



FEBRUARY 2013 • Official newsletter of the LSU College of Science

NEWS/EVENTS



Life Found Under Antarctic Ice

Associate Professor of Biological Sciences Brent Christner is a member of the research team that has discovered life forms deep under the Antarctic ice. The team found and collected microbes in a lake hidden under more than a half-mile of ice. The newfound life-forms have little connection to life on the earth's surface and many apparently survive by "eating rocks," said Christner in a National Geographic interview.

<< Photo: Sediments crumble as an underwater camera touches the bottom of Whillans Lake in Antarctica (Image courtesy Alberto Behar, JPL/ASU, and NSF/ NASA)

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Biologist Uncovers How New Coral Species Form

Michael E. Hellberg, associate professor of biological sciences, and graduate student Carlos Prada investigate how corals, specifically candelabrum corals of the genus Eunicea, specialize to particular environments in the ocean. The research team was recently featured in Proceedings of the National Academy of Sciences, or PNAS, for their research. Their studies of candelabrum corals, generally known as "sea fans," provides new insights into how species form in the ocean, a topic of relatively limited research as opposed to speciation of terrestrial organisms.

More

Above Photo: Close up of the polyps in a Eunicea species

KUDOS



A scientist at Purdue University has named a fungi for LSU System Boyd Professor of Biological Sciences Meredith Blackwell. Meredithblackwellia is a new genus discovered by Mary Catherine Aime, associate professor at Purdue University and former faculty at LSU in plant pathology and crop physiology. The new yeast genus will be featured on the cover of the March/April edition of Mycologia.



Professor of Physics & Astronomy Bradley Schaefer was featured in a February Space on NBCNEWS.com online article entitled, The star explosition that wasn't: Astronomers solve 150-year-old mystery.

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Assistant Professor of Biological Sciences and Curator of Fishes in the LSU Museum of Natural Science Prosanta Chakrabarty and Ph.D. student Bill Ludt traveled to Singapore to participate in the Singapore Jahore Strait Marine Biodiversity Workshop. Chakrabarty was invited to the workshop to collect fish specimens along with other international experts. This was Ludt's first international field trip. Chakrabarty and Ludt will be collecting in Japan this summer. More

MARQUEE PUBLICATIONS



A research team from the Department of Physics & Astronomy has published a paper in the Proceedings of the National Academy of Sciences, or PNAS. The paper entitled, Anomalous surface lattice dynamics in the low-temperature phase of Ba(Fe1-xCox)2As2, focuses on the observation of extremely large spin-charge-lattice coupling driven by the broken symmetry present at the surface. The study was conducted on single crystals grown at LSU of the newly discovered Fe-based superconductors Ba(Fe1-xCox)2As2, using high resolution inelastic electron scattering to probe the lattice dynamics (see picture to left).

The research team includes Professors of Physics & Astronomy Jiandi Zhang, Rongying Jin, and E. W. Plummer; postdoctoral researchers Jing Teng and Yimin Xiong; and graduate student Chen Chen.

Measurement of the nu_e and total 8B solar neutrino fluxes with the Sudbury Neutrino Observatory phase-III data set, a paper developed by Associate Professor of Physics & Astronomy Thomas Kutter, was recently selected as Physical Review C Editor's Suggestion. Kutter co-authored the paper with LSU post doctoral student Jason Goon.

NEW FUNDING

BIOLOGICAL SCIENCES

Jim Moroney, biological sciences chair and Glenda Wooters Streva Alumni Professor, Realizing Increased Photosynthetic Efficiency (RIPE), Bill and Melinda Gates Foundation, 2013-2018, \$700,000.

Ryoichi Teruyama, assistant professor of biological sciences, Epithelial Sodium Channels in Vasopressin and Oxytocin Synthesizing Magnocellular, National Institutes of Health, 2013-2017, \$370,000.

ALUMNI UPDATE



Jacob Saucier, an LSU biology graduate and current graduate student at the University of Wyoming, has accepted a position at the Smithsonian. During his time at LSU, Saucier went on two expeditions to Peru with the LSU Museum of Natural Science and assisted with rail fieldwork in Louisiana. He will be working at the Smithsonian as a collections manager (museum specialist).

