

## ***Magnetization and magnetic entropy dynamics under ultrafast laser excitation***

Dr. Serban Smadici  
Department of Physics  
University of Louisville

All-Optical Switching (AOS) and Ultrafast Demagnetization (UDM) are two responses of a magnetic material to an intense ultrafast laser pulse. A model of AOS, applying demagnetizing fields from the non-uniform magnetization induced by laser heating, works well for very thin metallic samples grown on thermally insulating substrates. The large temperature excursion of the area under the laser pulse and its fast modulation were then used to measure the magnetic entropy dynamics in UDM.

Short Bio:

PhD Columbia University 2005, post-docs at BNL and UIUC, at UofL since 2013.