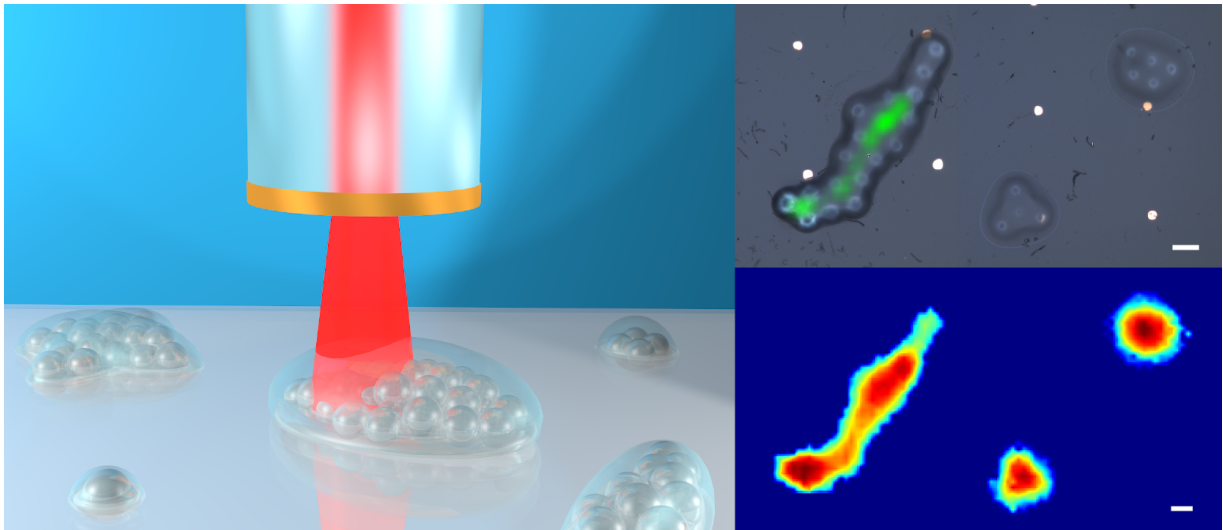




Optics and Photonics Group
Lunchtime Seminar
“Imaging through optical
fibres for hair-thin
endo-microscopes”
Salvatore La Cavera III



13:30 Wednesday 09 March 2022
C24 Coates building
All Welcome

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

Add to Calendar



“Imaging through optical fibres for hair-thin endo-microscopes”

Salvatore La Cavera III
13:30 Wednesday 09 March 2022
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All Welcome
MS Teams link

Optical fibres have revolutionised clinical practice in the form of the optical endoscope, and are now providing the framework for an entirely new endoscopic paradigm: all-optical acoustics. Here we present the development of a novel endoscopic fibre-device that uses coherent acoustic phonons to probe microscopic environments. Phononic imaging provides new benefits to endoscopy, such as label-free contrast, access to super-optical resolution using the phonon wavelength, and sensitivity to the elastic properties of specimens through the effect of Brillouin scattering. We demonstrate 3D imaging with optical lateral resolution, nanometric axial resolution, and compatibility with biological cells towards future in vivo diagnostics.