ALUMNI & DEVELOPMENT



MVP, Most Valuable Physician

LSU Alum featured on CBS This Morning

World-renown orthopedic surgeon Dr. James Andrews was featured in a CBS This Morning segment highlighting his contributions to sports medicine. Andrews, one of the most sought after orthopedic experts in the nation, has helped to preserve the careers of top athletes like Peyton and Eli Manning, Emmitt Smith, Drew Brees, Robert Griffin III (RG3), and many others. Andrews is also the author of Any Given Monday, a book of practical wisdom and professional advice to combat a growing epidemic of injury among young athletes. Watch CBS Morning Show Feature



LSU MathCircle Team Achieves Success at Harvard-MIT Tournament

Hundreds of top high school math students converged on the campus of MIT February 16 for the Harvard-MIT Mathematics Tournament (HMMT). Among these young mathematicians was the LSU MathCircle team consisting of eight students from Baton Rouge and New Orleans. LSU's group successfully competed against 95 teams from around the world. LSU MathCircle placed 15th in the GUTS round, an 80-minute team event with 36 short-answer questions on a variety of subjects with varying difficulty and point values. The team placed 34th overall with Scott Wu placing seventh

individually in the combinatorics round.

The team attributes its success to their coaches and months of study and preparation for the tournament. LSU graduate assistant Jesse Levitt and undergraduate Steven Olsen met with the team every Sunday for five months to prepare for the tournament. A portion of the participants' travel expenses were provided by LSU math alumnus and College of Science Dean's Circle member Charles Pinckney. Demarcus D. Smith Alumni Professor of Mathematics Frank Neubrander contributed funds for the coaches' travel and tutoring services. Additional support was provided by Lamar Advertising.

Held annually in Boston since 1998, the HMMT is the preeminent tournament for high school math students. Southern states are consistently underrepresented in these and other math tournaments. It was not until 2012 that a team from Louisiana competed in the tournament. Led by LSU students, the 2012 team placed third overall in their division, while one member placed tenth out of over 700 participants in the Algebra section.

LSU MathCircle is currently preparing for the American Regions Mathematics League (ARML), another well-recognized high school math tournament held throughout the U.S. on May 31 and June 1.

HMMT and ARML not only offer a great challenge to strong mathematics students, they also provide them with an opportunity to interact with nationally- and internationally-acclaimed mathematicians. Neubrander and LSU's student volunteers eagerly seek out potential Louisiana high school participants, lead practice sessions, organize the travel logistics, and chaperone the high school students.

Travel for the LSU students and Louisiana high school competitors is expensive. LSU's ongoing participation in these competitions is dependant upon the availability of donations from alumni and friends of the College of Science.

Gifts to the MathCircle team can be donated to the "LSU Foundation – Mathematics Research and Instruction Fund." Please contact Ann Marie Marmande (annmarie@lsu.edu) with any questions that you may have about donations to support the high school participants.



The Dean's Circle (DC) is a loyal group of alumni and friends who share a passion for advancing scholarship and research at LSU. DC members are playing an ever-increasing role in supporting the college's Formula for Excellence Strategic Plan. Our DC provides the working capital needed to fund pursuits of the College including, but not limited to:

- scholarships for first-time freshmen to attend pre-college boot camps,
- ٠ student organizations and educational travel expenses,
- faculty recruitment and recognition activities, and
- development initiatives that build alumni and community relations. ٠

Dean's Circle membership recognizes the generosity of alumni and friends who make annual gifts of \$1,000 or more to the Science Development Fund. Members enjoy invitations to events hosted by the college, including the annual Dean's Circle dinner and Hall of Distinction Ceremony, special communications from the dean throughout the year, and opportunities to meet and network with college leadership and other members.

To join by mail, make your check payable to "LSU Foundation-Science Dean's Circle" and mail your check to: LSU Foundation, 3838 West Lakeshore Drive, Baton Rouge, LA 70808

To donate online, select "Giving Online to the LSU Foundation" and complete the information on the online form. Select the "College of Science" as your gift designation and then select "Science Development Fund."

CONTACT US:

For more information on the Dean's Circle, please contact Ann Marie Marmande,



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

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