

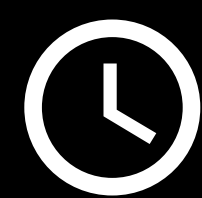


TEXAS TECH UNIVERSITY
Department of Physics & Astronomy™

THE BUCY LECTURE SERIES

TONY HEINZ

STANFORD UNIVERSITY



TIME

7:30 PM



WEDNESDAY

APRIL 19



LOCATION

SCIENCE BUILDING LECTURE ROOM 7



CAPTURING THE MOTION OF ELECTRONS AND NUCLEI IN MATERIALS IN REAL-TIME

The underlying structure of materials exists on the length scale of a billionth of a meter, corresponding to the size of an atom. Electrons and nuclei move very rapidly over the corresponding distances and can respond almost instantaneously when excited by light. In this talk, we describe how we can still freeze such motion. We do so by accessing times down to a millionth of a billionth of a second. We will also, explain how lasers have provided this remarkable measurement capability and illustrate how this stop-action approach can be exploited to obtain unique information about the properties and responses of materials.