

# engineeringNews

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OLGA WISNIA PHOTO



## BEST IN THE BAND

**INSTRUMENTAL:** Yes, we're biased, but the Cal Marching Band wouldn't be as great without the 27 engineers (out of 233 members) who are in it this year. Here, a group of them pause for our photographer after practice on September 2. They are, from left, EECS/Physics senior Albert Liu (baritone horn), ME senior Colin Hawley-Snow (alto saxophone), CEE sophomore Nathaniel Wagner (bass, also called marching tuba), CEE sophomore Bryce Townsend (alto saxophone), CEE junior David Umberg (snare drum), EECS sophomore Austin McGee (trumpet) and EECS sophomore David Clarino (mellophone).

## Happy Birthday NE

Department celebrates 50th anniversary



RACHEL SHAFER PHOTO

**NEXT-GENERATION NUKEE:** NE/EECS senior Brian Frisbie decided to major in NE after experiencing the rolling blackouts of California's energy crisis in 2000 and 2001.

The College's smallest department marks a big milestone this year with a special colloquium commemorating its 50th anniversary. The NE community will welcome back alumni and friends to a two-day event September 19th and 20th showcasing the department's history and contributions to the nuclear engineering field.

"The work of three generations of nuclear engineers has given us the tools to solve some of humanity's

most pressing problems, offering solutions that are critical to preserving our health, security and environment and our access to clean and abundant energy," says NE professor Per Peterson.

The colloquium will also honor two retiring professors. NE professor Bill Kastenberg will end his career after 42 years with UC; NE professor Don Olander will retire after 50 years at Cal.

Olander was one of the first to join the depart-

*Continued on page 2*

## POP QUIZ



What did you think of the tree sitters' protest?



**Emmanuel Adeagbo, EECS senior**

"Sometimes you gotta know when to call it quits. They had to come down eventually."



**Aditya Medury, CEE grad student**

"It's good that freedom of expression can be used by citizens in the United States."



**Uyen Nguyen, EECS senior**

"They were doing what they believed in, but it wouldn't have done any good."



**Eric Stone, CEE grad student**

"I feel like they didn't really accomplish much for being up there two years. They got more attention than anything."

# Happy Birthday NE

Continued from page 1

ment, which was founded in the fall of 1958 at the height of America's atomic age. It became UC's first and only nuclear engineering department.

A decade later, the department had grown to 95 graduate students. That same year, researchers were running studies using a complete, one-megawatt nuclear reactor that had been installed two years earlier in the basement of a newly minted Etcheverry Hall.

By the 1990s, nuclear power and technology had fallen out of public favor, and the NE department, like others around the country, saw its funding and enrollment decline. When the City of Berkeley went nuclear-free in 1986, the university removed the nuclear reactor.

Yet the department persevered. It poured its brain power into radioactive waste management research and emerging medical applications and continued to attract bright and motivated students.

Students like NE/EECS senior Brian Frisbie. He's part of a new generation of nuclear engineers who are seeing the pendulum of public opinion swing back in favor of nuclear energy and security.

And the department is seeing a rebirth. Its funding grew from \$4.07 million in 2004–2005 to \$6.82 million in 2006–2007. Last year, 53 undergraduates and 55 grad students were enrolled.

"Fifty years ago, nuclear energy was this fantastic thing that promised to solve our country's energy problems," Frisbie says. "It's always been a very viable solution. Now we're coming back to those original days of excitement. I think the colloquium isn't just about the department's 50 years, but a celebration that nuclear engineering itself is coming back."

**YOU'RE INVITED:** On Friday, September 19, from 2 to 5 p.m., the NE Department (4155 Etcheverry Hall) will host an open house and lab and campus tours.

For additional colloquium events and activities, see website below. ■



<http://anniversary.nuc.berkeley.edu>

# NE Department Milestones

**1958** – The new department is housed in temporary huts built as dorms for the Navy's V-12 program during World War II. Later, the dorms were razed for today's Faculty Glade, and the department moved to Etcheverry Hall.

**Early 1960s** – Department chair Thomas Pigford interviews faculty candidates on his sailboat in the bay. One candidate tumbles off the boat during his interview.

**1976** – Professor Olander publishes *Fundamental Aspects of Nuclear Reactor Fuel Elements*, a classic text in the field.

**1980s** – Professor Virgil Schrock's research contributes to the understanding of thermal-

hydraulic phenomena critical to the safety of current reactors, enabling concepts for future generations of passively safe nuclear reactors.

**1997** – NE Ph.D. student Darren Bleuél launches "Nukees," a comic strip about life as a nuclear engineering student. It is still published in the *Daily Cal*.

