

1145-47-549

Jake Fillman* (fillman@vt.edu), Mathematics (MC0123), 225 Stanger Street, Blacksburg, VA 24061. *Ballistic motion for limit-periodic Schrödinger operators.*

We study Schrödinger operators that are uniformly approximated by periodic operators. We show that if the rate of approximation is sufficiently rapid, then the associated quantum dynamics are ballistic in the sense that the position observable converges (on a linear scale) to an observable having trivial kernel. This may be used to establish a lower bound on the Lieb–Robinson velocity for an XY spin chain on the integers with limit-periodic coefficients. (Received September 09, 2018)