



SACRAMENTO STATE

Department of Physics & Astronomy Spring 2007

# *Physics Colloquium Series*

## *"Phase-locking and transients -- macroscopic quantum behavior in Josephson systems"*

*For tunneling between two superconductor, Josephson predicted both a current flowing at zero voltage and coherent oscillations at non-zero voltage. The same classical analysis can address several experimental observations of anomalous switching behavior from the zero-voltage Josephson state due to microwave perturbations. For example, Rabi oscillations, Ramsey fringes, and spin-echo resonances are natural response types in the classical system. Extension of the analysis may provide guidance for the investigation of devices for anticipated use in quantum information processing.*

## **Niels Grønbech-Jensen**

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University of California, Davis*

**Thursday, April 19, 2007**

**4:10-5:20 PM MND 1015**

**Open & Free to all Students, Faculty & Public**