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Towards a two dimensional lattice gas with dynamical geometry¹ ANNA KLALES, DONATO CIANCI, ZACHARY NEEDELL, PETER LOVE, Haverford College — We report on simulations using a lattice gas automaton in which the lattice is replaced by a triangulation of an arbitrary two-dimensional manifold. If the manifold is 2D Euclidean space the particles move on the Kagome lattice. We report results of simulations of channel flow for the flat space model and of simulations in which the particle state can change the geometry of the triangulation through the Pachner moves.

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