Abstract Submitted
for the MAR08 Meeting of
The American Physical Society

Universality and the thermal dependence of the conductance of nanodevices[1] LUIZ N. OLIVEIRA, Univ. Sao Paulo, ANTONIO C. SERIDONIO, Univ. Brasilia, MAKOTO YOSHIDA, Univ. Estadual Paulista — The conductance of a quantum wire side-coupled to a quantum dot will be discussed. In this device, plots of the conductance G vs. the gate voltage V_g applied to the dot display Fano antiresonances due to the interference between the current traversing the wire and the flux of electrons that hop to the dot to bypass the adjacent section of the wire; at fixed V_g's, the interference accounts for a variety of thermal dependences $G(T)$. Analytical renormalization-group arguments will be presented that map $G(T)$ to the universal curve $g(T/T_K)$ for the conductance of the spin-degenerate Anderson impurity Hamiltonian, with temperatures normalized by the Kondo temperature T_K. This linear, universal mapping will be shown to (i) generate curves in excellent agreement with the measurements of Sato et al. [Phys. Rev. Lett. **95**, 066801 (2005)] and justify those authors' phenomenological description of their data; (ii) fit novel numerical renormalization-group data for the conductance of the side-coupled device; and (iii) link $G(T)$ to the conductance of the single-electron transistor.

[1]Work supported by the CNPq, FAPESP and IBEM (Brazil).

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Date submitted: 27 Nov 2007 Electronic form version 1.4