
===== 物理学教室 =====
===== 物性コロキウム ご案内 =====

日時： 2019 年 5 月 16 日 (木) 16:30 - 18:00

場所： 理学合同 B 棟 745 号室

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題目： Current noise of a chargeless Fermi liquid

概要： We construct a Fermi liquid theory to describe transport in a superconductor-quantum dot-normal metal junction close to the singlet-doublet (parity changing) transition of the dot. Though quasiparticles do not have a definite charge in this chargeless Fermi liquid, in case of particle-hole symmetry, a mapping to the Anderson model unveils a hidden $U(1)$ symmetry and a corresponding pseudo-charge. In contrast to other correlated Fermi-liquids, the back scattering noise reveals an effective charge equal to the charge of Cooper pairs, $e^*=2e$. In addition, we find a strong suppression of noise when the linear conductance is unitary, even for its non-linear part.

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