

engineeringNews

FEBRUARY 19, 2009 VOL. 79, NO. 35

RACHEL SHAFER PHOTO



RESEARCH REVEALED

LET ME EXPLAIN: EECS Ph.D. student Isaac Liu discusses his poster, entitled “A Precision Timed Architecture for Timing Predictability and Repeatability,” with fellow EECS Ph.D. student Yang Yang. The researchers in the Center for Hybrid and Embedded Software Systems (CHESS) were among several students presenting their work during open houses at the Berkeley EECS Annual Research Symposium on February 12.

Opening soon...

CITRIS building dedication on Feb. 27

COE PHOTO ARCHIVES



ELEGANT: A rendering of the new Sutardja Dai Hall.

Get ready for the fences to come down! You're invited to celebrate completion of the Center for Information Technology Research in the Interest of Society (CITRIS) headquarters building next

to Davis Hall on Friday, February 27. The event will begin at 2:30 p.m. with a ribbon-cutting ceremony and official remarks to formally dedicate the building, named Sutardja Dai Hall.

Afterward, you'll have an opportunity to see parts of the building not normally open to the public through guided tours and interactive exhibits during an open house. A reception will follow. (Registration details on the next page.)

Built with public and private funding, Sutardja Dai Hall honors those fundamental to the building's success, in particular the late Dean A. Richard Newton, who had a key role in the building's conception and construction.

Continued on page 2

POP QUIZ



What class do you recommend other engineers take?



Sarah Price, CEE junior
 “Take E 28, Basic Engineering Design Graphics. I never had any computer skills before coming here, and it taught me AutoCAD and SolidWorks.”



Otto Lu-Steffes, ME/MSE junior
 “E 45, Properties of Materials. It gives an overview of materials science that every engineer should know. It's important to know what you're building with.”



Vishal Singh, NE junior
 “NE 101. It's a broad survey of everything from decays to technology and covers the whole breadth of nuclear engineering.”



Francisco Lozano, CEE sophomore
 “Physics C 10, Physics for Future Presidents. It gives you an understanding that the things you're learning are applicable and viable in society.”

Opening soon...

Continued from page 1

The approximately 141,000 gross square feet of space will house mostly interdisciplinary research laboratories associated with CITRIS; one-third of the building (its entire north wing) is dedicated to the Marvell Nanofabrication Laboratory, which will feature two cleanroom facilities.

Administrative offices for CITRIS will also be located in the hall, along with the Dado and Maria Banatao Institute@CITRIS Berkeley, the Cal component of CITRIS's multi-campus research effort. Other highlights include a 149-seat auditorium, conference rooms and a technology museum.

Students will find a relaxing place to eat and study at the Qualcomm CyberCafe, which will open by this summer. Located on the plaza level, it will feature tables and couches, a wireless AirBears connection, Peet's coffee and tea and catering by Cal Dining Services (bring your Cal 1 card!). Hours may extend into the early evening or later, depending on demand. On the same floor will be three classrooms with new audiovisual equipment.

The building's construction included several sustainable technologies such as the use of recycled fly ash in the concrete and an window sensor system that will detect open windows and shut down local ventilation systems to conserve energy.

After its formal dedication, the building will remain closed for a few more weeks as finishing touches are made on interior spaces; it's tentatively scheduled to open by April. Room reservation requests will be accepted beginning June 1.

For now, the new plaza west of the CITRIS headquarters will be open and offer a generous walking corridor for those traveling from North Gate toward Bechtel Engineering Center and the center of campus.

Engineers will get a brief respite from construction until the college begins a new project along Hearst Avenue in April. The Naval Architecture Building will undergo an interior renovation and new addition to house IEOR faculty and the Blum Center for Developing Economies. These projects will be completed by summer 2010. Due to construction, pedestrians traveling north to Etcheverry and Soda Halls must continue to access them via the crosswalks at North Gate or LeRoy Avenue. ■




To attend the dedication, please register at <https://forms.coe.berkeley.edu/citris-opening>.

Brewed Awakening Coupon

Buy one drink & get a second drink half off
(of equal or lesser value)

Please ask about our catering



Redeemable at
1807 Euclid Ave.
Berkeley, CA 94709
Ph: (510) 540.8865

Courtesy of **engineeringNews**

Not valid with any other discount, coupon or offer

Expires 5/31/2009

FACULTY RESEARCH SNAPSHOT

Oliver M. O'Reilly, ME

Joined faculty: 1992

Research areas:

Mechanics of the spine, mechanics of plant growth, wave energy converters

Current project:

"Dynamics of the human spine." The goal, in collaboration with UCSF researchers, is to develop a framework for analyzing spine dynamics. Future applications include advances in treatments for back pain as well as improved guidelines for spine-related surgical procedures. "This project got started when former students of mine, now at UCSF, asked me questions about measuring the motion of intervertebral discs, and that has led to a great collaboration with [UCSF professor of orthopedic surgery] Jeff Lotz."

