

# **UIC**

## Department of Physics Alumni Colloquium

*“From the Detection of Muons to the Detection of Brain Aneurysms”*



**Dr. Timothy J. Carroll**

*Northwestern University*

The understanding of physics has widespread applicability in a number of scientific and commercial endeavors. This gives men and women with a strong background in physics skills that can easily be translated beyond traditional careers in physics. Healthcare in the US accounts for roughly 18% of our economy, with 98% of the population within 3 hours of a hospital. The practice of medicine is dynamic and continuously improving which provides a highly significant area of research and development with great potential for scientific advances. Currently one of the most prominent areas of medicine is the early detections and staging of the progression of disease. We will discuss the role in which physics “detectors” are used to manage disease within a major metropolitan research hospital. This presentation will begin with a general overview of a particular imaging modality (Magnetic Resonance Imaging) and new developments that are intended to improve the outcome of patients with neurovascular disease, stroke and cancer as representative case studies. We hope to show how physics training can be translated into the medical arena.

**Wednesday, April 15th, 3:00 pm**  
**UIC Forum, Room E**

*Refreshments will be served at 2:30 pm outside Room E*

*UIC Forum is located at the SE corner of Halsted/Roosevelt*