MQ Photonics Research Centre Webinars

When: Wednesday 13 May 2020
Time: 2 PM
Where: Zoom invitation Join from a PC, Mac, iPad, iPhone or Android device: Please click this URL to start or join: https://macquarie.zoom.us/j/638365482 Join from dial-in phone line: Dial: +61 2 8015 2088 Meeting ID: 638 365 482

Speaker: *Dr. Simone De Camillis*

Title: **SUPER-RESOLUTION MICROSCOPY WITH UPCONVERSION NANOPARTICLES**

Abstract: Lanthanide-based upconversion nanoparticles (UCNPs) have great promise as biomarkers due to their photostability, reduced autofluorescence background, and excitation in the near-infrared spectral region. Thanks to their unique optical properties, UCNPs are also suitable to be imaged at sub-diffraction resolutions down to the single nanoparticle size, paving the way for quantitative nanoscopy. In my talk, I will give an overview of UCNP-based super-resolution techniques developed by our group in the past few years and discuss the current research directions.

Bio: *Simone De Camillis completed his PhD degree in 2017 at Queen's University Belfast, UK, where he studied ultrafast electron dynamics in biomolecules initiated by femto- and atto-second laser pulses. In 2019, he joined Macquarie University as postdoctoral researcher fellow within the ARC Centre of Excellence for Nanoscale Biophotonics, working on super-resolution imaging based on upconversion nanocrystals.*
His current research interests focus on microscopy and photonics technologies.