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## WEEKLY CALENDAR

November 15, 2010

### Departmental Colloquium

Wednesday, 3:40 PM, November 17, 2010  
109 Nicholson Hall

#### "Second Cancer After Proton and Photon Radiotherapies"

*Wayne Newhouse*  
*M. D. Anderson Cancer Center*

*Host: Kenneth Hogstrom*

• Refreshments served at 3:15 PM in 232 (Library) Nicholson Hall •

Long-term survival rates for patients with cancer are large and increasing. In survivors who received radiotherapy, the prevalence of radiogenic late effects is also large and increasing, with the potential to become a public health issue of considerable proportion. A multitude of late effects associated with radiation exposure include the development of second cancers, cardiac toxicity, cognitive deficits, and musculoskeletal growth abnormalities in children. In modern radiotherapy, much effort is devoted to developing personalized treatments that control the tumor while minimizing acute toxicities to surrounding healthy tissues; comparatively less attention is paid to minimizing late effects. However, in recent years, much progress has been made toward quantifying the radiation exposures and the associated risks of late effects from modern external beam radiation radiotherapies. The objectives of this lecture are to provide an introduction to radiotherapy-induced late effects, including the governing biologic and technical factors, to discuss techniques to minimize radiation exposures and risks, and to speculate on future developments that will enable personalized, risk-optimized radiation treatments.

### Departmental Colloquium

Thursday, 3:40 PM, November 18, 2010  
109 Nicholson Hall

#### "Extra dimensions, strings and black holes at the LHC"

*Marco Cavaglia*  
*University of Mississippi*

*Host: Jorge Pullin*

• Refreshments served at 3:15 PM in 232 (Library) Nicholson Hall •

With the Large Hadron Collider finally up and running, it is now time to hunt for large extra dimensions in particle colliders. In this talk, I will present an overview of the predictions for two possible exotic scenarios at the LHC: Production of string resonances and micro black holes. <http://www.phy.olemiss.edu/~cavaglia/>

#### Publications:

"Magnetospheres of black hole systems in force-free plasma," Carlos Palenzuela, Travis Garrett, Luis Lehner, and Steven L. Liebling, Physical Review D 82, 044045 (2010).