

University of Wisconsin-Milwaukee

**Dept. of Physics**  
**COLLOQUIUM**

*MRI-Guided Adaptive Radiation  
Therapy: Improving Precision  
in Cancer Therapy*

**Dr. Chris Williams**  
**Brigham & Women's Hospital (Harvard)**

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**Friday, 8 November 2019**  
**3:30 PM**

**Lapham Hall – Room 160**

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Radiation therapy treatments have traditionally used x-ray imaging to ensure that a patient is accurately positioned before treating them with a beam of ionizing radiation. In the past several years, new treatment machines have been developed that combine magnetic resonance imaging (MRI) systems with linear accelerators, enabling MRI-guidance before and during treatment delivery. These devices have the potential to improve our ability to visualize and treat soft-tissue tumors as well as to compensate for motion and changes in a patient's anatomy.

This talk will discuss the technical aspects and clinical rationale of these machines as well as early results and the role of medical physicists in implementing an MRI-guided radiotherapy program.

