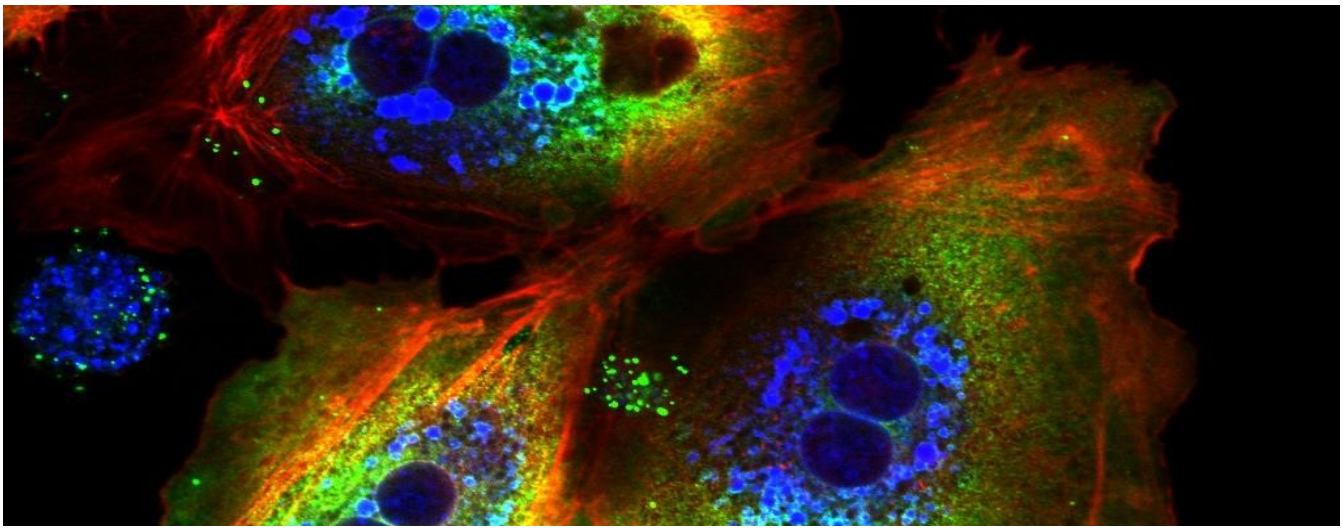


Location: Nikon Europe

Via San Quirico 300 - 50013 Campi Bisenzio (FI)

June 6th/7th

Provided by

Lecturers

Emiliano Descrovi

Marco Oggioni

Cristiano Rumio

Confocal microscopy course

Day 1

9.00 Welcome coffee

9.15 Outline of the course

9.20 Fundamentals of optical imaging:

a) image formation (white light and fluorescent)

b) magnification;

c) resolution;

d) 2D point spread function (PSF)

e) convolution in image formation.

10.15 Practical session: PSF measurement in wide field, on fluorescent beads, role of objective Numerical Aperture, role of detector resolution.

11.00 From wide filed to confocal;

a) extended illumination vs. scanning illumination;

b) light collection: the role of pin-hole.

11.30 Practical session: scanning mechanisms, setting of detector parameters,

2D Confocal PSF.

12.30 Lunch time

14.00 Image acquisition:

a) contrast and resolution in confocal microscopy

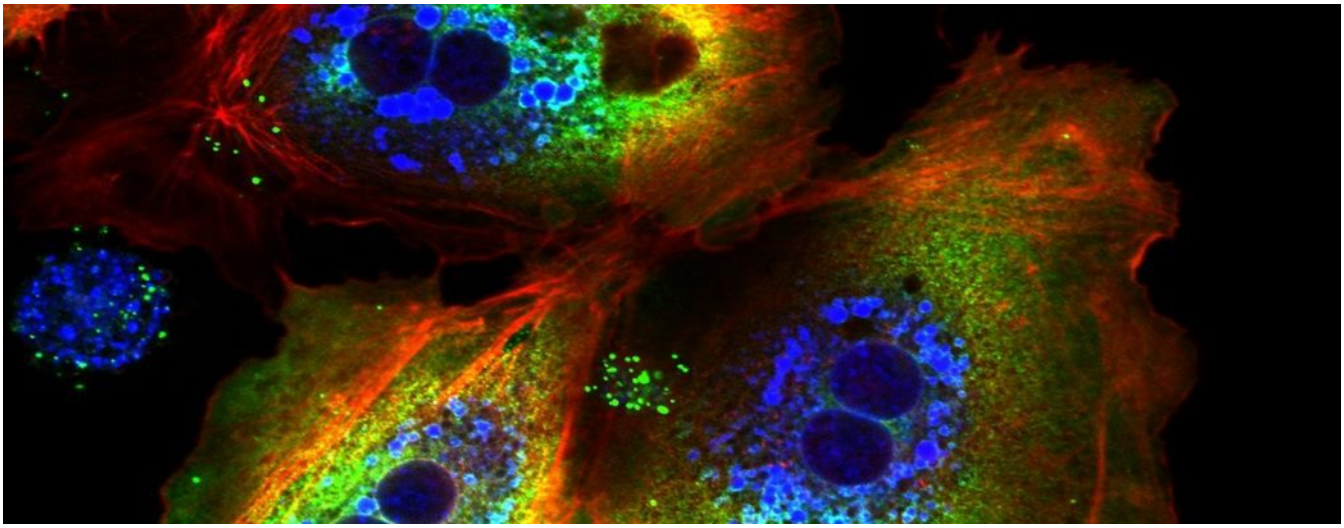
b) optical slicing (z stack)

15.00 Practical session: 3D PSF.

15.30 *Hands on*

Flow chart of confocal image acquisition.

18.00 End of day 1



Confocal microscopy course

Day 2

9.30 *Hands on*

Skills improvements in image acquisition and processing:

a) integration time
b) spatial sampling
c) photo-bleaching issues
d) 3D reconstruction
f) Multiple wavelengths acquisition

13.00 End of day 2

Provided by

You will have the opportunity to build and improve your skills in handling confocal microscopy with the assistance of skilled technical personnel. Bring your sample with you! Particular attention will be dedicated in helping you to find the best imaging solutions for your application.

For practical and hands-on sessions, a confocal microscope Nikon AX will be made available to participant.

For information: cristiano.rumio@nikon.com