LSUScience

SEPTEMBER 2012 | Official newsletter of the LSU College of Science

NEWS/EVENTS



College of Science to Host Ribbon Cutting for Chemistry and Materials Building

The College of Science is proud to announce the completion of the Chemistry and Materials Building. The College will celebrate this momentous occasion with a ribboncutting celebration **Thursday**, **October 11 at 11am**. The event will be held at the new facility, which is located off Highland Road (across from the French House).





LSU Research Team First To Link Two Groups of Blind Cave Fishes

A team of researchers from LSU's Museum of Natural Science, or MNS, and the American Museum of Natural Science has discovered that two groups of blind cave fishes on opposite sides of the Indian Ocean are each other's closest relatives.

Through comprehensive DNA analysis, the researchers determined that these eyeless fishes, one group from Madagascar and the other from similar subterranean habitats in Australia, descended from a common ancestor before being separated by continental drift nearly 100 million years ago.

Their study, which appears in the journal PLOS ONE this week, also identifies new species that add to existing biological evidence for the existence of Gondwana, a prehistoric supercontinent that was part of Pangaea and contained all of today's southern continents.





Assistant Vice Chancellor Saundra McGuire Named CLADEA Fellow

In November, LSU Assistant Vice Chancellor and Professor of Chemistry Saundra McGuire will receive the highest honor conferred upon professionals in learning assistance and developmental education, as she is inducted as a Fellow of the Council of Learning Assistance and Developmental Education Associations (CLADEA). McGuire will join a select group of only 45 individuals to receive such a distinction.









Mathematics Professors to Join Inaugural Class of AMS Fellows

In recognition of their distinguished contributions to mathematics, Michael F. and Roberta Nesbit McDonald Professor of Mathematics Susanne Brenner and Alumni Professor of Mathematics James Oxley will be inducted into the first class of American Mathematical Society (AMS) Fellows during the annual AMS conference in January.



Ride Sally Ride! Sally Ride Science Festival Exposes Girls to the Wonders of Science

Sally Ride Science and ExxonMobil hosted their annual science festival in Baton Rouge for the third time on September 22nd. The festival took place on LSU's campus; with girls from grades 4th-8th who explored hands-on workshops, listened to guest speakers and attended a street fair filled with booths, music and food. Families arrived around 11 a.m. near Patrick F. Taylor Hall, where activities lasted until about 5 p.m. The Sally Ride Science Festival is famous for bringing courageous and innovative female scientists who encourage young girls to pursue their dreams. This year's keynote speaker was NASA Astronaut Sandra Magnus.

The Sally Ride Science Festival is a partnership among The LSU Cain Center for STEM Literacy, LSU colleges of Science, Education and Engineering, ExxonMobil, and Sally Ride Science.

Geology & Geophysics Hosts Fall Wilbert Lecture Series

Come learn about the latest happenings in geoscience research by attending the Fall 2012 Wilbert Lecture Series. This year's series has an exciting and diverse line up of speakers.

Nov. 16, Dr. Alex Robinson, University of Houston, "Detrital

Nov. 30, John Dribus, Schlumberger Oil Field Services,

exploration and drilling below the salt"

zircon results from the Pamir: Insights into along strike variations in the preCenozoic tectonic evolution of the Tibetan orogen"

"Formation of Atlantic Margin Salt Basins and an overview of the

More

- Oct. 5, Dr. Yanxia Ma, Coastal topic
- **Oct. 26**, Rock Star competition
- Nov. 9, Prof. Youxue Zhang, Univ. of Michigan, "Kinetics and dynamics of crystal growth and dissolution in silicate melts"





Mathematics Department to Host Workshop On Lie Groups, Lie Algebras and Their Representations

The Department of Mathematics will host a workshop, as part of an NSF-sponsored series, on "Representations of Lie Groups, Lie Albegras and their Representations," October 6-7 in 241 Lockett Hall. The workshop will attract a number of mathematics experts to LSU offering graduate students interested in this field of study an opportunity to network with some of the nation's top researchers. *For more information, go to https://www.math.lsu.edu/~brworkshop/.*

FIVE YEARS IN A ROW!

