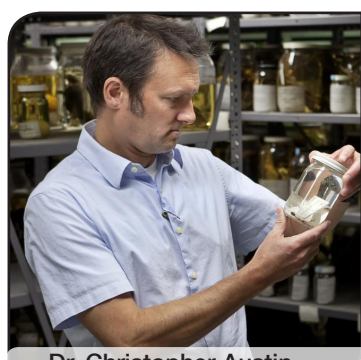


NEWS/EVENTS



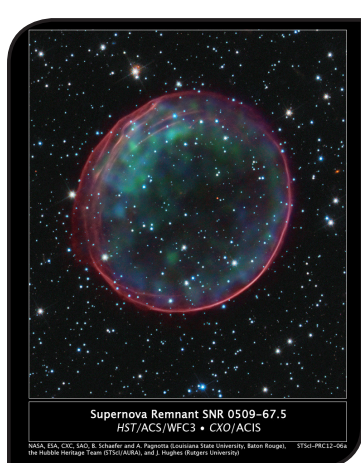
Dr. Christopher Austin

LSU Herpetologist Christopher Austin Discovers World's Smallest Vertebrate

Christopher Austin, associate professor of Biological Sciences and head curator of herpetology in the Museum of Natural Science has made a big splash with a tiny discovery. Austin recently discovered two new species of frogs in New Guinea, one of which is now the world's tiniest vertebrate, averaging only 7.7 millimeters in size. The tiny frog, called *Paedophryne amauensis* is small enough sit in the center of a U.S. dime.

Austin, leading a team of scientists from the United States including LSU graduate student Eric Rittmeyer, made the discovery during a three-month long expedition to the island of New Guinea, the world's largest and tallest tropical island.

[More](#)



LSU Astronomers Discover Origin of Thermonuclear Supernova

LSU Professor of Physics & Astronomy Bradley Schaefer and graduate student Ashley Pagnotta discovered the solution to a long-standing fundamental problem of astrophysics: what produces thermonuclear, or Type Ia, supernovae, which are tremendous explosions where the light is often brighter than a whole galaxy?

The LSU team's solution represents the culmination of more than 40 years of worldwide study focused on this issue, often referred to as the "progenitor problem." The possible types of precursor system types, called progenitors, were considered to be either a pair of white dwarfs in a close binary orbit that spiral into each other due to gravitational attraction (called the double-degenerate model) or another type of binary where the ordinary companion star in orbit around the white dwarf is feeding material onto the white dwarf until it reaches the critical mass (called the single-degenerate model). For decades the debate has raged, with no decisive evidence, and currently a roughly evenly divided opinion amongst astronomers.

[More](#)



Dr. Marcia Newcomer

LSU Biologist to Serve on NIH Grant Review Panel

LSU Biological Sciences Professor Marcia Newcomer has accepted an invitation to serve on the Macromolecular Structure and Function E-Study Section (MSFE) of the Center for Scientific Review (CSR) from July 1, 2012 until June 30, 2016.

As a member of the study section, Newcomer will review grant applications submitted to the National Institutes of Health (NIH), recommend potential research projects to the appropriate NIH national advisory council or board, and survey the areas of research in her field of science.

[More](#)



Dr. Thomas Kutter



Dr. Martin Tzanov



Dr. William Metcalf

LSU Research Featured in Physics World Top 10 Breakthroughs of 2011

LSU Department of Physics & Astronomy Professors Thomas Kutter and Martin Tzanov and Professor Emeritus William Metcalf were recently recognized as part of the Physics World Top 10 Physics Breakthroughs of 2011 for their studies recording the first real indication of a new type of neutrino oscillation.

The professors, along with graduate and undergraduate students, have been working for several years on an experiment in Japan called T2K, or Tokai to Kamioka, Long Baseline Neutrino Oscillation Experiment, which studies the most elusive of fundamental subatomic particles – the neutrino. In the spring of 2011, they announced an indication of a new type of neutrino transformation or oscillation from a muon neutrino to an electron neutrino.

According to the article in Physics World, this breakthrough could allow researchers to pinpoint the final undetermined neutrino "mixing angle," as well as provide a clue toward solving the mystery of why matter, rather than antimatter, dominates the universe.

Work at T2K is ongoing, but was severely interrupted due to the 2011 earthquake in Japan that devastated the country's infrastructure and caused significant loss of life and hardship to the nation's population. T2K facilities were partially damaged, but a swift and dedicated recovery effort by many people led to the restart of the research facility in December 2011 and neutrino measurements are expected to resume in January 2012.

[More](#)



Two College of Science Faculty Featured in 2011 Memorable Moments Video

LSU Physicist Bradley Schaefer and Assistant Professor of Biological Sciences Prosanta Chakrabarty were highlighted in LSU's Memorable Moments in 2011 video.

NEW FUNDING

BIOLOGICAL SCIENCES

Christopher Austin, "The Unique Skinks of New Guinea: Diversity, Systematics, and Malaria Parasites," NSF, 2012-2016, \$350,000.

Gary King, "Diversity, Distribution, Significance, and Diversity of Aerobic, Thermophilic CO-oxidizing bacteria," NSF, 2012-2015, \$394,000.

Bruce Williamson, "LTREB Renewal: Successional Pathways and Rates of Change in Tropic Forests of Brazil, Costa Rica, and Mexico," NSF, 2012-2016, \$105,870.

CHEMISTRY

Barry Dellinger, "The Role of Environmentally Persistent Free Radicals in the Chemistry of Airborne PM2.5," NSF, \$431,726 awarded in three annual increments.

COMPUTER SCIENCE

Supratik Mukhopuyay, "Video Analytics," American Systems Group, 2011, \$255,000.

