

SPRING
2011

NEW WAVE NEWS

Scientists Explore Blood Vessel Growth »

Three new faculty members in the Tulane Department of Biomedical Engineering are leading the way in understanding how circulating cells are involved in the function and growth of microvascular networks. Each is studying blood vessels from a different angle, resulting in an interdisciplinary approach to the research.

[Read Full Story »](#)**Oliver Fund Scholar Probes Ancient Sea-Level Rise »**

Did the melting of ancient ice sheets after the last Ice Age cause sudden sea-level rises? What can be learned from this distant history that could send cautionary messages to modern populations living at the ocean's edge? Tulane researcher Torbjörn Törnqvist is drilling into coastal soils in search of answers.

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ACCOLADES

Biomedical Engineering Professor Donald Gaver was awarded \$299,867 from NSF to develop an experimental technique to dynamically measure interfacial flows in models of the lung in order to identify strategies for reducing ventilator-induced lung injury of individuals with Acute Respiratory Distress Syndrome (ARDS).

Cell and Molecular Biology Professor YiPing Chen was

Message from the Dean*Nicholas J. Altiero, Dean*

It is my pleasure to introduce this electronic newsletter of the Tulane University School of Science and Engineering. In this quarterly communication, we will highlight the extraordinary accomplishments of the school's students and faculty and will update you on school activities and events. In addition, each issue will include feature articles about Tulane science and engineering alumni, benefactors, and members of the school's faculty and staff.

Now in its fifth year, the School of Science and Engineering brings together the sciences, engineering, and mathematics in an interdisciplinary environment that focuses on learning, discovery, collaboration, innovation, and engagement in the community. Approximately 1650 undergraduate students and over 400 graduate students are currently enrolled in degree programs offered by the school and more than 200 of our undergraduate students are working side by side with the graduate students and faculty on sponsored research projects that address important societal issues associated with health, energy, and the environment. Additionally, we are in the process of developing new programs in areas such as advanced materials and computer and computational science that will significantly expand the breadth and depth of the school's offerings.

While the School of Science and Engineering is relatively young, degree programs in the sciences and in engineering have been offered at Tulane for over a century and there are currently more than 18,000 Tulane alumni who majored in science and engineering disciplines. We hope to reach all of those alumni with this newsletter as well as parents of science and engineering students and other friends of the school. We trust that all of you will enjoy receiving these quarterly reports and will frequently visit our website at tulane.edu/sse/ to follow our progress. We would also like to hear from all of you so please take the time to contact us at: sse@tulane.edu

Tulane University has made a remarkable recovery since Hurricane Katrina and its horrific aftermath and, by every measure, is an even stronger institution that it was before the storm. We are proud that the School of Science and Engineering has played a major role in the renewal of this great university and we are looking forward to continued success in the years ahead. Our sincere thanks to all who make this success possible.

Physics Professor Is One of World's Most Cited*Article by Kathryn Hobgood Ray*

With nearly 70,000 citations referring to his work on density functional theory, Tulane physics professor John Perdew is among the world's most-cited physicists—if not the most cited in the last 30 years.

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awarded \$315,303 from NIH to study the role of Shox2 gene in TMJ development and its functional mechanisms in mice to provide fundamental information for our understanding of the formation of this unique joint in humans.

Cell and Molecular Biology Professor Jeff Tasker was awarded \$338,433 from NIH to study Corticosteroids, which represent a critical neuroendocrine signal activated during the stress response to increase survival under life-threatening conditions.

Chemistry Professor Igor Rubtsov was awarded \$450,000 from NSF to develop a novel analytical instrument for accessing structures of molecules in solution, the two-dimensional infrared spectrometer.

Ecology and Evolutionary Biology Professor Hank Bart was awarded \$285,497 from NSF to explore new machine learning methods for expediting the pace of taxonomic (new species) discovery.

Mathematics Professor Rafal Komendarczyk was awarded \$345,180 from NSF to study topological structures in the setting of probabilistic models of dust or powder particles, systems of water droplets and other similar processes.

Psychology Professor Jeff Lockman was awarded \$1.6 million from NIH to understand the development of hand-mouth coordination in infants and to develop new methods to assess this skill using high-speed motion capture technology.

