

“Just call me Babak”

An essay by EECS senior Jaeyup Lee



PHOTO COURTESY OF DONOVAN LEE

In July, EECS Ph.D. student **Donovan Lee** (pictured, with wafer) received the “Best Student Paper Award”

for his paper entitled, “WetFET — A Novel Fluidic Gate-Dielectric Transistor for Sensor Applications,” presented at the 2007 International Symposium on VLSI Technology, Systems and Applications, held in Taiwan. The award honors the best-written student paper. Roger Howe, EECS professor Tsu-Jae King Liu and EECS Ph.D. student Xin Sun are coauthors.

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“Don’t call me professor or mister,” said the EE 20N instructor on the first day of lecture. “Just call me Babak.”

That was one way EECS lecturer Babak Ayazifar eliminated the gap between himself and his students. Another was “banzai.” He instructed students to shout out “banzai” whenever they wanted to take a break.

Banzai!

Although some professors can seem aloof, Babak is different. I believe he’s a remarkable professor.

I’m a transfer student and, during my first semester, everything was confusing. I decided to drop a course, which led me to Babak, my faculty advisor.

That was the first time I met him. I showed him my petition, and he helped increase my chances for approval. He was so likeable, I wanted to get to know him.

Babak was born in Iran in the late 1960s and immigrated to the United States when he was in high school. He earned his bachelor’s in electrical engineering from CalTech and his master’s and doctorate in electrical engineering from MIT, where he won the top graduate teaching award. In 2005, he joined the Berkeley faculty.

Last semester, I took EE 20N and discovered just how different Babak is. His lectures were exciting, and he was passionate about signals. At the start of each class, he woke us up with a dash of humor. Although class got harder, his sense of humor and enthusiasm kept it enjoyable. Every lecture was filled, even though the class was webcast.

Students also packed his office hours, sitting on chairs or on the floor. That’s because he didn’t just answer questions but gave mini lectures. He even held extra office hours for students doing poorly. He met with each one individually and gave study tips. Although his hours

were in the late afternoon, he never skipped them or came tired. He once said, “It’s a great day for me when I see the glitter of ‘I get it now’ on a student’s face.”

Before the first midterm, we got an e-mail from Babak around midnight entitled, “Time to Hit the Sack (Dr’s Orders!),” with detailed reasons why we needed to sleep. I hadn’t been able to fall asleep, but his e-mail eased

my worries and I slept comfortably.

Some of my classmates were talking after the test, and one said, “That was very hard, but I won’t drop this course even if I get an ‘F’ in it.”

Everybody likes him for many reasons, but mostly because he is a special teacher who cares for his students. He advises students to “Use your time wisely” and “Be just! Be just to yourself, your family, your friends and everyone else who’s had an impact on your life.” Whenever I’m tired and feel like giving up, Babak inspires me.

This essay is adapted from an IDS 140 assignment.

