

MQ Photonics Research Centre webinars

When: Wednesday 9 December 2020 at 2 PM

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TITLE: LIGHTING UP LIQUIDS: THE BENIGN AND BIZARRE PROPERTIES OF SUPERFLUID HELIUM

Abstract: Superfluid Helium was one of the very first macroscopic quantum mechanical systems to be observed. Indeed, many of the unusual properties of superfluid Helium have been extensively studied; from the characteristic viscousless flow and quantized circulation to the mysterious "roton". Quite remarkably, however, many questions still remain about the microscopic picture of superfluid Helium. In this talk, I will describe the evolution of our research programme; from using superfluid Helium purely as novel mechanical component in an optomechanical system, to investigating the formation and nature of the superfluid itself.

Bio: Glen Harris attained his PhD at the University of Queensland in 2015, under the supervision of Prof. Warwick Bowen. His PhD focussed on a range of topics from feedback control and force/displacement sensing to the fundamental properties of superfluid helium. During his postdoctoral studies the Yale University, Dr. Harris worked on levitated droplets of superfluid Helium (Prof. Jack Harris) and on Brillouin scattering in crystalline materials (Prof. Peter Rakich). Upon returning to the University of Queensland, Dr. Harris has continued to expanded his research into both Brillouin scattering and superfluid Helium.