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**Chiral Non-Fermi Liquids** SHOUVIK SUR, McMaster University, SUNG-SIK LEE, McMaster University and Perimeter Institute for Theoretical Physics — We propose a renormalization group scheme which is suitable for theories with Fermi surface. Low energy modes near the Fermi surface are viewed as a collection of one dimensional fermions with a continuous flavor labelling the momentum along the Fermi surface. Based on this approach, we study a class of chiral metals where one patch of Fermi surface is coupled with a gapless boson in two dimensions. Depending on the dispersion of the boson, one obtains either non-Fermi liquid or Fermi liquid state. We provide a non-perturbative argument for the stability of the states, and compute the exact critical exponents. Finally, we propose a possible experimental realization of a chiral non-Fermi liquid state.

Shouvik Sur  
McMaster University

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