LSU College of Science

LSU Department of Physics & Astronomy

Weekly Calendar & News

February 2-5, 2018

Departmental Colloquium

Coherent Elastic Neutrino-Nucleus Scattering (CEvNS): Doing Big Physics with Small Neutrino Detectors

Diane M. Markoff
North Carolina Central University (NCCU) and
Triangle Universities Nuclear Laboratory (TUNL)

Host: Jeff Blackmon

3:30 PM Thursday, February 8 at 119 Nicholson Hall
• Refreshments served at 3:10 PM in 232 (Library) Nicholson Hall •

While typical neutrino detectors are quite large and far from their natural or human-made source, there is a branch of neutrino experiments that tends to be smaller in size and located close to a constructed source. Experiments measuring the coherent neutrino-nucleus scattering interaction take advantage of high-flux reactor, beam or spallation sources and involve finding an unobtrusive space to place the neutrino detector. Although predicted over 40 years ago, this interaction was unambiguously detected for the first time in 2017 by the COHERENT collaboration with the "world's smallest neutrino detector" at the Spallation Neutron Source at the Oak Ridge National Laboratory. This talk will initially provide an historic overview of coherent neutrino scattering, the physics reach of this interaction (including supernova dynamics, dark matter experiments, and 'non-standard' interactions) and a brief review of current international activities. The presentation will then focus on the initial COHERENT collaboration results from a CsI detector and relevant background measurements. The talk will conclude with a description of the COHERENT collaboration's current configuration and future plans for a suite of detectors with various materials for neutrino scattering measurements.

LSU Physics & Astronomy in the News

- LSU physics professor collaborates globally, receives award from Chinese President (LSU Reveille)
- Alumna Ashley Pagnotta "Watching Exploding Stars for Thousands of Years" (Three Body Problems)
- From Microscopic to Telescopic Views, Here are LSU Scientists' New Year's Resolutions (Featuring Jorge Pullin)
- Meet the AAS Keynote Speaker: Gabriela González (Astrobites)

Events

- What I did with my Physics Degree by Leslie Austin, 2000 LSU Physics Alumna, 2004 LSU Paul M. Hebert Law Center. (Flyer is attached)
  - When: Wednesday, February 7, 5:30pm
  - Where: Room 119 Nicholson Hall
  - Free pizza will be provided

Announcements

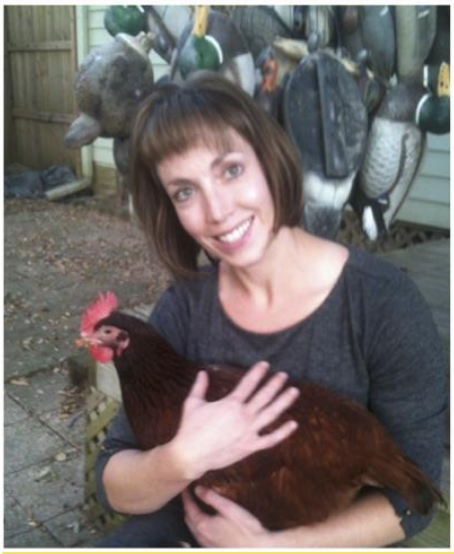
Students Mardi Gras Holiday

begins on Monday Feb. 12 at 7:30 a.m. Classes resume on Wednesday, Feb. 14 at 12:30 p.m.

Campus closed on Tuesday, Feb.13

What I Did with My Physics Degree

LSU alumna Leslie Austin shares her experience from physics to Chief Operating Officer



Wednesday
Feb. 7
5:30 p.m.
Room 119
Nicholson Hall
FREE PIZZA
will be provided!

Leslie Austin

B.S., Physics, 2000, LSU

Juris Doctor/Bachelor of Civil Law, 2004, LSU Paul M. Hebert Law Center

After graduation from the LSU Law Center, Leslie began a career in human resources (HR) with a focus on labor and employment law compliance. She has been at her current job, with HR Solutions, for almost 10 years, starting off as a benefits and HR manager and eventually rising to her current role as Chief Operating Officer.
While pursuing a career in HR, she received her Professional in Human Resources (PHR) designation in 2007, her Global Professional in Human Resources (GPHR) in 2010, and the Society for Human Resource Management, Senior Certified Professional (SHRM-SCP) designation in 2015.

While at LSU, Leslie Mock Austin was very active in many groups:

- Society of Physics Students
- LSU Cosmic Ray Astrophysics Group Student Team
- Awarded the Outstanding Student Worker of the Year in Physics & Astronomy
- LSU Research Associate upon graduation
- Traveled with the Advanced Thin Ionization Calorimeter (ATIC) project for its maiden launch in Antarctica

Most recently, Leslie is a graduate of the Baton Rouge Leadership Program class of 2017 and was featured in the Baton Rouge Business Report executive spotlight series for November 2017. When she is not focused on continuing education and career, Leslie spends her time volunteering for local non-profits, hanging out with her backyard chickens and rock climbing!

LSU | College of Science
Department of Physics & Astronomy