



## **Department of Physics & Astronomy**

Weekly Calendar & News February 27- March 4, 2017 Departmental Colloquium

<u>A View with AGN Population Studies of the Evolution of Supermassive Black Holes</u>

Jack Singal University of Richmond Host: Ravi Rau 3:30 PM Thursday, March 2, 2017 119 Nicholson Hall

• Refreshments served at 3:10 PM in room 232 (Library) Nicholson Hall •

In the centers of active galaxies (AGN) the interaction of infalling matter with supermassive black holes give rises to enormous jets of particles and radiation which shine across space and time as the most luminous sustained objects in the Universe. Different processes occurring in distinct regions near the black hole result in output in different wavebands of light, including radio, visible, infrared, x-ray, and gamma-ray. Current and upcoming large-scale surveys offer the chance to systematically analyze the evolution of AGN output over the history of the Universe in these wavebands, and thus build a more comprehensive picture of what has been happening with supermassive black holes and their environments. This colloquium will discuss some recent progress in this area, including statistical techniques to determine these evolutions given the complicated biases and truncations in multiwavelength astronomical survey data, and the implications for the evolution of AGN and their supermassive black hole engines over billions of years.

### Publications

 "Primordial tensor modes of the early Universe" by Florencia Martínez and Javier Olmedo. <u>https://arxiv.org/abs/1605.04293</u>

## LSU Physics & Astronomy in the News

#### Kip Matthews Named American Association of Physicists in Medicine Fellow



Kenneth "Kip" Matthews has been named a Fellow of the American Association of Physicists in Medicine. A distinct honor among the medical physics profession, an AAPM Fellow honors members who have made significant contributions through service, the advancement of medical physics knowledge based upon independent original research or development, medical physics educational activities, especially in regard to the education and training of medical physicists, medical students, medical residents and allied health personnel, and leadership in the practice of medical physics.

#### Events

 Saturday Science: <u>Is Zika such a big deal now because it's changed?</u> Who: Dr. Rebecca Christofferson, LSU School of Veterinary Medicine When: Saturday, February 25, 10:00 - 11:00 AM Where: Nicholson Hall - Room 130

#### • Mardi Gras Holiday

Begins at 7:30 AM on Monday, February 27 University offices are closed on Tuesday, February 28 Classes resume at 12:30 PM on Wednesday, March 1

- Seminar: <u>A Universal Moire Effect and Application to X-Ray Imaging</u> Who: Dr. Han Wen, NIH
  When: Friday, March 3, 2:30 PM
  Where: Nicholson Hall - Room 435
- Landolt Observatory Public Viewing Night: Aldebaran disappears at 9:52:01 PM CST When: Saturday, March 4, 9:00-10:00 PM Where: Nicholson Hall Roof- Landolt Observatory

#### Please see the attached flyers

## Securday Seconde

## Is Zika such a big deal now because it's changed?

#### A public lecture by Dr. Rebecca Christofferson



#### About the Speaker

Dr. Rebecca Christofferson is an Assistant Professor in the Department of Pathobiological Sciences' College of Veterinary Medicine at LSU. Her work focuses on ways to better inform model parameters that best explain & predict transmission, expansion, & emergence of biological public health threats.

Zika virus has been around for a long time. It was first identified in 1947 in Uganda and has circulated in Africa for years. So why did it become such a huge thing in South America? Why all of a sudden is it such a threat to pregnant women and their babies? By examining the history of Zika through reading what other scientists have done and by doing experiments on Zika in the lab, we can get closer to answering those questions.

## 25 February 2017, 10-11:00 a.m.

Room 130 Nicholson Hall, LSU

LSUSaturdayScience@gmail.com

LSU Advanced Imaging Working Group

# **A Universal Moiré Effect and Application to X-Ray Imaging**



Senior Investigator, PI, Imaging Physics Laboratory, Biochemistry and Biophysics Center, National Heart, Lung and Blood Institute, NIH

# Friday, March 3 2:30 PM 435 Nicholson Hall

Efficient methods to image the wave characteristics of x-rays have been a focus of research for several decades. The motivation for developing such technologies in the context of medical imaging will be discussed. An overview of full-field wave imaging techniques will be given followed by examples of recent advances.

Questions? Email Les Butler at Ibutler@lsu.edu

Office of Research & Economic Development