**2005** – NE professor Jasmina Vujic becomes the first female nuclear engineering department chair of a Top 10 U.S. university.

**2006** – Passive safety features studied at UC Berkeley in the 1990s are integrated into a majority of new reactor utilities selected for construction licenses.

## THE COEFFICIENT: PEOPLE INSTRUMENTAL TO COLLEGE LIFE

### Gordon W. Long

**Title:** Principal laboratory mechanician

**His job:** Together with Mick Franssen, manages the ME Student Machine Shop in the basement of Etcheverry Hall, a workshop open to ME, NE and CEE students. Trains students to safely operate shop machines and tools. Provides guidance for students designing and manufacturing components for projects.

**Impact:** Trains 150 students per semester; supports project-based classes and Cal's solar, Formula SAE and Supermileage vehicle teams and the Steel Bridge team.

**Accolades:** ME honor society Pi Tau Sigma's Instructor of the Year Award 2005; Chancellor's Outstanding Staff Award 2003

**Memorable projects he's seen:** A variable velocity bike headlight, which optimized the light beam as you pedaled faster for improved night vision, and a pizza slicing machine.

**All in the family:** His father began as a Navy aviation machinist; his grandfather was a tool and die maker.



RACHEL SHAFER PHOTO

**SHOP KEEPER:** In Gordon Long's world, machine learning is just that (safety glasses required). Says ME senior Doug Pan of the Supermileage Vehicle Team, "I've come to realize that creating a model in SolidWorks or AutoCAD is the easiest step, and without Mick and Gordon's combined assistance, my team and I would not be half as capable."

**What you didn't know:** In 1991, he danced with a Japanese modern dance and theater troupe, Harupin-Ha, and performed in Tokyo.

**Hobbies:** Collects Japanese carpentry tools and plays old time, country and ragtime tunes on the guitar.

**Last word:** "It's okay to make mistakes here," Long says. "If a part doesn't turn out the way you envisioned, that's okay. We're not grading you. It's all part of learning. The most satisfying part of my job is giving students some hands-on experience so they can not only design things but also manufacture them." ■



## Calling entrepreneurs

All UC Berkeley students and faculty are invited to participate in the 2008 Venture Lab Competition on Thursday, October 2. Judges are looking for groups who demonstrate an innovative solution to one of today's pressing problems. Up to four winning teams will get help starting their ventures; prizes include \$10,000 in funding as well as a \$2,000 budget for office furnishings and supplies. Teams must apply by September 21. For applications, rules and details, visit <http://cet.berkeley.edu/>.

## Climate change workshop

On Thursday, September 25, CITRIS will present "How Can China and the U.S. Work Together to Address Climate Change?" a workshop on regulating global emissions sponsored by the Federation of American Scientists. The event will begin at 10 a.m. in Sibley Auditorium, Bechtel Engineering Center. For details, visit <http://www.citris-uc.org/FAS>.

## Engineering career fairs

Quick reminder! The EECS Career Fair will take place on Wednesday, September 24. The Biotech and Bioengineering Career Fair will take place on Wednesday, October 1. For more details, visit the Career Center at <http://career.berkeley.edu>.

## Tinker Day

Engineers and non-engineers are invited to Tinker Day, which takes place every Friday from 2 to 5 p.m. in the north foyer of Hesse Hall. Come tinker on your projects or learn new tinkering skills. For information, e-mail Romy at [romy@berkeley.edu](mailto:romy@berkeley.edu).

## MIT dean to give talk

On Thursday, September 25, Subra Suresh, dean of engineering at MIT, will deliver a lecture entitled "Materials Science Approaches for the Study of Human Diseases," the first in the MSE Department's Dow Distinguished Lecture Series. The event begins at 4 p.m. in 348 Hearst Memorial Mining Building. A student poster session starts at 3 p.m. For more information, go to [www.mse.berkeley.edu/seminars.php](http://www.mse.berkeley.edu/seminars.php).

## Add/drop course deadlines

The final deadline to drop Non-Early Drop Deadline Courses is September 26 at 3:45 p.m. The final deadline to add a course is September 26 at 11:59 p.m. Follow the procedures listed at <http://coe.berkeley.edu/students/current-undergraduates/courses-scheduling/add-drop-change-grading-option-deadlines-instructions/>.

## Facebook jobs

Addicted to Facebook? Get paid for it! Facebook will hold a student recruitment infosession at 5 p.m. on Tuesday, September 23, in 521 Cory Hall. For more details and a list of other infosessions, go to [www.eecs.berkeley.edu/IPRO/recruitment.shtml](http://www.eecs.berkeley.edu/IPRO/recruitment.shtml).

