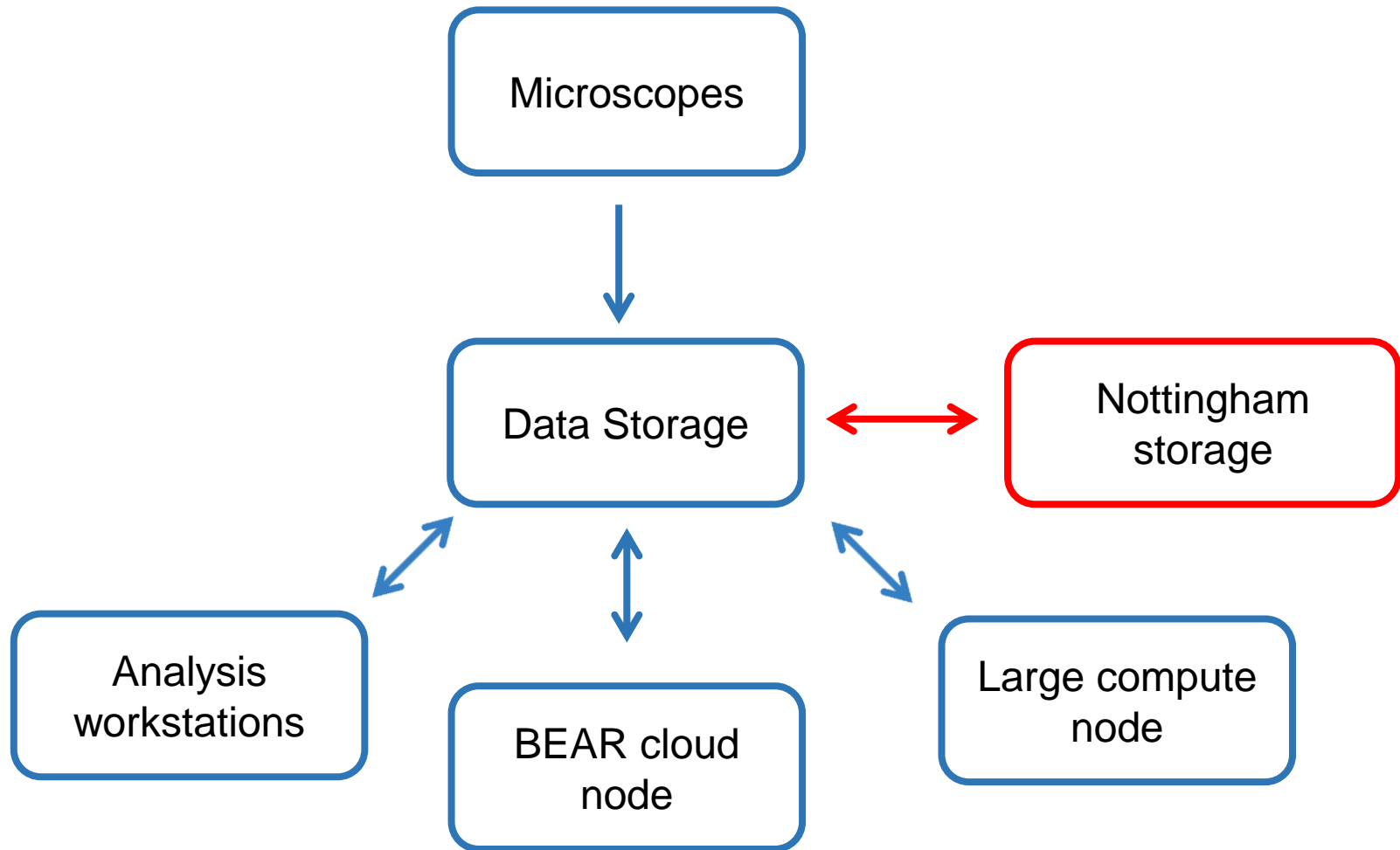
IN PARTNERSHIP:

The Universities of Birmingham and Nottingham



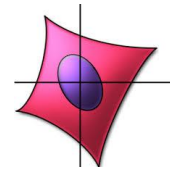
COMPARE
CENTRE OF MEMBRANE PROTEINS AND RECEPTORS

Data handling workflow for Birmingham



Open source software support

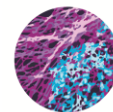
- Open source analysis is reportable and reproducible
- There are a large range of excellent powerful open software applications with cutting edge algorithms built in:



ImageJ2, Fiji, Knime, Ilastik, Icy, CellProfiler, OMERO etc.....

IN PARTNERSHIP:

The Universities of Birmingham and Nottingham



COMPARE
CENTRE OF MEMBRANE PROTEINS AND RECEPTORS

Collaborative projects procedure

1. Contact me (j.a.pike@bham.ac.uk) to arrange a preliminary meeting to discuss potential projects and for image analysis advise:
 - There will be a online enquiry form in the near future.
 - Where possible meetings will be scheduled between 13:00 – 15:00
2. Potential projects will be discussed and approved by a sub-committee

