



## First Irish/UK



### Light sheet fluorescence microscopy workshop

**Venue:** Royal College of Surgeons in Ireland, 123 St Stephen's Green, Dublin 2

**Organisers:** Dr Emmanuel G. Reynaud (UCD), Dr Heiko Dussmann (RCSI), Dr Chris Power (Zeiss)

Light sheet microscopy is an emerging technology that enables long term imaging of large biological specimen with minimal photo damage. It opens new avenues to study cell biological and developmental processes with unprecedented resolution in space and time and facilitates systems biology approaches by quantitative imaging of entire living systems. The life science research community is eager to use light sheet microscopy inspired by the many spectacular proof of principle papers, but is less aware of the technological and computational challenges associated with the light sheet microscopy paradigm.

#### Monday 25<sup>th</sup> of November

Morning (9-12 am): Open to all

**Introduction:** Dr Emmanuel G. Reynaud (UCD), Dr Heiko Dussmann (RCSI)

**Dr Bill Chaudhry**, Newcastle University: “**Introduction to Light Sheet Microscopy**”

**Dr Chris Power**, Carl Zeiss UK: “**Zeiss Light Sheet Z-1**”

**Dr Emmanuel G. Reynaud**, University College Dublin: “**Challenges in Light Sheet Microscopy**”

Lunch-time: 3 quick introductions to the Zeiss Lightsheet Z-1

Afternoon (1pm- 5pm): three groups of 5 persons.

**Session 1:** Sample preparation, Dr Emmanuel G. Reynaud

**Session 2:** Light Sheet Z.1, Dr Chris Power and Dr Heiko Dussmann

**Session 3:** How to build a light sheet microscope, Dr Bill Chaudhry

**Last session:** Data management, Dr Chris Power and Dr Emmanuel G. Reynaud

Evening (5pm- 7pm): Discussion and Q and A

Besides the workshop, there will be demo time slots available during the week after the 25<sup>th</sup> of November, if you are interested please contact Dr Chris Power (via email [chris.power@zeiss.com](mailto:chris.power@zeiss.com) and include a brief description of your potential own sample you want to image).

Send application requests to [microimaging@rcsi.ie](mailto:microimaging@rcsi.ie) with a short description of your research/needs for 3D microscopy.

We will run two additional training sessions depending on numbers and requests

21<sup>st</sup> of November 1.30 pm-5 pm,

Session: Cell Biology and Tissue Engineering (10 persons max.)

**Dr Malte Wachsmuth**, EMBL: "Observing single molecules with a light-sheet microscope",

**Talk free for all.**

2<sup>nd</sup> of December 1.30 pm-5 pm,

Session: Extra class

**Fees:** A small fee (20€) will apply to cover room rental and consumables. A 50% discount will apply for MSI and RMS members.

Further announcements see <http://systemsmedicineireland.ie/category/new>

**Sponsors:**