GEOLOGY & GEOPHYSICS

Carol Wicks, "Sediment Transport Study in Carbonate Terrains," NSF, Beginning March 2012, \$349,000.

KUDOS

Associate Professor of Biological Sciences **John Battista** served on a panel that reviewed the Department of Energy's Joint Genome Institute (JGI). JGI is a premier high-throughput DNA sequencing facility located in Walnut Creek, CA.

Michael F. and Roberta Nesbit McDonald Professor of Mathematics **Susanne Brenner** has been appointed managing editor of *Mathematics Computation* by the American Mathematical Society Council and appointed to the editorial board of *Numerical Algorithms*.

Physics & Astronomy Postdoctoral Researcher **Jacobo Diaz-Polo** has written a paper entitled *Probing Loop Quantum Gravity with Evaporating Black Holes*, which has been published in *Physical Review Letters*. To view the full paper, go to www.aps.org.

The American Mathematical Society honored **Hui-Hsiung Kuo**, Nicholson Professor of Mathematics, during a special session of the AMS 2012 annual meeting, held January 4-7 in Boston, MA. The session covered lectures on infinite dimensional analysis and mathematical physics to financial mathematics.

Professor of Chemistry **Robin L. McCarley** was awarded the Richard W. Hantke Alumni Teacher Award by his alma mater, Lake Forest College.

Professor of Mathematics **Ambar Sengupta**, has been appointed the new Hubert Butts Alumni Departmental Professor. Sengupta also wrote *Representing Finite Groups: A Semisimple Introduction* published by Springer, January 2012.

STAR SCHOLARS



Freshman sprinter and chemistry major **Kendra White** is one of the January Student Athletes of the Month. The St. Louis, MO native is expected to be a great talent for LSU. She was one of the nation's elite prep quartermilers for the class of 2011. Her impressive resume includes 2011 USATF Junior Olympics Champion in the 4x400 and 2010 Youth Outdoor Champion in the 400m and 4x400. Within the top 10 of her graduating class, she was also named the 2011 St. Louis Post-Dispatch Scholar-Athlete of the Year at her high school.

[More](#)

Tiffany Lemon, LSU biochemistry major, was one of 88 students selected to participate in an advanced biomedical research internship at Harvard University's RAGON Institute. Lemon was supported through a grant from the Howard Hughes Medical Institute. An account of Lemon's research experience was featured in the December 11 *Daily World*.

[More](#)



The International Centre for Diffraction Data (ICDD) has selected chemistry graduate student **Gregory McCandless** as a 2012 Ludo Frevel Crystallography Scholar.

[More](#)

Yalma Vargas-Rodriguez, biological sciences PhD candidate, will receive up to \$4,000 from the Mohamed Zayed Species Conservation Fund in Abu Dhabi for her research on conservation biology of sugar maple.

>> Check out *The Gold Standard: Undergraduate Research at LSU*. Some of the featured researchers are College of Science Students.

[More](#)

DEVELOPMENT HIGHLIGHTS

Geaux Teach!

Nationally Recognized Program Seeks Support to Train Math, Science Teachers for the Future

The LSU Geaux Teach Program has become a leader in the recruitment of highly qualified secondary math and science teachers. In 2007, LSU was one of 12 institutions awarded a \$2.4 million grant from the National Math and Science Initiative (NMSI) to expand our program designed to better recruit and train teachers. Geaux Teach is different than LSU's previous curriculum in that students now receive a bachelors degree in math, chemistry, physics or biological science with a concentration in secondary education. They also begin teaching experiences as freshman rather than waiting until senior year. The rigorous education and training received through the program prepares our graduates to provide quality math and science education, including AP courses, immediately upon graduation.

As part of the grant, NMSI will provide an exiting matching gift opportunity to help sustain the program over time. A 1:1 match for every dollar donated to Geaux Teach will be given to LSU if we raise \$1 million by the end of May 2012. To date, we have raised \$600,000 towards the \$1 million goal.

A gift to Geaux Teach is an investment in the future of math and science education in Louisiana and beyond. The College of Science needs your help to meet the \$1 million match. A successful effort will result in a \$2 million endowment in support of math and science teacher education at LSU.

To give to the LSU Geaux Teach Program, contact *Ann Marie Marmande at 225.578.4906 or email anmmarie@lsu.edu*.



Memorial Fund Established in Honor of Ronald J. Siebeling

The Ronald J. Siebeling Memorial Fund in Biological Sciences was established by many of Ron's friends, former students, and colleagues who have made gifts in his honor. To date, the College has raised \$35,000.

The immediate goal of the Ronald J. Siebeling Memorial Fund is to raise \$60,000 to establish a professorship that directly impacts graduate student support. Gifts towards this fund will be used to support initiatives that best reflect Dr. Siebeling's unwavering commitment to LSU and his various contributions as an educator, research scholar, and mentor. The best use of these gifts will be determined by the College of Science Dean.

Help keep Ron's legacy of scholarship, mentorship, and achievement going by giving to the Ronald J. Siebeling Memorial Fund in Biological Sciences. For more information or to discuss multi-year pledges to the fund, call *Eric Guerin at 225.578.7602 or email eguerin@lsu.edu*.



1914-2012

We learned, with regret, of the death of **George C. Kent**, College of Science Hall of Distinction member and LSU Professor Emeritus.

Though he is no longer with us, his legacy of academic excellence, scholarship and mentorship will live on.

The College extends sincere condolences to all family and friends of Dr. George C. Kent.

His presence will truly be missed.

To submit news items for the upcoming College of Science E-News, email djenkins1@lsu.edu

GIVE to the College of Science

Join us on Facebook