Students working for him: Eight (including three undergraduates)

Percentage of his work week spent on research: 25 to 40

Favorite place to work: The dining room table at home. "There are no distractions, no e-mail. If I'm burning to



MARIA ARANAS PHOTO

RESEARCH VIA CLASS: This semester O'Reilly is teaching ME 104, Engineering Mechanics II, and ME 275, Advanced Dynamics. "Teaching teaches you the importance of clarity, and clarity is just as important in research. Also, a fair number of my papers were written because of questions that came up in my teaching, either questions students had or, say, when I was getting ready for lecture and discovered something wasn't right or didn't make sense."

work on an idea, I go home, close the door and grab pen and paper."

On his research wish list: Grants totaling \$200,000 a year to support three to four more graduate students exploring the mechanics of plant growth

Last word: "The discovery process in research requires patience above all. Most ideas won't work. It's a voyage. You're not certain where you will go, but you always need to leave room for wandering. That wandering can be very fruitful." ■

announcements



Get the complete College calendar at www.coe.berkeley.edu/events.

Eng4Kids

Engineering for Kids, which introduces engineering to local fourth through sixth graders, will be held on SATURDAY, FEBRUARY 21. The event is organized by multiple undergraduate engineering societies and will consist of hands-on activities to introduce important principles from a variety of engineering disciplines. For more information, visit <http://pts.berkeley.edu/e4k/>.

CITRIS dedication registration

Construction is almost over! Come celebrate the dedication of the new CITRIS headquarters building (next to Davis Hall) on FRIDAY, FEBRUARY 27, at 2:30 p.m. To attend the dedication, please register at <https://forms.coe.berkeley.edu/citris-opening>.

E 190 Placement Test

EECS, ME, IEOR and Chemical Engineering majors must pass Engineering 190 in order to graduate. If you are planning to enroll in E 190, you need to take the placement test, offered three times a year. The next placement test is MONDAY, MARCH 9, from 5 to 7 p.m., in Sibley Auditorium, Bechtel Engineering Center. You don't need to sign up for the test, but you will need to check in with your student I.D. For more information, contact tech_comm@berkeley.edu.

Lockheed Martin Technology Day

Bring your resume and chat with practicing engineers from Sandia National Labs, Information Systems & Global Services, and Space Systems. See demos and exhibits, win raffle prizes and enjoy refreshments. The event will take place on TUESDAY, MARCH 10, from 10:30 a.m. to 3:30 p.m., in Wozniak Lounge, Soda Hall.

\$30,000 in prizes

Have an idea that demonstrates the ability of IT to address a major societal challenge? Consider entering it into the fourth annual CITRIS White Paper competition, which will award \$30,000 in prizes. White papers should be 5 to 10 pages in length, not including appendices. Deadline to apply is MONDAY, MARCH 23. For more details, visit www.citris-uc.org/Big-idea-deadline-2009.

Commencement registration

The 2009 Commencement ceremony will be a traditional all-college ceremony held on Saturday, May 23, from 8:30 a.m. to 12 p.m., at the Hearst Greek Theatre. Departmental receptions will follow at various campus locations. Visit the official website

www.coe.berkeley.edu/commencement beginning Wednesday, February 25, to register online to participate in Commencement and reserve your tickets. There is a six-ticket limit per graduating student. Registration deadline is MONDAY, APRIL 20. If you have questions, please contact Dawn Kramer at dkramer@berkeley.edu.

Teach E 98!

Want to share everything you wish you knew as a freshman engineer? We are looking for passionate instructors to teach E 98 in Fall 2009. E 98 is a fun DeCal class designed to help freshmen engineers get the most out of Berkeley. Each section meets one hour a week, with three instructors and 20 students. E 98 is an amazing opportunity to build teaching and communication skills, and it works around your schedule! Apply online at e98.berkeley.edu.

TXT ENGI

Ask a Kresge Engineering librarian your question(s) by texting 66746. Start your message with the keyword ASKENG1. A librarian will text you back an answer within two hours, Monday through Friday, 10 a.m. to 5 p.m. Questions asked after hours will receive a response the next business day. For details, go to www.lib.berkeley.edu/ENGI/txt_engi.shtml.