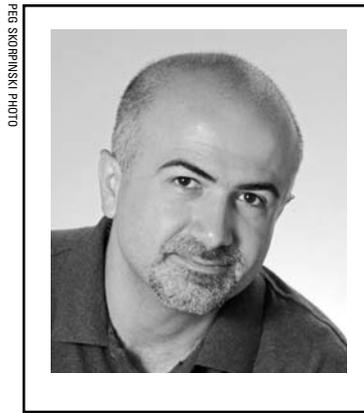


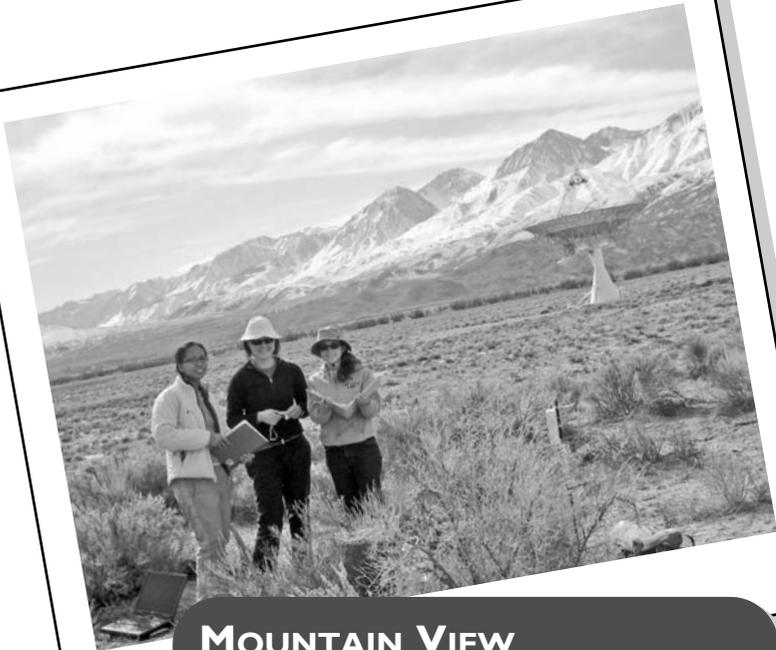
PHOTO COURTESY OF TINA CHOW

ADMIRER: EECS lecturer Babak Ayazifar

<http://www.eecs.berkeley.edu/Faculty/Homepages/ayazifar.html>



PHOTO COURTESY OF TINA CHOW



MOUNTAIN VIEW

SCIENCE IN THE SIERRAS: CEE graduate student Megan Daniels (right) and two Stanford graduate students install soil moisture sensors in Owens Valley. The team is working with CEE assistant professor Tina Katopodes Chow to understand lee waves and atmospheric rotors generated by strong winds over the Sierra Nevada.

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Mission Mongolia

ME designer researches IT systems on Mongolia's steppes

PHOTO COURTESY OF JASPAL SANDHU



HORSEBACK: Jaspal Sandhu (right) with a rural doctor in Mongolia.

Nomadic herders comprise one-third of Mongolia's population. To provide health care on the vast, open steppes, the Mongolian government operates a system of *bagiin бага эмч* or rural health workers.

These herders-trained-as-doctors require access to the latest medical information and provincial hospitals, which may take days to reach.

Technology offers hope. A well-designed information system could virtually shrink the distances. Information to diagnose an ailment, for example, could be a click away.

The operative word is "could." An experimental program sponsored by the Asian Development Bank is training some of these workers to use PDAs. That's where ME Ph.D. student Jaspal Sandhu, working with his adviser ME professor

Continued on page 2

What's the best place on campus to see the sunset?



Tesa Dinio, ChemE senior

I work up on the hill at the Lawrence Berkeley National Laboratory in the Molecular Foundry, and we have a view of the entire Bay Area. It's really beautiful.



Alex Wu, EECS senior

I'm kind of a homebody and I'm usually home before sunset.



Eric Ramos, ME master's student

It's pretty nice from the Terrace Café. There's a bench on top in the corner and on a clear day you can see San Francisco.



David Ball, CEE senior

The bench in the tree above Memorial Stadium on Tightwad Hill. And from the roof of my co-op, Kingman Hall.

Mission Mongolia

Continued from page 1

Alice Agogino, saw an opportunity.

Sandhu is a design engineer with a passion for international and rural health. While searching for his Ph.D. focus two years ago, he ran across the bank's grant proposal, and a light bulb switched on. "Only by understanding the personal, professional and organizational needs of *bagiin emch* can we develop systems and solutions that will be useful," he writes in an e-mail. In other words, the PDA program could make a difference, but let's understand the users first, then design the technology.

Sandhu put this theory into practice. He's now living in Mongolia, where he observes 15 health workers as they go about their daily lives. Since January, he's traveled more than 6,000 miles by microbus, jeep, motorcycle, horse and foot. His goal is to gain a comprehensive picture of the workers, observe the PDA program and provide design recommendations to the bank and Mongolia's Ministry of Health. The work will inform his Ph.D. thesis, which aims to improve design methodology.

Before he puts on his design hat, Sandhu is a social observer. He interviews, takes notes and photographs his subjects. He is learning the local customs and the Mongolian language. He builds relationships with hospital directors and government officials. And he tastes personal adventure. He's nursed himself out of illnesses, imbibed local drinks (tea, vodka and *airag*, or fermented mare's milk) and suspended his vegetarianism to accommodate rural customs.

"There are definitely hard days, but I've learned some flexibility since I've been here," says the former Intel and Nokia employee. On a recent trip, he journeyed 67 hours to meet a *bagiin emch* who had been given a PDA, only to find her not at home. Four hours later, she and her husband arrived on a motorcycle. "It didn't bother me, though it might have six months back."

Though research is progressing well, Sandhu says he'll be challenged to complete all his field research by January, when he returns to Berkeley. But he wouldn't trade it for the world. "I can honestly say that I don't want to be doing anything other than this work right now."

 Read Sandhu's blog at <http://jaspal.typepad.com>.

SUDOKU

Enter digits from 1 to 9 into the blank spaces. Every row must contain one of each digit. So must every column, as must every 3x3 square. The answer will appear in the next issue. Below is the answer to last issue's puzzle.

