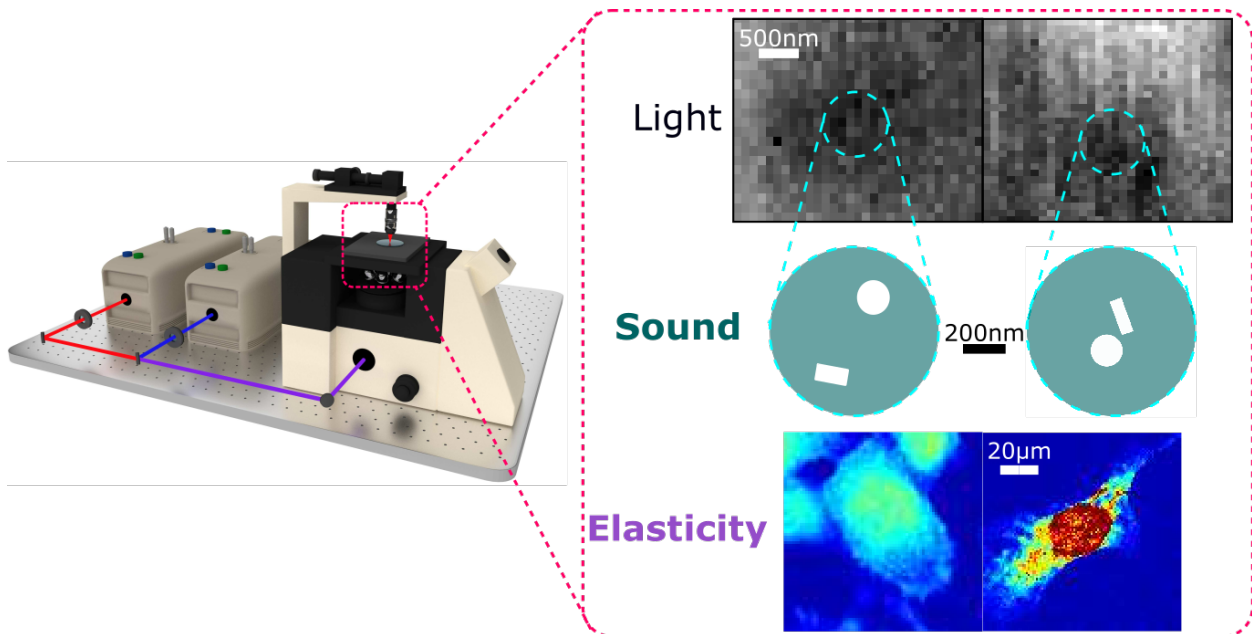


Optics and Photonics Group Lunchtime Seminar

“Nano-ultrasound microscopy – a new approach to super-resolution imaging using sound”

Rafael Fuentes-Dominguez



13:30 Wednesday 29 June 2022
C24 Coates building
All Welcome

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

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MS Teams link

Super-resolution optical microscopy has had a tremendous impact in life sciences over the last two decades for its ability to reveal the insights of biological processes at nanoscale dimensions. These methods usually rely on the optical properties of either fluorophores or nanostructures to provide super-resolution. An alternative to light (photons) is sound (phonons) which offers sub-optical axial resolution as well as enabling the elasticity quantification on biological cells. This is key to understand changes at sub-cellular level due to diseases; for instance, cancer. In this talk, I will present a new scheme of super-resolution imaging by reconstructing nanostructures (including size, shape, position and orientation) using phonons with a precision of 3 nm which will enable novel elasticity measurements in 3D at the nanoscale.