



SACRAMENTO STATE

Department of Physics & Astronomy Spring 2008

# *Physics Colloquium Series*

## *"Time Symmetry vs. Quantum Mechanics"*

*Our universe has several "arrows of time" that distinguish the past from the future, despite the fact that physical laws are deeply time-symmetric. All but one of these "arrows" have a common explanation, resulting from the initial boundary conditions on the universe (i.e. the Big Bang). The one "arrow" that cannot be explained in this manner is the treatment of time in quantum mechanics (QM). I will explain some of the time-asymmetric concepts inherent to QM, and then summarize my recent efforts to refashion QM without this asymmetry ([arxiv.org/abs/0706.4075](http://arxiv.org/abs/0706.4075)). It appears that such a time-symmetric perspective might help explain many open foundational questions.*

**Ken Wharton**

**San Jose State University**

**Thursday, May 1, 2008**

**\*4:20-5:30 PM MND 1015**

*\*Note new times this semester*

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