LGSU
 College of

 Science

 JULY/AUGUST 2013
 • Official newsletter of the LSU College of Science



### **NEWS/EVENTS**



**Test your Pythagorean Theorem skills!** Find the length of the diagonal above.

Thirty-five LaMSTI participants graduated with Masters of Natural Science degrees during LSU's summer commencement ceremony August 9.







### Raising the Bar Preparing Master Science, Math Teachers

With the preparation and training of quality math and science teachers among the nation's top priorities, LSU has joined hands with the school districts within a 50-mile radius of Baton Rouge to grow and nurture a community of master science, technology, engineering and math (STEM) teachers through the **Louisiana Math and Science Teacher Institute (LaMSTI)**.

The NSF-funded program provides a special track of the Masters of Natural Science degree offered through the LSU College of Science. The program is specifically designed for practicing middle and high-school math or science teachers, providing graduate-level courses intended to increase candidates' command of their subject area and their ability to prepare students for college or technical careers.

# LSU Hosts Gulf Coast Summer Institute

LSU was one of seven institutions nationwide to host a National Academies Gulf Coast Summer Institute (GCSI). The program, supported by the Howard Hughes Medical Institute, aims to foster innovative approaches to teaching undergraduate science. LSU biological sciences faculty **Chris Gregg** and **Bill Wischusen** led the week-long program which included 53 participants from 17 colleges and universities. As a result of their successful completion of the GCSI, the following biological sciences and geology and geophysics faculty and graduate students were named National Academies Education Fellows in the Life Sciences: **Jeremy Brown, Michal Brylinski, Karen Maruska, Khoa Nguyen, Lori Patrick, Jillian Bambrick-Banks, Achim Herrmann, Suniti Karunatillake, Benjamin Maas, and Tiffany Roberts. In addition, GCSI directors Gregg and Wischusen, and biological sciences faculty <b>Brooke Dubansky, Anne Grove,** and **Joseph Siebenaller** were named National Academies Education Mentors in the Life Sciences for their efforts as facilitators.

More

## LSU Physicists Involved in Results Confirming Neutrino Transformation

The international T2K research collaboration, involving LSU Department of Physics & Astronomy Professors Thomas Kutter and Martin Tzanov, Professor Emeritus William Metcalf, and a team of postdoctoral researchers and undergraduate and graduate students, announced definitive evidence of muon to electron neutrino oscillations. This conclusive observation was announced during the European Physical Society meeting in Stockholm. The collaboration announced the first indication of this process in 2011.

# Field Camp 2013 Experience

The LSU Department of Geology & Geophysics has produced a short video to give you a glimpse of the 2013 field camp experience.

Visit Geology's **YouTube** page, to see the winner of the Field Camp's Third Annual Hot Dog Eating Contest.

#### **KUDOS**



G. Byerly



S. Karunatillake

D



D. Lane



K. Murray

**Gary Byerly**, dean of the LSU Graduate School and Richard and Betty Fenton Alumni Professor of Geology & Geophysics, contributed to the production of an award-winning map titled *Geologic Map of the West-Central Barberton Greenstone Belt, South Africa.* The map won the award for Best Reference Map at the 40th Annual Cartography and Geographic Information Society Map Design Competition.

**Suniti Karunatillake**, assistant professor of geology and geophysics, was the speaker during the seventh installation of LSU's Science Cafe. Karunatillake, a renown Mars expert, discussed the search for water on the Martian surface and the planet's potential for habitability.

**Daniel Lane**, ornithologist and LSU Museum of Natural Science associate, is a collaborating award PI for an NSF Advancing Digitization of Biodiversity Collections (ADBC) Program titled, *Developing a Centralized Digital Archive of Vouchered Animal Communication Signals*. The principal investigator on this program is Michael S. Webster from Cornell University. Other collaborating award PIs are Rafe Brown, University of Kansas; David Kavanaugh, California Academy of Sciences; and Travis LaDuc, University of Texas at Austin.

**Kermit Murray**, professor of chemistry, has been invited to serve as a member of the Enabling Bioanalytical & Imaging Technologies Section, Center for Scientific Review, for the term beginning July 1, 2013 and ending June 30, 2017. Members are selected on the basis of their demonstrated competence and achievement in their scientific discipline. The Center for Scientific Review is the portal for the National Institutes of Health grant applications and their review for scientific merit.

#### **MARQUEE PUBLICATIONS**



A research group including Moreland Family Professor of Biological Sciences **Terry Bricker** has published a paper titled, *Radiolytic Mapping of Solvent Contact Surfaces in Photosystem II of Higher Plants: Experimental Identification of Putative Water Channels within the Photosystem,* that will appear in the August 9 *Journal of Biological Chemistry.* The journal's cover showcases a figure developed by the researchers that highlighting possible paths of water to, and dioxygen from, the active site metal cluster of Photosystem II.



Professor of Biological Sciences **Kenneth Brown** co-authored *Conservation Status of Freshwater Gastropods of Canada and the United States* in a recent edition of *Fisheries.* The paper describes one of the most threatened freshwater faunas, gastropods found in the streams of the southeastern U.S.

LSU Emeritus Boyd Professor of Botany **Shirley C. Tucker** and **Mark W. Chase**, former MS student and current head of a research team at Kew Royal Botanic Gardens, are among the top 25 authors over the past 100 years to publish in the *American Journal of Botany*.



Tucker, a 2006 Hall of Distinction inductee, has published 53 articles over 51 years. Known as LSU's original evolution/development scholar (EVO-DEVO), she retired from LSU in 1995, but maintains a very active research program at the University of California, Santa Barbara.

Chase, a former MS student of LSU Biological Sciences Professor Lowell Urbatsch, has published 57 articles over 25 years. He is known for the development of pioneering techniques used to analyze large numbers of DNA sequences. These techniques are now used by scientists throughout the nation to unravel the relationships of plants.

GEAUX TIG

LSU/ Science

## 2013 Annual Fund in Full Swing

The College of Science **2013 Annual Fund Campaign** has reached the halfway mark and has already exceeded the 2012 campaign by **more than 20 percent**.

Each year, these donations directly support students, faculty, and outreach initiatives within the College. Your contributions enable us to produce some of the nation's finest entrepreneurs, researchers, educators, healthcare professionals, and industry leaders.

As part of the Science Annual Fund, you can split your gift between the College and the Department of your choice (biological sciences, chemistry, geology & geophysics, mathematics, and physics & astronomy).

Gifts of \$1,000 or more qualify for membership in the Dean's Circle. These funds provide the dean with resources to address the most pressing needs of the college, support boot camp programs to help students transition to the expectations of college, and provide scholarships for some of the nation's best and brightest students.

Contributions by our alumni and friends have been a key factor in the progress we have made, and our future success will require even greater support. If you have not already done so, we hope that you will join us by making a donation to the 2013 College of Science Annual Fund. To learn more, please contact **sciencealumni@lsu.edu**.

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



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