7	6	4	2	3	5	8	1	9
5	3	1	9	4	8	6	7	2
2	8	9	6	1	7	5	4	3
8	4	7	1	9	6	2	3	5
6	1	2	5	7	3	9	8	4
9	5	3	4	8	2	7	6	1
4	7	8	3	5	9	1	2	6
3	2	5	8	6	1	4	9	7
1	9	6	7	2	4	3	5	8

2				8				7
	7	3						6
		9		4		1	2	5
5	2	6	3				7	
		7	2		8	6		
	3				9	4	5	2
9	1	5		6		7		
7						2	6	
3				9				1

Puzzle by websudoku.com

Meet your ASUC reps

Winnie Kuo and Jason Louie plug you into student government

This fall, two engineers took their seats on the ASUC Senate for a year of solving campus problems through the student government's legislative branch. The Senate controls the ASUC's \$1.4 million budget and represents the voice of UC Berkeley students.

Winnie Kuo (BioE senior), Apple Engineering party
What are your goals?

Expand academic services available to students such as building hours to keep study lounges open longer. Bechtel Engineering Center closes at 6 p.m., and I think it should stay open later, especially around finals season. I will also work with the other senators to foster community building between different groups on campus, for example, between engineers and the business community.

What can the ASUC do for engineers?

ASUC grants! If your group needs to go to a conference, say, ASUC grants can provide assistance. You should apply at least three weeks in advance. Contact me for more information. Also, if you have any concerns about campus policies, we can present them to the Senate.

Contact her at winnie.kuo@asuc.org.

Jason Louie (IEOR senior), Unite Greek party

What are your goals?

I'm interested in educating Generation Y on how to achieve financial stability. For example, how can you pay off debt from student loans and credit card debt, yet at the same time invest for retirement?

What can the ASUC do for engineers?

If student groups need money, we can help fund their causes through grants. We can also act as a liaison between the College of Engineering and other colleges.

Contact him at jjlouie@asuc.org.



JASON LOUIE

WINNIE KUO

RACHEL SHARER PHOTOS

Speed Networking

You've heard of speed dating? Welcome to Speed Networking — a whirlwind evening of one-on-one networking! Meet nearly 20 of our successful alumni in just one hour. Get tips on how to make a personal pitch for your job campaign, or get assistance in feeling more confident when talking in a business setting. This program is open to just 20 engineering students on a first come, first served basis. To register, e-mail your name, major and projected grad year to bears@berkeley.edu. For more information, visit www.coe.berkeley.edu/Alumni.

Senior Gift Campaign

Come join the Senior Gift Campaign Committee and make a huge impact on your College! In addition to raising crucial income for the Annual Fund, the campaign's goals are to encourage student participation, build your resume, network with other graduating seniors and alumni and show your school spirit. You don't need to

be a senior to get involved. To learn more, contact Tara McCulloch at tmcculloch@berkeley.edu or 643-6291.

E 190 Placement Test

Planning to take E 190 next semester? You need to take the placement test first. The next test will be Tuesday, October 16, from 5 to 7 p.m. in Sibley Auditorium, Bechtel Engineering Center. You do not need to preregister. Just show up a few minutes early with your student ID and something to write with. There are no make-up exams; the next test will be in March. For more information, e-mail sokolik@berkeley.edu.

More than meets the eye

Don't miss the showing of the movie "Transformers" on Friday, October 19, at 7 or 9:30 p.m. in Wheeler Auditorium. Cost is \$3 with your student ID or \$5 general admission.



career corner

WITH EECS ALUMNA ERIKA SANCHEZ

Erika Sanchez (B.S.'04 EECS) completed four internships during her college career at IBM, IBM's Almaden Research Center and at Boeing. After graduating, she landed a job at Boeing as an embedded software engineer based in Orange County. This year she became an enterprise auditor for Boeing, traveling to the company's different divisions within the United States and abroad to investigate their business operations.

How did internships help your career?

Internships really helped me narrow down what I liked and mainly, what I didn't want to do. After a few internships, I knew I didn't want to solely be a computer scientist. I had an internship where I was in the lab coding all day and that wasn't for me. I need more people interaction in my job. My internship at Boeing also helped me land a job I was very interested in within the company. It's a lot easier to secure a position when you're in the company and have access to internal job searches and understand the context of the job description.

What should students do now to prepare for a career?

One of the biggest lessons I've learned so far is how important communication is. If you can't present your ideas clearly, no one will understand them or fund them. Get involved in any student group and get some leadership experience. You do a lot of work in industry that is nontechnical, such as documenting your ideas, speaking in front of groups and presenting your ideas. In addition, networking plays an extremely important role in industry, and student groups provide an arena to practice your networking skills.

What skills did you learn in college that help you now?

I attend business dinners and am glad I learned business etiquette tips from a sorority workshop in college. I also have applied the logic learned from my engineering courses to my daily work, as well as the ability to multitask learned from my college activities.

What are some things to think about while considering a potential job?

Most likely, this won't be the job you'll be in for 30 years. The most important things are that you're comfortable with the people you work with and that you like your geographical location, because that's where you will form your networking base.

Have additional questions? E-mail erika.i.sanchez@boeing.com.