



FEBRUARY 6, 2008

COLLEGE OF BASIC SCIENCES

E-NEWSLETTER

The *College of Basic Sciences e-Newsletter* is published in February, April, June, August, October, and December.

Submissions for the April e-Newsletter should be made no later than March 17th to bascdan@lsu.edu.

NEWSLINKS

The URLs listed below are direct links to the various news pages or newsletters within the College and departments. News highlights also appear on the college's [Home Page](#) and visit our departmental pages:

[Biological Sciences](#)

[Chemistry](#)

[Computer Science](#)

[Geology & Geophysics](#)

[Physics & Astronomy](#)

[Museum of Natural Sciences](#)

The Calendar of Events is located on the last page for this issue.

NOTES FROM 338

Dear Colleagues,

The hiring season is well underway and all five academic departments have active searches. I've been impressed by the overall quality of applicants and am optimistic that we will have a "bumper crop" of new colleagues next fall. Thus far, we have added Dr. Sophie Warny (Geology & Geophysics) and Dr. Shane Stadler (Physics & Astronomy). Both will start their appointments next fall, and both bring established, well-funded programs to LSU.

Most of you have heard that Governor Jindal's administration has imposed a hiring freeze, and this has understandably caused some confusion. While it would not be accurate to say that this freeze has no impact on us, we are forging ahead with "business as usual" within the following context. The "freeze" officially began January 15 and will end June 30. As such, it has no impact on our faculty searches, as those appointments begin in August at the earliest. The freeze will technically impact appointments that occur within the stated time frame (e.g., staff, postdocs, etc.). However, while we may be asked to provide additional justification for hires, we fully expect our requests will be approved. The take-home message here is, carry on!

Recently, I made two trips to the DC area. The first was to attend a National Council for Science and the Environment (NCSE) meeting and the associated Council for Environmental Deans and Directors (CEDD). Provost Merget was an active member of CEDD for many years prior to her appointment at LSU. As the name implies, the organization is focused on environmental issues broadly defined; it takes an active role in influencing national and international policies related to the environment. Our featured speaker was Michael Crow, President of Arizona State University, and a leading proponent of "sustainability" (<http://www.asu.edu/president/sustainability/>) a concept that is integrated into the ASU curriculum and is manifested in its policies and practices.

The second DC-area trip was to attend "Diversity Symposium 4" at the Howard Hughes Medical Institute. DS4 was the last of a series of meetings that focused on promoting diversity in the sciences. Previous meetings were held at Harvard, UL Monroe, and the Univ. of Washington. HHMI Professor **Isiah Warner** (Chemistry) is somewhat of a celebrity at these meetings, as his programs and accomplishments in promoting diversity are broadly recognized and praised. Participants were very

continued

interested in our BIOS program (pre-freshman biology boot-camp; <http://www.biology.lsu.edu/introbio/bios/home.htm>). It appears likely that the next step will be the creation of a national organization that is focused on diversity in sciences, and which will provide a variety of resources toward that end.

Cheers,
Kevin C.

KUDOS

Priscilla Milligan (Biological Sciences) received a 2007 LSU Foundation Outstanding Staff Service Award, one of thirteen awarded on the campus.

Andrew Maverick (Chemistry) was named the Dr. Philip W. and Foymae K. West Distinguished Professor in Chemistry.

Darrell Henry, Campanile Charities Professor of Geology and Geophysics, served as the co-editor of a special volume of the *American Mineralogist* in honor of Charles V. Guidotti. The special volume is currently scheduled to appear in February 2008. Darrell has been named as an associate editor of *The Handbook of Mineralogy*.

Students and research scientists at LSU who are members of the LIGO Scientific Collaboration, including Associate Professors **Joseph Giaime**, head of the LIGO Livingston Observatory, and **Gabriela Gonzalez** (Physics & Astronomy), were recently named among critical contributors to the search for gravitational waves coincident with a very strong Gamma Ray Burst (070201).

Gabriela Gonzalez was appointed chair of the selection committee for the [Gravitational Wave International Committee thesis prize](#). The GW IC, is a sub-committee of the International Union of Pure and Applied Physics. The committee selects the winner based on the best thesis in gravitational wave research worldwide.