LSU MaintainsTop Tier Status in U.S. News & World Report Rankings

For the fifth straight year, LSU has been recognized as one of the top universities in the country by U.S. News & World Report. In U.S. News & World Report's 2013 edition of Best Colleges, LSU is once again ranked in the first tier for "Best National Universities."

"Despite the tough budget climate, LSU continues to be nationally competitive," said Interim LSU System President and LSU Chancellor William Jenkins. "As Louisiana's Flagship University, LSU is providing a premier education, and the rankings are a recognition of that effort."

Jenkins credited the university's faculty, staff and students for continually making LSU a better place to work and receive a top-notch education. \swarrow *More*

NEW FUNDING

BIOLOGICAL SCIENCES

Fernando Galvez (PI), Andrew Whitehead (UC Davis) and Chris Green (LSU Ag), "Mechanisms of Reproductive, Developmental, and Early Life Stage Impacts of Marine Oil Spills in a Vertebrate Sentinel Model," NIH Environmental Health Sciences, Oceans and Human Health, 2012-2016, \$388,432

Gary M. King (PI) and **Thomas S. Bianchi** (Texas A&M), "Collaborative Research: The role of priming in microbial utilization of terrestrially-derived dissolved organic carbon: a proof of concept," NSF, 2012-2013, \$32,880

Kyle Harms (PI) and Metha M. Klock, "The Role of Mutualisms in the Colonization and Establishment of Non-Native Acacia Species in California," BOR EPSCoR Links with Industry, 3 Months, \$7,000 **Fredrick H. Sheldon** (PI), Robert G. Moyle (University of Kansas), and Thomas Martin (University of Montana), "Dimensions: Collaborative Research: Historical and contemporary influences on elevational distributions and biodiversity tested in tropical Asia," NSF, 2012-2016, \$330,378

CHEMISTRY

Zakiya Wilson and George Stanley, Graduate Assistance in Areas of National Need (GAANN), U.S. Department of Education, \$533,064

MATHEMATICS

Karl Mahlburg, Experimental Program to Stimulate Competitive Research, Algebra, Number Theory, and Communications, NSF, 2012-2015, \$134,006

KUDOS

Julia Chan, Les & Dot Broussard Professor of Chemistry, was named a fellow of the Southeastern Conference Academic Consortium Academic Leadership Development Program (SECAC ALDP).

Barb Dutrow, Adolphe G. Gueymard Professor of Geology & Geophysics, was an invited keynote speaker at the 4D Adamello Conference held in Bagolino, Italy. Her talk entitled "Impact of fluid flow on the development of contact metamorphic aureoles: 4D numerical experiments of heat and mass transport" lead off the session on contact metamorphism associated with granitic magma emplacement.

Jake Esselstyn, curator of mammals, LSU Museum of Natural Science, conducted an interview on CBC Radio with *Quirks & Quarks'* Bob McDonald, about his discovery of a nearly toothless rat on the Indonesian Island of Sulawesi. *Click here to listen to the complete interview.*

Nell McAnelly, associate director at the Cain Center, received one of the highest service learning course evaluations at LSU. The evaluations showed that students' service-learning experience increased their understanding of how knowledge, skills and abilities learned in the course apply to everyday life.

MARQUIS PUBLICATIONS

Rongying Jin, LSU Professor of Physics; Jiandi Zhang, LSU Professor of Physics; Dalgis Mesa, LSU Graduate Student of Physics, and others have published a paper entitled *Coupled Structural and Magnetic Antiphase Domain Walls on BaFe2As2* in *Physical Review B*.

STAR SCHOLARS



Students Explore Marine Biology of Southeastern Alaska

Thirty-one LSU students explored the last frontier of North America during the fifth Alaska Academic Programs Abroad experience. The trip began in Bellingham, Washington, where the students led by biology faculty members Fernando Galvez and William Stickle caught the ferry to Juneau, Alaska. After two and half days on a boat, the study abroad group arrived in Auka Bay, where they conducted research on marine communities.

