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An Interactive Approach to Optical Tweezer Control

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Poster Presentation P34

AN INTERACTIVE APPROACH TO OPTICAL TWEEZER CONTROL

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We have developed an interactive user-interface that can be used to generate phase holograms for use with spatial light modulators. The program utilizes different hologram design techniques allowing the user to select an appropriate algorithm. The program can be used to generate multiple beams, interference patterns and can be used for beam steering. We therefore see a major application of the program to be within optical tweezers to control the position, number and type of optical traps.