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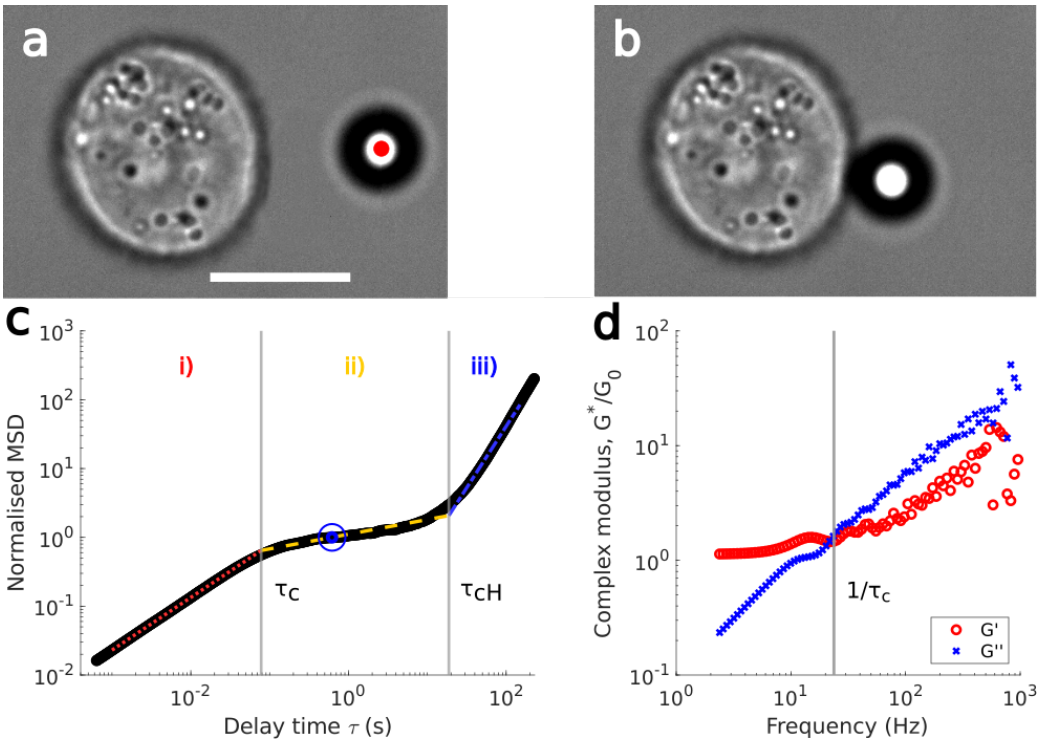
OPTICS & PHOTONICS
UNIVERSITY OF NOTTINGHAM

Optics and Photonics Group
Lunchtime Seminar

"Non-invasive microrheology of living cells"

Will Hardiman



13:30 Wednesday 22 June 2022
B3 Life sciences building
All Welcome

Add to Calendar

http://optics.nottingham.ac.uk/wiki/seminars_2022

“Non-invasive microrheology of living cells”

Will Hardiman

13:30 Wednesday 22 June 2022

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All Welcome

MS Teams link

Microrheology allows for the study of mechanical properties of soft materials on micron length-scales, such as biological cells. The elasticity of individual cells can be used as a biomarker for disease or metastatic potential. Cells regulate their mechanical properties via the cytoskeleton, a scale-free network of proteinaceous filaments such as actin and microtubules. Function of the cytoskeleton is essential for normal cellular processes such as migration and division, as well as adhesion and mechanotransduction. Despite extensive study, it is not well understood how individual filament contribute to the overall properties of the cytoskeleton. I will present a method for probing mechanical properties at a single cell level, and results from experiments using an actin depolymerising drug which demonstrate a significant change in the cellular response to microbead adhesion.