Biology major Jonathon Moss says, "conducting research took up the majority of our time." The students were divided into research groups consisting of five or six students doing specific research. Moss' research group studied mussels. They collected mussels from eight different locations, compared their condition indices, and then hypothesized on their differences.

"The weather was unusually nice, so we were able to do a lot of activities" Moss added. "My favorite part was hiking a glacier and going into several underground ice caves." The experience allowed the group to gain knowledge through research and to form long-lasting friendships while appreciating the gorgeous landscape on the Alaskan coast. Moss admits, "this was one of the best trips I have ever taken and I would go back in a



heart beat."

Hector Urbina, Ph.D. student, biological sciences, won first prize for his poster presentation, "Phylogenetic Study of the Xylose Reductase XYL1 in Insect Gut Yeasts," during the 13th International Conference on Yeasts at Madison, Wisconsin, August 26-30, 2012. Urbina's research poster is part of his larger dissertation research for which he has collected in Guatemala, Thailand, and tropical Australia.

ALUMNI & DEVELOPMENT HIGHLIGHTS



Call for 2013 Hall of Distinction Nominations

The College of Science is preparing to honor the achievements of some our most distinguished alumni, faculty and friends during the 2013 Hall of Distinction event. Hall of Distinction inductees are alumni, faculty, and friends of the College of Science who have made significant contributions to their disciplines, the community, the College and the University by demonstrating sustained excellence in their scientific, business and/or community activities.

ELIGIBILITY | All individuals, living or deceased, who have made outstanding contributions to their profession and community during their lifetime, and have had formative associations with the College of Science are eligible. Included, but not limited, are Alumni, Emeritus Faculty Members and friends of the College who are Alumni by association. No individual can be considered while an employee of the University.

NOMINATIONS | A letter of nomination from anyone interested in the College must be submitted to *Associate Dean John Lynn (zolynn@lsu.edu)* to start the consideration of the nominee. Dr. Lynn will acknowledge receipt of the nomination and request the additional information required, if any, by the selection committee. Nominations must be received by *October 15 and should be one to three pages in length.*

SPECIAL NOTE from the LSU Foundation regarding Estate Plans:

Upcoming changes to tax laws may affect your estate planning. You can provide for loved ones and protect your assets through a planned gift to the College of Science through the LSU Foundation. *Click <u>HERE</u>* for more information.

COMINGS & GOINGS

The College of Science would like to welcome four new tenure-track faculty appointed this fall. They are:

Louis Haber, assistant professor, chemistry | Haber received his bachelors degree from the University of California, Berkeley, in 2002. He continued at Berkeley and received his Ph.D. in 2009. Haber completed his postdoc at Columbia University in 2012. His areas of interest include fundamental investigations on nanomaterials and their interactions with molecules and light. *Faculty Page >> http://chemistry.lsu.edu/site/People/Faculty/ Louis%20Haber/item46358.html*) **David Shea Vela-Vick, assistant professor, mathematics** | Vela-Vick was a student of John Etnyre at the University of Pennsylvania. He recently finished an NSF-PostDoc at Columbia University. In 2012 Vela-Vick was awarded the Chauvenet Prize for expository mathematical writing. His areas of interest include problems in contact geometry, low-dimensional topology, knot theory and Riemannian geometry.

Faculty Page >> https://www.math.lsu.edu

Achim Herrmann, assistant professor, geology & geophysics | Herrmann studied in Germany where he received his Vordiplom at the Universitat Tubingen in Geology and Paleontology and diplom from the Universitat Heidelberg. Herrmann received his Ph.D. in Geosciences from Pennsylvania State University. His areas of interest include uranium isotopes in carbonate sediments, ocean acidification, and changes in earth systems. *Faculty Page >> http://www.geol.lsu.edu/aherrmann/Site/About_Me.html*)

Karen Maruska, assistant professor, biological sciences

Maruska received her Ph.D. at the University of Hawaii in 2007. Her research is broadly focused on understanding the neural and molecular basis of natural social behaviors, including aggression and reproduction, and the mechanisms that underlie sensory, behavioral and neural plasticity. *Faculty Page >> http://www.biology.lsu.edu/cos/biosci/FacultyandStaff/Faculty/item42762.html*)

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

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