

Microscopy Course 2011

Day 1: Monday 14 March - Fundamental Principles of Microscopy

Start:	9.30	Coffee and Registration	
Ilan	10:00	Introduction to the course	
1	Richard	10.15-11.15	General introduction to light microscopy
2	Ian	11.15-12.30	Principles of microscopy and microscope anatomy
		12.30-1.30	Lunch and informal discussions
3	Ian	1.30-2.30	Contrast enhancement (phase contrast and DIC)
4	Ilan	2.30-3.30	Basic Fluorescence Microscopy
		3.30-4.00	Coffee break
5	Richard	4.00-5.00	Basic image analysis
		5.00-6.00	Informal questions (basic microscopy)

Day 2: Tuesday 15 March - Imaging Molecules in Cells

6	Mark	9.00-10.00	Fluorescent dyes and proteins
7	Richard	10.00-11.00	Live cell imaging
		11.00-11.20	Coffee break
8	Jordan	11.20-12.20	Confocal, spinning discs and Multiphotons
		12.30-1.30	Lunch and informal discussions
9	Ilan	1.30-2.30	Advanced widefield microscopy design (and OMX)
10	Ian	2.30-3.30	Detectors for microscopy
		3.30-4.00	Coffee break
11	Ian	4.00-5.00	F* techniques: FRET, FLIM, FCS, FRAP, FLIP
		5.00-6.00	Informal questions

Day 3: Wednesday 16 March - New and emerging Imaging Approaches

12	Howarth	9.00-10.00	Single molecule techniques
13	Ilan	10.00-11.00	Breaking the limits: OMX, STED, SPIM, PALM
		11.00-11.20	Coffee break
14	Ian	11.30-12.30	Building bespoke microscopes; image storage
		12.30-1.30	Lunch and informal discussions
15	Graeme	1.30-2.30	Applied Image analysis and Matlab
ALL		2.30-3.30	Micron and the self-taught practical exercises
		3.30-4.00	Coffee break
ALL		4.00-5.00	Questions and Discussion
		6.00	Drinks & nibbles and informal discussions

Course organisers and lecturers:

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