UNDERSTANDING THE Physics of Life

EVENT ALERT

EPSRC Pioneering research and skills

BBSRC bioscience for the future

Physics of Life Events

The Future of Optical Techniques in Biology

12 September 2018
University of Nottingham, Trent Building, Senate Chamber

Workshop organisers:

Claire Friel and Amanda Wright (University of Nottingham)

Registration:

Fee: £20 *** Includes lunch and refreshments**

Deadline: 09 September

Student Member the Biochemical Society?

Student members of the society can apply for travel funds to attend the meeting by applying here:

BIOCHEMICAL SOCIETY

This workshop will focus on the use and development of optical techniques beyond traditional microscopy. Bringing together physicists and biologists, linked by the use of cutting edge optical techniques in their research, this meeting provides a forum to discuss future possibilities for optical techniques in measurement and manipulation of biological systems. Emphasis will be on minimally-invasive optical approaches where artificial sample perturbation is kept to a minimum. We intend that the workshop will initiate and develop conversations and collaborations that will both inform instrument and technique development and bring new methods to bear on existing biological problems. The key question will be 'what is the future for optical techniques in biology'?

Speakers:
Kurt Anderson (Francis Crick Institute)
Oliver Castell (Cardiff University)
Maria Dienerowitz (Universitätsklinikum Jena)
Claire Friel (University of Nottingham)
Neil Kad (University of Kent)
Philipp Kukura (Oxford)
Brian Patton (University of Strathclyde)
Erik Schaeffer (University of Tuebingen)

Register for future of optical techniques

SAVE THE DATE!

27-30 November 2018

Physics of Biological Oscillators: New Insights into Non-Equilibrium

Chicheley Hall, Buckinghamshire

Workshop organisers:

Peter McClintock and Aneta Stefanovska (Lancaster University)

Registration is opening soon.

More information on Biological Oscillators worskhop

and Non-Autonomous Systems

Living systems are affected by external influences that are often oscillatory, such as daylight for plants or nutrition in mammals. They can best be understood as open systems operating far from equilibrium (physics) or as nonautonomous dynamical systems (mathematics). All biological oscillations are therefore subject to modulations of frequency and amplitude, and many of them arise in direct response to the external perturbations. Furthermore, one must often take explicit account of the limited timespan over which the oscillations can be observed.

The aim of this interdisciplinary workshop is to move forward by promoting communication between the life scientists who measure time-variable oscillations, the physical scientists and mathematicians trying to understand them, and the engineers seeking to exploit them. There are obvious applications to "smart", semi-automatic, instruments in physiology and medicine, as well as to plants and crop productivity. Optimal ways of implementing the new ideas and knowledge will be explored.

Visit Physics of Life Website