



MACQUARIE
University

MQ Photonics Research Centre Seminar

Wednesday, 8 December 2021, 2:00 pm (Sydney time)
(Zoom link: <https://macquarie.zoom.us/j/85829287435>)

Astrophotonics - when Astronomy meets Photonics

Associate Professor Sergio Leon-Saval

Sydney Astrophotonic Instrumentation Laboratory, University of Sydney

Abstract:

Astrophotonics lies at the interface of photonics and astronomical instrumentation. Its goal is to manipulate light in new ways to enable new kinds of astronomical science or to undertake traditional astronomy in more effective ways. In other words, its aim is to achieve more, or to achieve more with less. In recent years, we have begun to feed light efficiently from large telescopes into photonic devices via a photonic lantern or/and an AO system. This opens a largely uncharted landscape rich with possibilities. Photonic devices have the additional advantage of mass replication, low power requirements, robustness, small footprint and minimal weight. The power of photonics and gradual improvements in AO at most observatories, together with the development of new photonic devices, strengthens the case for astrophotonics year by year.

Speaker biography:

Sergio Leon-Saval is an Associate Professor at the School of Physics in the University of Sydney where he is now Director of the Sydney Astrophotonics Instrumentation Laboratory (SAIL), and Deputy Director of the Institute of Photonics and Optical Science (IPOS). A/Prof Leon-Saval has more than 16 years of experience in the research area of photonics. He has made breakthrough contributions in the field of specialty optical fibres, astrophotonics and optical instrumentation systems. He is a Senior Member of the Optical Society of America (OSA), and a Council Member of the Australian and New Zealand Optical Society (ANZOS). He was the 2019 recipient of the AOS John Love Award, that recognizes innovations and technical advances in the field of optics.