## Google jobs

Apply for full-time positions at Google by September 26. For applications and more information, visit [www.google.com/support/jobs/bin/static.py?page=students.html&sid=technical](http://www.google.com/support/jobs/bin/static.py?page=students.html&sid=technical). Google will be on campus October 10 to do interviews at the Career Center. The company will start accepting resumes for internships in November.

## WHAT YOU BROUGHT TO SEMINAR AND WHAT IT SAYS ABOUT YOU:



# < of note >



BioE alum **Denis Lam** (B.S.'07 BioE) is leading the charge to address the high incidence

of chronic hepatitis B among Asians and Pacific Islanders through a campaign called "Cal Hep B Free." Hepatitis B (HBV) is the leading cause of liver cancer and is often transmitted at birth. Even if you feel healthy, you may be at risk. There are often no symptoms, so get yourself tested! The Tang Center is currently offering free screenings. By participating, you can also enter a contest to win \$1,000 for you and your student club. Get all the details at <http://calhepbfree.org>.

## OFFICE HOURS

An interview with CEE professor James Rector

*Rector earned his B.A. in mathematics from the University of Wisconsin-Madison in 1981 and his M.S. and Ph.D. in geophysics from Stanford University in 1984 and 1990, respectively. He joined the Berkeley faculty in 1992 and focuses on exploration geophysics and applied seismology.*

to find voids and caves in the mountain. Then the consortium ran out of money, so we never found the treasure. But what we learned and the technologies we developed became the foundation for my company, Berkeley GeoImaging."

**Call him:** Jamie

**Teaching this fall:** CE C178, Applied Geophysics, and CE 92, Introduction to Civil and Environmental Engineering

**Office hours:** Monday and Wednesday, 11 a.m. to 12:30 p.m.

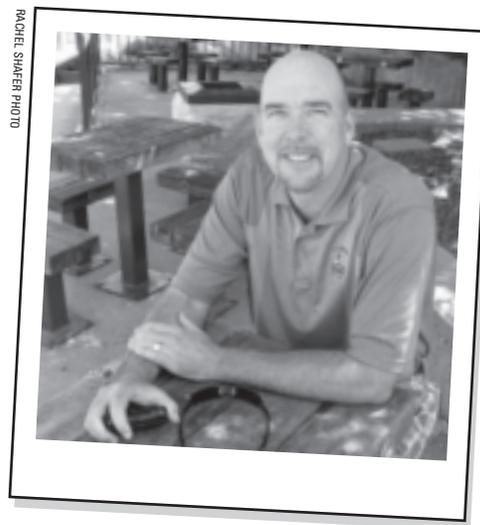
**Ringtone on his Blackberry:** "I Wanna Be Sedated" by the Ramones or "Add it Up" by the Violent Femmes

**Has a weakness for:** "Great Danes. I have two. They're sweet, sweet animals."

**When people find out he teaches at Berkeley:** "Yeah, I tell them I'm a geophysicist, and they're usually like, 'Oooh. You must be smart.' My wife tells people I'm world famous... in whatever the hell it is I do. I consider myself a scientist, not an engineer. I'm most interested in the why."

**If he could teach any course:** "The history of jazz. I love jazz and I played professional jazz piano for many years. I still gig occasionally. I also sing with the Monks' Chorus at Christmas. It's a male vocal group that started over 100 years ago. We sing Latin drinking songs."

**Most interesting paper he's ever presented:** *3-D Seismic Exploration for the Victorio Peak Treasure*. "Back in my early days here, a consortium of individuals approached me about helping them find a gold treasure they thought was buried in a New Mexico mountain. So we essentially built a brain scan for the mountain. It worked! We were able



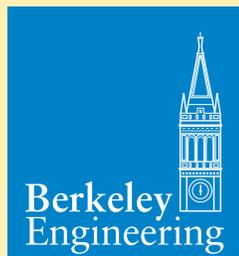
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**How students today differ from his student days:** "Their math skills are not as strong, but they're smarter. I don't think I could get into Berkeley now."

**Biggest problem facing his field:** "The lack of education about natural gas — [Senator] Joe Biden [the Democratic nominee for vice president] didn't know it was a fossil fuel! I think the attention being paid to biofuels at Berkeley is a big crock of hooey. Natural gas is the best near-term solution to our energy needs. It's the bridge to sustainable solutions like solar, wind, even tidal. The key is finding better, noninvasive ways to find and extract it. And yes, I believe in conservation. I'm currently installing solar panels on my roof and a solar water heater in my home."

**Final lecture would be on:** "Golf course architecture and design. We'd go study at Royal Dornoch [the renowned golf course in Scotland]. Yes, I like to golf." ■

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