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Katherine A. Kime* (kimek@unk.edu), Dept. of Mathematics and Statistics, Founders Hall,
University of Nebraska Kearney, Kearney, NE 68849. *Explicit Quantum Controls*.

We compute explicit quantum controls which transfer initial states with certain properties to terminal states with different properties. Increasing the number of intermediate states introduces flexibility but also computational complexity. Discretized stationary states of the Schrodinger equation are inherent in the numerical approximations we use, and we describe their connection to Feynmnan-Hibbs path integrals. (Received September 05, 2012)