Abstract Submitted
for the MAR16 Meeting of
The American Physical Society

A Functional Renormalization Group Study of Hubbard Models with Correlated Hopping interactions. NAHOM YIRGA, Boston University, ARIANNA MONTORSI, Politecnico di Torino, DAVID CAMPBELL, Boston University — Hubbard Models with correlated hopping interactions have recently been derived from the Floquet Hamiltonian for driven Hubbard models [1]. We consider these models generalized to include an extended Hubbard interaction (V) and both with and without particle-hole symmetry. Using the Functional Renormalization Group method, we derive the phase diagram of this class of models in one and two dimensions. In one dimension we reproduce a spin transition to a bond-ordered phase previously seen in DMRG studies [2]. We extend these results to two dimensions. [1] M. Di Liberto, C. E. Creffield, G. I. Japaridze, C. Morais Smith, Phys. Rev. A 89, 013624 (2014) [2] A.A. Aligia et al., Phys. Rev. Lett. 99, 206401 (2007)

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Date submitted: 07 Jan 2016 Electronic form version 1.4