Ed Seidel (CCT/Computer Science) is one of the lead scientists for LSU in a consortium of nine universities across the state that were awarded \$9 million from NSF to create high performance computing tools to speed research into projects like

hurricane forecasts and tiny sensors to detect disease. An additional \$3-million from the Louisiana Board of Regents and \$3.2-million from the participating institutions will provide a total of \$15.2-million for the consortium to utilize over the next three years, [Supercomputing Online](#) reports.

Jorge Pullin, Hearne Chair of Theoretical Physics, was inducted into the Mexican Academy of Science on January 31st in Guanajuato, Mexico. The link is in Spanish [here](#).

MARQUEE PUBLICATIONS

Sitherama S. Iyengar, R. P. Daniels Professor and chair of Computer Science, with co-authors Ranjit Abraham and Jay B. Simbha, won the best paper award at the IEEE-CIT 2007 conference held at IIT-Roorkee on 20-22 December, 2007 for their paper "Medical datamining with a new algorithm for Feature Selection and Naïve Bayesian classifier."

Amar Karki, **Dana Browne**, **Roy Goodrich** and **David Young** (Physics & Astronomy) along with **Dixie Gautreaux** and **Julia Chan** (Chemistry) published a paper in the IOP Publishing journal, *Journal of Physics: Condensed Matter*. "Magnetotransport properties and the Fermi surface of single crystal VB₂," appears in the [online edition](#) and was also featured in the January 2008 print version.

Isiah Warner, with **Aaron Tesfai**, **Bilal El-Zahab**, **David Bwambok**, **Sayo Fakayode**, **Mark Lowry**, (Chemistry), and collaborator Gary Baker (Oak Ridge National Laboratory), published a paper in the American Chemical Society journal *Nano Letters*. "Controllable Formation of Ionic Liquid Micro- and Nanoparticles via a Melt-Emulsion-Quench Approach," appears in the [online edition](#) and will be in an upcoming print version.

PROGRAM NEWS

The LSU Museum of Natural Science's [Virtual Museum](#) now features unique science videos on its web site as part of a new partnership with National Public Radio's "Science Friday" and its educational outreach partner, TalkingScience. This cooperative effort offers museum visitors weekly news and information about science and technology in an informative yet entertaining way.

NEW GRANT FUNDING NOTICES

Biological Sciences

Meredith Blackwell, "Profiling Microbial Identity and Activity: NanoSIMS and Microarrays," Lawrence Livermore National Lab, November 2007 through November 2008, \$450,000.

Kenneth Brown, "Predicting the diversity and risk of extinction of Louisiana freshwater mussels from water quality, landscape scale factors and fish host communities," Louisiana Department of Wildlife & Fisheries, September 1, 2007 through June 30, 2008, \$51,312.

Jacqueline Stephens, "New Minority Undergraduate Internship," American Diabetes Association, July 2007 through June 2008, \$3,000.

Chemistry

Steven Soper with co-PIs **Robin McCarley**, **Robert Hammer** and N. Dimitris (Engineering), "High Throughput Modular Microfluidic Systems for Drug/Discovery Development," NIH, August 2007 through April 2008, \$2,557,904.

Isiah Warner with co-PI **James Robinson**, "Enhanced Protein Separations Using Molecular Micelles," NIH, August 2007 through July 2008, \$778,962.

Isiah Warner, "Graduate Research Fellowship Program," NSF, September 2007 through August 2012, \$40,500.

Andrew Maverick, "2007 UNCF Merck Graduate Science Research Dissertation Fellowship," United Negro College Fund, September 2007 through August 2009, \$30,000.

Computer Science

Sundaraj Iyengar with co-PI, **Gabrielle Allen** (CCT/Computer Science), **Peter Chen**, **Tevfik Kosar** (CCT/Computer Science), "Center for Excellence in Integrated Smart Cyber-centric Sensor Surveillance Systems," BOR, June 2007 through June 2012, \$1,226,616.

Erik Schnetter (CCT) with co-PI **Gabrielle Allen** (CCT/Computer Science), T. Goodale and M. Tyagi (CCT), "SDCI HPC Improvement: Cactus Tools for Application Level Performance and Correctness Analysis (ALPACA)," NSF, August 2007 through July 2010, \$586,070.

