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How to construct a Universal Linear Optical State Generator?
PAVEL LOUGOVSKI, HWANG LEE, JONATHAN DOWLING, Louisiana State University — We consider all optical realization of a universal quantum state generator utilizing projective photon measurements to create an effective non-linearity. Specifically we are interested in finding a set of unitary optical devices required in order to generate a given quantum state for a given input and a projective measurement. We illustrate the formalism for a case of multi-photon path entangled states (N00N states). We conjecture an existence of necessary criteria connecting a size of a N00N state to a number of input modes of a generator.

Pavel Lougovski
Louisiana State University

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