

Dr. Sambandamurthy Ganapathy
Professor, University at Buffalo
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11:00 a.m. to 11:50 a.m. in ENW 115

Noise signatures in novel correlated systems

Abstract:

Correlated electron materials exhibit fascinating electronic and magnetic phenomena as a result of the interplay of various degrees of freedom and this interplay gives rise to an array of potential applications from Mott-FET to magnetic storage. Electrical transport and conductivity fluctuation measurements in pure, single crystalline materials and nanoscale devices help us understand the microscopic charge transport mechanisms within competing ground states as the phase diagram of these materials are explored. In this talk, experimental results from electrical transport and conductivity noise measurements across metal-insulator, Mott and Neel transitions in a series of novel correlated materials will be presented.