



MQ Photonics Research Centre Seminar



When: Wednesday 22 April 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 Andrea de Lima Ribeiro*

Title: **A LIDAR-compatible approach to remote sensing of water temperature using Raman spectroscopy**

Abstract: The measurement of depth-resolved water temperature provides essential information for the understanding of the water column dynamics and is limited by the use of in situ techniques. In this talk I will present novel LIDAR-compatible spectroscopic and numerical methods for monitoring subsurface water temperature based on Raman scattering. Accuracies as high as $\pm 0.2^\circ\text{C}$ were achieved when predicting temperature from natural samples analysed in laboratory using different excitation wavelengths (532 nm and 473 nm) associated with multivariate statistics analysis. I will also discuss the relative merits of using each excitation wavelength and methods for spectral correction of natural water samples.

Bio: *Dr de Lima Ribeiro recently graduated from MQ with PhD in Physics, having carried out her research with Prof. Helen Pask on Raman spectroscopy. She is now a postdoctoral researcher in our Department, and a fortunate owner of the rising feline Instagram celebrity.*