Collaborative Innovation Center of Quantum Matter & Department of Physic

## Quantum Critical Fluctuations Lea ing to Strange Metals in 2D Metallic Anti-Ferromagnets, Ferromagnets and in the Cuprates

## **Abstract:**

d a d XY model for loop-current order in Cuprates. The spectral function of the quantumcritical fluctuations for this model in 2D for a range of parameters is determined by topological defects - instantons and 2D vortices; it is a separable function of space y. The a gi a fe i- i id

for the fermions follow from coupling to such fluctuations.

and energy.



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Time: 14:30 Dec. 21, 2015

Lecture room (C302), the 3rd floor, New Science Building