Ask an engineering student

Need advice about a class or professor? Curious about finding internships or research work? Worried about a grade? Interested in switching majors? Wondering if engineering is right for you? Send us your question (anonymity is fine, but please include your year and major) to engnews@coe.berkeley.edu. We'll have it answered by one of our student volunteers and publish the answer in an upcoming issue of *Engineering News*.

Answer to last issue's crossword puzzle



< of note >

An EJC for everyone?

Two seniors write a proposal to redesign engineering's student government, will host a meeting to debate



Her life celebrated

The campus memorial service for Jengyee Liang (B.S.'05 IEOR) will take place on Saturday, February 21, at noon in the

Clark Kerr Garden Room. The event, a celebration of Liang's remarkable life, is open to everyone in the Cal community.

Liang died on November 10 at the age of 25 after a three-year battle with lupus, an autoimmune disease. Among her many achievements at Berkeley, she served as president of Berkeley's chapter of the Institute of Industrial Engineers, worked as an ASUC senator and received the prestigious Bechtel Engineering Scholarship. She also volunteered for the Special Needs Aquatic Program where she taught swimming techniques to children with disabilities.

Read more about Liang and make donations in her honor at www.jengyee4ever.org. ■

Just two years ago, the Engineers' Joint Council (EJC)—our official engineering student government—established an officer position dedicated to helping clubs schedule a single room in Bechtel Engineering Center. Now technology allows for a simpler solution: Google Calendar. Many other functions of EJC have been replaced by technical tools, and EJC is more efficient. But it's also gone from being an important body to a dormant organization that merely distributes ASUC funds, a necessary function, but not one that alone can justify its existence.

EJC's weakened status is due to the fact that technology has replaced direct inter-societal interactions. These organic interactions could produce more activities like Engineering4Kids Day, E 98, Intro to Berkeley Engineering, and Engineering Week, which enrich the Berkeley Engineering experience more than any independent group could. But with less communication between groups, there's less cooperation and a diminished sense of community.

A hasty remedy would be to revert back to the traditional EJC structure, by re-implementing rigid officer positions and holding mandatory inter-societal meetings. However, these organizational traits are obsolete for our generation. We believe that what the engineering student community needs is an entirely new student government, one that works not independently of student groups but with them.

Here are some of our ideas, and we welcome the input of all engineers in formulating them. EJC must not be run at a tactical level. It shouldn't

coordinate events, even if they're jointly run by several societies. Instead, it should be a leadership body dedicated to supporting the 25-plus engineering student groups. For example, every semester, Tau Beta Pi has many more officer candidates than it can accommodate, whereas other clubs may be on the verge of collapse from a lack of dedicated officers.

A strategic EJC could be responsible for implementing policies to correct this problem.

Our new vision calls for an EJC constituted by more than just a dedicated and responsible officer core that harnesses technical

tools for day-to-day operations. We believe EJC also needs a student committee to analyze the current status of each society, identify overall social capital, relay findings via a public report and provide policy recommendations. Such a committee could also produce and maintain an overall student society five-year plan, so clubs wouldn't fall into inactivity when committed members graduate. The goal would be to promote a wide variety of healthy, active clubs over the long term and offer every engineer ample opportunities to get involved.

The rejuvenation of EJC will succeed only if the entire student community works together and jointly fabricates what could be a truly revolutionary engineering student government.

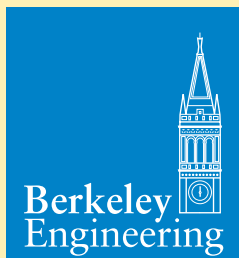
Please join us in sharing your ideas and discussing these prospects on Tuesday, March 3, at 7:30 p.m. in 120C Bechtel Engineering Center. Everyone is welcome. ■

—Written by MSE/BioE senior Ahmad Namvargolian and ME senior Sam Woodard



SAM WOODARD (LEFT) AND AHMAD NAMVARGOLIAN discuss their ideas to change current practices in the Engineers' Joint Council.

engineeringNews



University of California, Berkeley
Engineering News
312 McLaughlin Hall
Berkeley, California 94720-1704
Phone: 510 642.5857
Fax: 510 643.8882

engnews@coe.berkeley.edu

www.coe.berkeley.edu/news-center/publications/engineering-news

Published biweekly on Thursdays during the academic year by the Engineering Marketing and Communications Office, College of Engineering, University of California, Berkeley. Copy deadline is 4:00 p.m. on the Monday preceding publication.

Rachel Shafer
managing editor and writer

Megan Mansell Williams
reporter

S. Shankar Sastry
dean

Karen Rhodes
executive director, marketing and communications