

# CU Physics Department Colloquium

Monday, April 12, 2010 4:10 PM 428 Pupin Hall

## Physics With Two Time Dimensions

We explore the properties of physical theories in space-times with two time dimensions. We show that the common arguments used to rule such theories out do not apply if the dynamics associated with the additional time dimension is thermal or chaotic and does not permit long-lived time-like excitations. We discuss several possible realizations of such theories, including holographic representations and the possibility that quantum dynamics emerges as a consequence of a second time dimension.

**Berndt Mueller, Duke University**

**Hosted by Miklos Gyulassy**

