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Type: **Invited talk**

3D meta-optics: a new platform for wavefront shaping and optical sensing

Thursday 15 December 2022 11:00 (30 minutes)

Ultrathin meta-optics has transformed current photonic design. I will highlight a new 3D meta-optics platform with unleashed height degree of freedom. Design, 3D laser nanoprinting, and applications of various 3D metasurfaces will be discussed.

Bio:

Dr Haoran Ren is an ARC DECRA Fellow at Monash University. He joined Monash University in mid-2022, before that he held a Macquarie University Research Fellowship at Macquarie University, a Humboldt Research Fellowship at LMU Munich, and a postdoc position at RMIT University. His nanophotonics research seeks to uncover the underlying physics in structured light-matter interactions at nanoscale. His research group at Monash aims to develop advanced optical materials and nanotechnology to unleash the full potential of structured light in optical and quantum information processing. Ren is an Associate Investigator for the ARC Centre of Excellence for Transformative Meta-Optical Systems, and a member of the APL Photonics Early Career Editorial Advisory Board.

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