

Weekly Calendar & News

January 27- February 2, 2018

Departmental Colloquium

Good Timing: Exploiting Entanglement for Secure Clock Synchronization

[Antia Lamas-Linares](#)

Texas Advanced Computing Center, University of Texas at Austin

Host: Jonathan Dowling

3:30 PM Thursday, February 1 at 119 Nicholson Hall

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

The ability to synchronize remote clocks is a surprisingly fundamental part of civilian and military infrastructure, from cell phone networks to power grids, onward to GPS and gravitational wave detection. Unfortunately, it is known that it is not hard to spoof a GPS signal and use it to steer a target clock to a desired time. Under non-adversarial conditions time synchronization is a hard physics problem; when a malicious adversary is present, it becomes a task in secure metrology. I will present a protocol inspired by the techniques from quantum communication that allows secure synchronization of two remote clocks in the presence of a well equipped adversary. The experimental implementation and initial experimental results will be discussed.

LSU Physics & Astronomy in the News

- [Women in Physics Conference: solidarity matters, discrimination still prevalent](#) (Spinnaker, UNF)
- [American physicist Plummer: the future of scientific research in China](#) (People's Daily Central, Google Chrome will allow you to translate the Chinese language to English in this news)
- [Student Spotlight: Margarite LaBorde, a double major in physics & math](#)
- [Where's the Flux? Dust? Discuss.](#) (AAS Nova)
- [LSU professor debunks alien megastructure myth](#) (LSU Reveille)

Events

- [“Saturday Science: “The underwater forest: a time capsule from the last ice age”](#) by Kristine DeLong, LSU Department of Geography & Anthropology (Flyer is attached)
 - When: Saturday, January 27, 10 am
 - Where: Room 130 Nicholson Hall
- [Landolt Astronomical Observatory Public Viewing Night](#): View the Moon, getting close-up views of the 'lunar seas,' craters and mountains.
 - When: Saturday, January 27, 7-8 pm, (*Rain date is Sunday, January 28 7-8 pm*)
 - Where: LAO on the roof of Nicholson Hall

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SATURDAY SCIENCE

The Underwater Forest: a time capsule from the last ice age

A free public lecture by
Dr. Kristine L. DeLong



About the Lecture

Dr. Kristine DeLong is an Associate Professor in LSU's Department of Geography & Anthropology, in the College of Humanities & Social Sciences.

This research project focuses on "The Underwater Forest" found 10 miles offshore of Alabama in 60 feet of water where Hurricane Ivan exposed the remains of large baldcypress stumps still rooted in their life positions, previously buried under 9 feet of sand since the last ice age 50,000 years ago. Terrestrial environments preserved from the Ice Ages are rare, since advancing glaciers remove much of the sediment from the landscape. Furthermore, preservation of organic remains in original life form is even more rare since bacteria quickly decompose any remains. These trees are not petrified, but are well-preserved wood with much of their cellular structure still intact and even smell like freshly cut wood when you cut or sand it. This site is the subject of an award-winning documentary "The Underwater Forest" that has captured the media's interest due to the site's uniqueness and remarkable scientific discoveries.

27 January 2018, 10-11:00 a.m.

Room 130 Nicholson Hall, LSU

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