

MQ Photonics Research Centre Webinars



MACQUARIE
University



Speaker: Mr Sarath Raman Nair

When: Wednesday 10 June 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

Title: Quantum magnetic sensors using fibre cavity diamond lasers.

Abstract: In this talk I will talk about engineering quantum magnetic sensors using lasers constructed from diamond crystal containing nitrogen-vacancy (NV) centres in fibre cavity platforms. The NV centres can be used either as emitters or as absorbers inside the cavity. I will talk about our experiments towards realising a diamond NV laser magnetometer. Furthermore, I will also talk about our theoretical results on engineering a quantum magnetometer using the combination of diamond Raman laser and NV centres' absorption.

Bio: *Mr. Sarath Raman Nair obtained M.Sc Applied Physics from Indian School of Mines, Dhanbad, India (Now IIT Dhanbad) in 2014. In 2016 he obtained an MRes degree in Physics from Macquarie University for his thesis under the supervision of Dr. Thomas Volz. In 2019, Sarath submitted his PhD thesis on Engineering quantum magnetic sensors using fibre cavity diamond lasers, under the supervision of A/Prof. Thomas Volz.*