

Abstract Submitted
for the NEF12 Meeting of
The American Physical Society

Entangled-State Synthesis and Quantum Control ROSHAN SHARMA¹, Williams College — Controlling the quantum state of a system is a first step towards many applications in quantum information science. We come up with the fastest algorithm to synthesize entangled states for coupled resonators. We also look at the propagation of a *qudit* under a controlled Hamiltonian. We have compared several optimization techniques such as the simplex search and GRAPE algorithm to come up with the optimal set of controls to evolve an initial state approximately into the desired final state.

¹My work was advised by Prof. Strauch of the Physics Department, Williams College.

Roshan Sharma
Williams College

Date submitted: 11 Oct 2012

Electronic form version 1.4