



FILM Microscopy Day 2016

Friday 3 June, 9.45-17.30

SAFB-G34 (Sir Alexander Fleming Building), South Kensington Campus

Programme

Morning Session

09.45-10.00 Welcome & latest FILM news – Tony Magee

10.00-11.00 Introduction to Light microscopy and sample preparation – Steve Rothery (FILM)

11:00-11:10: company technobytes: Essen Biosciences – Life Technologies

11.10-11.30 coffee & tea break

11.30-12.10 “Understanding and handling image data” - David Gaboriau (FILM):

12:10-12:20: company technobytes: Nikon - Zeiss

12.20 -13.15 Microscopy Match-Maker:

FILM users present their research performed in FILM through 3 min snapshot presentations

13.15-14.15 sandwich lunch

Afternoon Session:

**14.15-15.00 “Imaging the mechanisms and functions of immune cells” –
Leo Carlin (Imperial College London)**

**15:00 -15.45 “Deciphering cellular morphodynamics using Bioimage Informatics”
Alexandre Dufour (Institut Pasteur)**

15.45-16.15 coffee & tea break

Plenary Lecture

16.15-17.15 Michelle Peckham (University of Leeds)

“Imaging the Cytoskeleton”

Using live-cell and super-resolution microscopy techniques.

17.15-17.30 Tony Magee: Round-up

17.30-18.30 Refreshments (foyer)

registration:



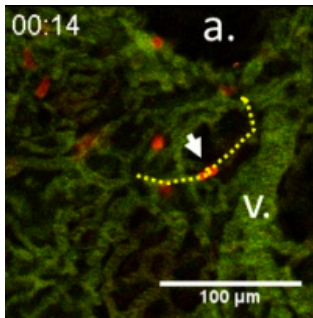
We make it visible.



Speaker information

Dr. Leo Carlin, Imperial College London

“Imaging the mechanisms and functions of immune cells”



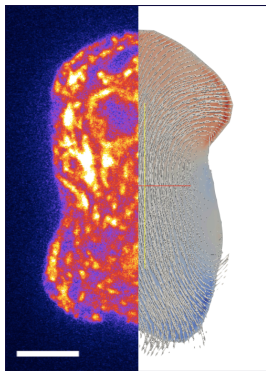
Leo Carlin did his PhD with Dan Davis (Imperial College) on imaging the immunological synapse of natural killer cells. He continued using cutting-edge biophysical and imaging methods during his postdoctoral stays with Tony Ng and Frederic Geissmann (King's College London) to investigate immunological cells' behaviour and their interaction with the surrounding environment.

As a lecturer at Imperial College London, he continues to use intravital microscopy of the lung and complementary techniques (flow cytometry, histology, etc.) to investigate fundamental questions regarding the function of neutrophils in the lung, e.g., how intravascular neutrophils interact with other specific subsets of leukocytes in the lung vasculature, what the pathophysiological consequences of

these interactions are, and whether marginating neutrophils respond differentially to those mobilised from the bone marrow in response to inflammation in terms of recruitment.

Dr. Alexandre Dufour, Institut Pasteur:

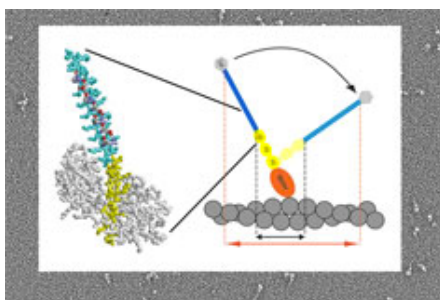
“Deciphering cellular morphodynamics using Bioimage Informatics”



Alexandre Dufour obtained the Ph.D. degree in bioimage informatics in 2007 from Paris Descartes University (France) while holding a Junior Scientist position at the Institut Pasteur of Seoul (South Korea), where he developed methods and software for 3D High-Content Screening. He then joined the Institut Pasteur of Paris (France) as a Post-Doctoral Fellow, and was appointed Permanent Staff Scientist in 2011. His main research interests focus on partial differential equations, deformable models and shape quantification approaches in 3D bioimaging, and their application to the quantification of morphological and dynamic processes at the cellular and multicellular level, notably to unravel the biomechanics underlying cell deformation and motility. He is also involved in open-source software development for reproducible research in the bioimage informatics field.

Prof. Michelle Peckham, University of Leeds:

“Deciphering cellular morphodynamics using Bioimage Informatics”



Our research group works broadly on the cytoskeleton and cytoskeletal molecular motors, myosins and kinesins, to understand the structure, function and how the activity of these proteins are regulated in cells, as well as how these proteins are implicated in and contribute to disease processes. The involvement of many muscle myosins in heart and skeletal muscle disease has led to us developing an interest in muscle development, and the contribution of satellite cells (muscle stem cells) to muscle formation. We use a wide range of tools and approaches to address key questions about molecular motors, that include a wide

range of cell and molecular biology techniques, protein expression and purification, as well as light microscopy, electron microscopy, X-ray crystallography, NMR, AFM and other biophysical approaches, often through collaborating with other research groups at Leeds. We are also developing 'super-resolution' imaging approaches, including PALM/STORM, and iSIM.

Registration: <https://film-microscopy-day2016.eventbrite.co.uk>

