

Abstract Submitted  
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**New directions for quantum lattice gases** PETER LOVE, Haverford College — Quantum Lattice Gas Automata are an extension of classical Lattice Gas Automata with the added constraints of linearity and unitary evolution. They were defined in the late 1990s by Meyer, and Boghosian and Taylor. We present a unified version of these models and study them from the point of view of the quantum simulation of problems of quantum dynamics of practical interest including chemical reactive scattering.

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