



Image: RUFFLING CELL - A cell expressing a GFP Affimer for actin (green) and mcherry actin (magenta)  
Image Credit: Michelle Peckham (Leeds)

# *Multi-scale mechanics in biology: Current Challenges and Potential Solutions for Healthcare Applications*

15-16 May, Weetwood Hall, Leeds

**Overview:**

Multiscale mechanics of biological systems has emerged as an exciting area of research and provides enormous opportunities for innovative multidisciplinary basic research and technological advancement. This workshop will discuss current experimental and theoretical tools for exploring the mechanical properties of biological soft matter, including proteins, polymers, membranes, fibrous networks, cells and tissues. The possibilities of understanding biological systems which span multiple scales, both spatial and temporal, and the challenges involved in bringing this knowledge together into a single multi scale understanding will also be explored. Finally, example success stories, where knowledge of physics at each length scale has resulted in novel approaches to solving clinical challenges will be given. We aim to bring together physical scientists, biologists, engineers and medical disciplines.

**Organisers:**

**Lorna Dougan** (Leeds), Steve Smye (NIHR/Leeds/Kings College London), Marlene Mengoni (Leeds), Michelle Peckham (Leeds), David Head (Leeds)

**Speakers:**

**Laurent Blanchoin** (Grenoble)

**Gijsje Koenderink** (AMOLF)

**Cornelis Storm** (Eindhoven)

**Robert Ariens** (Leeds)

**Daniel Frankel** (Newcastle)

**Ewa Paluch** (UCL/Cambridge)

**Vasileios Vavourakis** (UCL)

**Ruth Wilcox** (Leeds)

**REGISTER HERE:**

<http://www.physicsoflife.org.uk/multiscale-mechanics-in-biology.html>

**REGISTRATION FEE: £40 \* Includes lunches, refreshments and conference dinner.**

**REGISTRATION DEADLINE: 01 May 2018**