CONTACT US

Tulane University
School of Science & Engineering
Suite 201, Lindy Boggs Center
for Energy and Biotechnology
New Orleans, LA 70118

Phone: 504-865-5764
Fax: 504-862-8747

✉ sse@tulane.edu

FEEDBACK

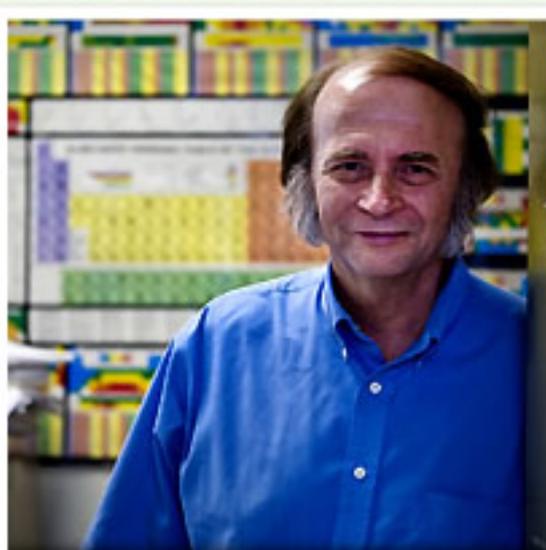


Photo by Paula Burch-Celentano

Engineering Health in Africa

Article by Fran Simon

When Bob Lathrop came from Canton, Ohio, to Tulane University he had in mind a career in biomedical engineering with a corporation. But after two months volunteering in eastern Africa this summer with Engineering World Health, Lathrop's interest is leaning toward more social ventures.

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photo by Bob Lathrop

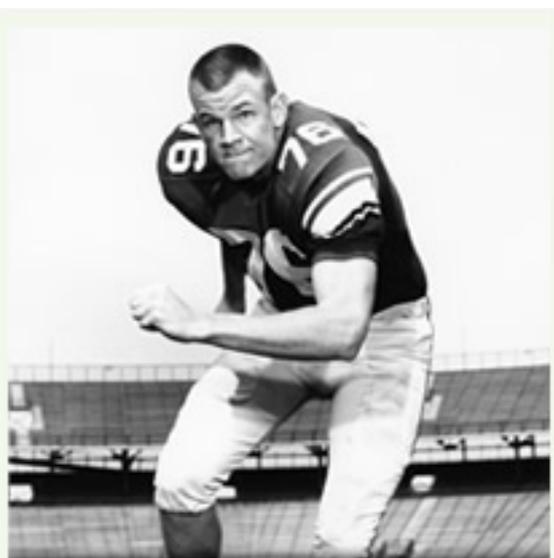


photo from Tulane Athletics

Memory of Classmate Felled in Vietnam Inspires Scholarship 40 Years Later

Article by R.M. Morris

Throughout his career, Mike Goodrich carried with him the memory of Tulane classmate Tim White, a brilliant young civil engineer tragically killed in a helicopter crash in Vietnam. Now, more than 40 years later, Goodrich has given White's memory and legacy a permanent place at Tulane in the form of a new scholarship in his name.

"It's something I've always wanted to do in his honor," Goodrich said. "I never forgot him. He had quite an influence on my career."

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✉ candy@tulane.edu

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INVESTING IN SSE

Philanthropy plays a critical role in our success. The School of Science and Engineering relies heavily on the support of our alumni and friends to fulfill our mission of fostering and promoting innovative scholarship, transformative research, and creative inquiry.

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Staff Excellence Award for Humanitarianism

Article by Belinda Lacoste

His friends and co-workers in the School of Science and Engineering might say Brett Tribou is a guy who knows how to make things happen. According to Tribou, Tulane University is a place where things are happening and he's thrilled to be a part of it.

Tribou's enthusiasm clearly extends beyond his work as an administrative secretary in the chemical and biomolecular engineering department. In December 2010 Tribou was chosen to receive the Tulane Staff Excellence Award for humanitarianism.

"This award was a surprise and it was overwhelming because I don't feel like I did anything extraordinary," Tribou says...

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Upcoming Events

2011 Science and Engineering Alumni Awards Celebration

Thursday, April 7, 2011

6 PM – 8 PM

Lavin-Bernick Center for University Life – 1834 Club – Room 215

All Science and Engineering alumni are invited

2011 Tulane Engineering Forum

Friday, April 15, 2011

8:15 AM – 5 PM

Ernest N. Morial Convention Center

Registration is required »

[View All Events »](#)

2011 Science and Engineering Graduation Celebration

Thursday, May 12, 2011

6:30 PM

Immediately following the conclusion of the Undergraduate Ceremony

SSE Corner – Wave Good Bye Party – Mardi Gras World

All graduates and their guests are invited