

## Microscopy Course 2014

### Day 1: Monday 19 May

<b>Start:</b>	<b>9.00</b>	<b>Coffee and Registration</b>
Ilan	9:30	Introduction to the course
1 Richard	9.45-10.45	General introduction to light microscopy
2 Ian	10.45-12.00	Principles of microscopy and microscope anatomy
	<b>12.00-1.00</b>	<b>Lunch and informal discussions</b>
3 Ian	1.00-2.00	Contrast enhancement (phase contrast and DIC)
4 Eva	2.00-3.00	Basic Fluorescence Microscopy and sample prep
	<b>3.00-3.30</b>	<b>Coffee break</b>
5 Richard	3.30-4.30	Basic image analysis
6 Mark	4.30-5.30	Fluorescent dyes and proteins
	<b>5.30-6.00</b>	<b>Informal questions (basic microscopy)</b>

\*\*\*\*\*

### Day 2: Tuesday 20 May

7 Richard	9.00-10.00	Live cell imaging
8 Alan	10.00-11.00	Confocals, spinning disks and multiphotons
	<b>11.00-11.20</b>	<b>Coffee break</b>
9 Ian	11.20-12.20	Advanced widefield microscopy and bespoke
	<b>12.30-1.30</b>	<b>Lunch and informal discussions</b>
10 Matt	1.30-2.30	Cameras for microscopy
11 Ian	2.30-3.30	F* techniques: FRET, FLIM, FRAP, FLIP
	<b>3.30-4.00</b>	<b>Coffee break</b>
12 Chris E.	4.00-5.00	STED, FCS
13 Eva	5.00-5.20	Light-sheet microscopy
	<b>5.20-6.00</b>	<b>Informal questions</b>

\*\*\*\*\*

### Day 3: Wednesday 21 May

14 Chris L.	9.00-10.00	Single molecule techniques
15 Rainer	10.00-11.00	STORM/PALM techniques
	<b>11.00-11.30</b>	<b>Coffee break</b>
16 Ian	11.30-12.30	OMX
	<b>12.30-1.30</b>	<b>Lunch and informal discussions</b>
17 Errin	1.30-2.30	Electron Microscopy
18 Douglas	2.30-3.00	Image management
19 Dominic	3.00-4.00	Applied Image analysis and Matlab
	<b>4.00</b>	<b>Drinks &amp; nibbles and informal discussions</b>

\*\*\*\*\*

### Day 4: Thursday 22 May – Microscope demos and image analysis

9.00-12.00 and 14.00-17.00

DV live: Jupiter-GFP macrophages

Spinning disk live: Jupiter-GFP macrophages

OMX V2 dSTORM: Rainer's samples

OMX V3 SIM: macrophages

Olympus scanning confocal in the demo room: macrophages

Olympus TIRF in SPIM room: macrophages

Olympus basic wide-field in the prep area: bead slide

Image analysis

15 min demos + 5 min walking: 8 sessions in the morning, 8 sessions in the afternoon (5 people per group, 80 people in total)