

**TUFTS UNIVERSITY**  
**Physics and Astronomy Colloquium**

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**“A Digital Zoetrope and Early  
Computer Generated Films for  
Physics Education”**

Computer models of physical phenomena can provide a powerful means for transforming spatial and temporal scales that are remote from those that characterize our built-in perceptual hardware. Animated displays based on such models can help to build students' intuitions about phenomena that are traditionally encountered only through formal mathematical machinery. In the 1960's and 70's the speaker and his colleagues at MIT made a series of short computer generated films designed to build students' (and their own) intuition about phenomena on scales remote from human experience. This talk will discuss and show a series of such films displaying one-dimensional quantum mechanical scattering events from a variety of potentials in configuration space and momentum space as well as films showing electric fields from accelerating and oscillating charges at velocities comparable to the velocity of light.

*3:00 pm*

*Friday, February 17, 2012*

*Robinson 253*

*Medford Campus*

*Refreshments served at 2:30 in The Knipp Library, Room 251*