

Abstract Submitted
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Time Reversal Symmetry Breaking in 2D Lattice Model WEI LIU,
ALEXANDER PUNNOOSE, City College of New York — We use magnetic group
as a tool to classify the possible spontaneous time-reversal symmetry breaking states
in 2D electronic systems. We study the leading order fluctuations of the order pa-
rameter with discrete symmetry. The method is applied to the study of Topological
Mott insulator phase in Graphene and orbital loop currents in CuO planes.

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