

Daniel Salvat



Graduate Institution: Indiana University Bloomington

Graduate Discipline: Experimental Nuclear Physics

Hometown: Las Cruces, NM

Relevant SC Research: Nuclear Physics

Research Interest:

My current research lies in neutron physics. My current research projects are the development of new Ultra-Cold Neutron (UCN) detectors, the study of UCN production in cryogenic solids, neutron transport simulations, and the development of a magnetic neutron trap at the Los Alamos Neutron Science Center (LANSCE) for a measurement of the neutron beta-decay lifetime.

My additional interests include next generation probes of precision electroweak and short range fifth force experiments. I am also interested in new concepts for probing baryon/lepton number violating processes, such as neutron oscillation and Majorana neutrino experiments.

About Me:

I have completed my coursework and thesis proposal at Indiana as of the end of the 2011—2012 school year. This summer I am working with colleagues at IU and Los Alamos to construct the neutron lifetime experiment. In addition, summer 2012 I will attend the Lindau meeting of Nobel laureates, and IU's Center for Spacetime Symmetries summer school. In the fall of 2012 I will move to Los Alamos to install the neutron lifetime experiment at LANSCE.

This summer I am running a weekly informal experimental physics discussion group with my peers at the Center for Exploration of Energy and Matter at IU, discussing specific problems and new solutions in experimental physics.

I plan to continue experimental research in basic physics. In my graduate studies, I plan to develop a broad scope of theoretical knowledge and experimental techniques in order to devise novel experiments to probe the standard model and physics beyond it.

Aside from research, I enjoy playing guitar, audio recording, film, and cooking with my wife.



U.S. DEPARTMENT OF
ENERGY

Office of
Science