Geology/Museum of Natural Science

Sophie Warny Bart, "Preliminary Palynological and Paleoenvironmental Characterization of ANDRILL's Southern Macmurdo Sounds," NSF, June 2007 through May 2008, \$27,879.

Sophie Warny Bart, "Past environmental conditions on the Antarctic Peninsula: a palynological characterization of in-situ sediments recovered during the 2006 SHALDRIL campaign," NSF, July 2007 through September 2009, \$100,049.

Physics & Astronomy

Michael Cherry, "Multiwavelength and Multimessenger Observations in conjunction with the GLAST Satellite Mission," NASA, October 2007 through September 2009, \$1,434,000.

Jeffrey Clayton, "The Role in Interstellar Dust Production by Type II Supernovae and Red Supergiants," NSF, August 2007 through July 2010, \$289,917.

Jeffrey Clayton, "The Search for Evolution of Emission from Dust in Supernovae with HST and Spitzer," Space Telescope Science Institute, September 2007 through August 2009, \$6,975.

Jonathan Dowling, with co-PI **Hwang Lee**, "Quantum LIDAR: Remote Sensing at the Ultimate Limit," Department of the Air Force, July 2007 through March 2009, \$532,382.

Thomas Kutter, "Research in Elementary Particle Physics-Outstanding Junior Investigator Award, DOE April 2007 through March 2010, \$270,000.

William Metcalf, **Thomas Kutter**, and **James Matthews**, "Research in Elementary Particle Physics", DOE April 2007 through March 2010, \$1,555,000.

Bradley Schaefer, "The Shell of the Recurrent Nova T Pyx," Space Telescope Science Institute, June 2007 through May 2009, \$8,695.

Joel Tohline (Physics/CCT), "Gravitationally Driven Instabilities that Influence Stellar Evolution," NSF, August 2007 through July 2010, \$370,820.

PATENTS

Robert Hammer (Chemistry), with Francis Barany et al. (Cornell Research Foundation), and George Barany (Univ. of Minnesota), "Detection of Nucleic Acid Sequence Differences Using Coupled Ligase Detection and Polymerase Chain Reactions," US Patent No. 7,312,039, issued December 25, 2007.

Isiah M. Warner, Joseph B. Schlenoff (Florida State), Constantine P. Kapnissi (University of Cypress), "Analytical Separations with Polyelectrolyte Layers, Molecular Micelles, or Zwitterionic Polymers," US Patent No. 7,314,550, issued January 1, 2008.

Steven C. Hand and Michael A. Menze (Biological Sciences), "Preservation of Eukaryotic Cells Using Reversible Pore Formation," US Patent No. 7,314,755, issued January 1, 2008.

STUDENT NEWS

Students enrolled in LSU's first video game design course competed against their counterparts from the University of Illinois at Chicago (UIC) in December and one of LSU's five teams, Psychic Ballroller, took first place. The team consisted of **Kevin Kolz**, **Jason Harang**, **Kyle Nunez**, and **John Lewis**. At LSU, the course was scheduled both as a computer science course (CSC 4700) and an arts course (FMA 4001), attracting students from both disciplines. The course emphasized links between art and technology, with art students working on the animation and character design together with computer science students who primarily programmed the game.

DEVELOPMENT & FUNDRAISING UPDATE

Clarence P. Cazalot, Jr. and Marathon Oil Corporation have made a combined gift totaling more than \$1.6 million to the Department of Geology & Geophysics. The gift advances the department's comprehensive initiative for diversity in geology, provides funds to renovate the Howe Russell atrium, and creates an endowment to support a lecture series within the department.

Basic Sciences alumni **Ron** and **Dr. Mary Neal** have made the largest single gift ever to the Department of Biological Sciences. The Neals recently donated

\$500,000 to support a distinguished professorship (\$180,000), endowed graduate student stipends (\$240,000), an endowed undergraduate scholarship (\$50,000), and discretionary support for the department and the college (\$30,000). Once matching dollars from the Board of Regents are received, the total value of the gift will be \$780,000. Ron received his undergraduate degree in zoology in 1974 and a master's in geology in 1977. Mary received her undergraduate degree in zoology in 1975 and is a gynecologist in Houston.

