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Type: **Poster Presentation**

Spatial profile shaping for use in optical fibres.

Controlling the spatial profile of light through optical fibres is extremely useful in being able to deliver tailored high-power beams directly to the point of contact, as well as in optical communication systems. In this presentation, we compare various types of optical fibres, ranging from single mode, multi-mode step index and graded core fibres, as well as photonic crystal fibres. We first demonstrate spatial control by dynamically modifying the beam size of the fundamental mode coupled to an optical fibre with the use of a Digital Micro-mirror Device (DMD), which is verified against the expected coupling efficiency. Two methods are presented for generating and tailoring a Flattop profile with the use of a DMD. Ultimately, we plan to propagate the generated Flattop profile through a multimode fibre, of which we will outline the planned process.

Apply to be considered for a student ; award (Yes / No)?

Yes

Level for award;(Hons, MSc, PhD, N/A)?

MSc.

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