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Simulating a deformable mirror with a spatial light modulator

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Deformable Mirrors are highly topical due to their ability to compensate for phase distortions caused by atmospheric turbulence. Since these devices can handle optical powers in the order of kilowatts, they are well suited for high-power applications ranging from high bandwidth optical communication to spatial profile control in additive manufacturing and other applications that involve high thermal aberration corrections. The number of mirror segments and their geometric structures are vital for beam shaping. Here we use a Liquid Crystal on Silicon Spatial Light Modulator to mimic the mechanical design of a deformable mirror and comparatively analyse the effect of mirror segment number and geometry on structured modes.

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

Yes

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

MSc

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