Billy and Ann Harrison pledged \$225,000 to support a staff position and technical needs for the subsurface lab in geology. In recognition of their commitment, the lab will be named the Billy and Ann Harrison Family Laboratory for Subsurface Geology.

Dr. Mary Lou Applewhite donated \$100,000 to create a new professorship in the Department of Biological Sciences. This professorship will qualify for state matching funds and provide support for graduate students within the department.

BP, Inc. has donated computer hardware valued at \$10,000 to the Department of Geology & Geophysics to run Petrel Software. Petrel provides a single software solution to support the entire seismic to simulation workflow and removes the need for a multitude of specialized tools.

EnCana Oil & Gas USA, Inc. has made a \$45,000 pledge to the department of Geology & Geophysics. The gift will be used for graduate students and will provide scholarships, awards, and research support.

The **Patrick F. Taylor Foundation** is annually supporting four undergraduate scholarships in chemistry and two in geology. These awards provide a significant stipend of \$3,000 per student per year. The four chemistry and one geology scholarships are named in honor of Patrick F. Taylor. The second geology award is named in honor of alumnus, Charles Jones, who passed away in 2007.

The **Hubert Charitable Foundation** made a gift of \$10,000 to the Vertebrate Paleontology Research Fund in the Museum of Natural Sciences.

Paul Dickson made a gift of \$10,000 to the Bird Resources Fund in the Museum of Natural Sciences.

LSU chemistry alumnus **Dr. Calvin Mattax** (MS, 1952; PhD 1954) and music alumna **Carolyn Mattax** (MA, 1951) have created a new professorship to support graduate students in chemistry. Through personal gifts and matching donations from ExxonMobil, the Mattaxes will provide \$60,000, which will be eligible for \$40,000 in matching funds from the Board of Regents.

ALUMNI NEWS UPDATES

Clarence P. Cazalot, Jr. (BS, Geology, 1972) received the Woodrow Wilson Award from the Woodrow Wilson International Center for Scholars of the Smithsonian Institution in recognition of his corporate citizenship.

Nagi Rao (PhD, Computer Science, 1988), a Senior Research Staff Member of Oak Ridge National Laboratory, has been awarded the highest IEEE Fellow award for 2008 for contributions to networking and sensor fusion. He is a distinguished scientist and a Corporate Fellow with millions of dollars in funding from various agencies.

Mary Neal (BS, Zoology, 1975) was named by *Texas Monthly* magazine as one of the Top Docs in Texas for 2007. Dr. Neal is a gynecologist in the Houston area.

SEND US YOUR NEWS!

The Basic Sciences e-Newsletter is distributed to all faculty and staff in the College of Basic Sciences and to a larger subscription list of administrators, alumni, and friends of the college. If you know someone who should be receiving the e-Newsletter and is not, please send their contact information and e-mail address to

bascdean@lsu.edu.

Thank you to all of our contributors who provide the items for this newsletter.

CALENDAR OF EVENTS

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| February 11 | College Research and Teaching Award nominations due in Dean's Office (original + 5 copies) |
| February 12 | BASC Scholarship Breakfast
7:30-9:00 AM
Faculty Club |
| February 25 | Distinguished Research Master Award nominations due in Dean's Office (original + 4 copies) |
| March 13 | Choppin Honors Convocation
4:30-6:30 PM
Faculty Club |
| March 17-23 | Spring Break |
| March 30 | Course scheduling for Fall semester and Summer intersession begins
5:00 PM |
| April 4 | Spring Invitational (Departments should not schedule seminars or other events on this afternoon; a large number of faculty are needed to advise approximately 400 students) 12:30-4:30 PM |
| April 14 | P&T packets due in Dean's Office (original + 20 copies) |
| Apr. 30-May 4 | Concentrated Study Period |
| May 2 | Executive Committee Meeting
1:30-3:00 PM TBA |
| May 2 | Hall of Distinction Banquet
6:00 PM
Lod Cook Alumni Center |
| May 3 | Classes End |
| May 5-10 | Final Exam Period |
| May 16 | BASC Diploma Ceremony
7:30 PM
Maravich Assembly Center |