

engineeringNews

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RACHEL SHAFER PHOTO



NEW PRESIDENT, NEW ERA

CROWD APPEAL: Hands rose in approval at the inauguration of Barack Obama as the nation's 44th president on Tuesday, January 20, shown on a jumbo screen in Sproul Plaza. "We will restore science to its rightful place," Obama told the world in his inaugural address. BioE junior Tu Tran was among the 10,000 or so at Sproul. "I thought it was inspiring and motivating," he says. "It makes me want to do my part in society to effect change." Turn to page four for EECS junior Max Zheng's essay on Obama's science and technology proposals.

Job outlook? "Fair"

What to expect this year, career-wise

RACHEL SHAFER PHOTO



PICK ME: Students line up to speak with Intel recruiters at the EECS Internship Fair.

At the EECS Internship Fair on January 22, students crowded around tech company recruiters to distribute their resumes, and Pauley Ballroom buzzed with nervous energy. It appeared to be

college recruiting as usual, despite the news that some companies represented, like Microsoft and Intel, had recently announced job layoffs.

While the poor economy means job gloom for most students, engineering majors can find good opportunities, sources say, particularly internships. "We are currently recruiting for multiple full-time, entry-level opportunities," reports Doug Fauth, a recruiter for video game developer Activision. "And our intern/co-op hiring plan for 2009 indicates about a 20 percent increase from 2008."

Tom Devlin, director of UC Berkeley's Career Center, reports that in a December survey of the

Continued on page 2

POP QUIZ



How is the global recession affecting you?



Akshay Banesh, CEE junior

"The construction industry has slowed down. Even in India, it's hard. We're hoping that Obama will make major infrastructure changes that will put things back on track."



Ami Domadia, EECS senior

"I'm really depressed about going into a career. The job hunt is scary right now. Friends who graduated last semester got very few interviews and are still looking for jobs."



Jessica Fitzgerald, EECS senior

"It hasn't really affected me much. I'm in my own everyday world here. You hear about it on a daily basis but don't necessarily see the impact. I'm not exactly sure why."



Andy Tran, BioE freshman

"People around me are affected, so I guess that affects me, too. One or two in my family have been laid off, and food prices are higher."

Job outlook is “fair”

Continued from page 1

center’s 700 most active employers (including engineering and technical industries), 45 percent said they would be hiring the same or more full-time employees this year than last, and 65 percent said they would be hiring the same or more interns.

“For engineering majors, it’s a fair job market,” says Devlin. “It’s far better than the general marketplace for all workers.” (Indeed, a UCLA economic report in December predicted that the California unemployment rate will reach 9 percent this year, and that there will be weak job growth through 2010.)

Still, the global recession is making it tougher for engineers than in years past. Some say they have friends who graduated in 2008 who are still trying to find jobs.

Fauth paints it this way. “Companies might be a little more cautious because of the economy, and you might see fewer companies recruiting on campus because of limited travel budgets. Job postings might be a little slower in getting approved, and traditional time frames to recruit might be pushed closer to graduation or summer.”

Worried engineers are adjusting. “I think a lot of small companies have scaled back their internship programs, and the openings at the bigger companies are already being filled,” reports CEE sophomore Madeline Ziser. “I’m going to try to send out as many resumes and cover letters as I can before the March [Civil and Environmental Engineering Career] fair. I hope this will give me an edge on the competition.”

Devlin and Fauth recommend that engineers exercise patience in finding a job and flexibility with regard to job type, industry and location. Although a job may not be perfect, consider whether it will position you better for the next opportunity, Devlin advises.

Graduate school is another option, but Devlin cautions that students should apply for the right reasons. Those hoping to wait out the economy in school and then demand a higher salary with a more advanced degree under their belts might find that the strategy backfires. “Hiring someone with a bachelor’s degree is a cost-cutting measure for companies,” Devlin explains. But go to graduate school if that’s what you want, he says, especially if you’re ready to specialize or pursue a passion.

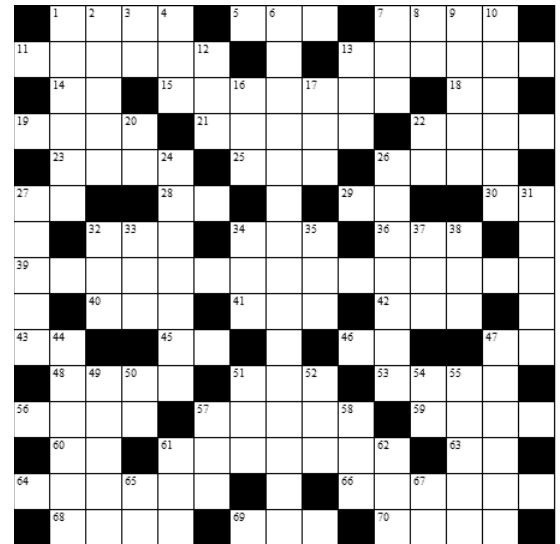


career.berkeley.edu/

Engineering and science crossword puzzle

ACROSS

1. Asynchronous Communication Interface Adapter
5. Compound used as the frequency determining element in microwave oscillators
7. Basic element
11. Luminous atmospheric phenomenon
13. Set a steady-state voltage
14. Chemical symbol for radium
15. Ham radio operator
18. Chemical symbol for chlorine
19. Signal amplitude degradation due to inefficiency
21. Cambridge _____, technical book publisher
22. Cable television, abbr.
23. Moon of Saturn discovered in 1672
25. Error checking scheme, abbr.
26. No insulation
27. 0.001 of an amp
28. Akin to an EE, CE, AE, etc.
29. 10[^]1 numerical prefix
30. Morse Code for “from”
32. Innovative Power Products, Holbrook, NY, abbr.
34. Line of Sight; Linux Operating System
36. Filter type
39. Performing a calculus function
40. Signal-to-noise ratio, abbr.
41. The system than converts common website names to IP addresses, abbr.
42. Negation prefix
43. Millihenry, abbr.
45. I.602E-19 Joules
46. Kilocycles, abbr.
47. European equivalent to the U.L.
48. Volts divided by resistance
51. The cell band above DCN
53. Online auction site
56. Volt, meter, pint, pound, e.g.
57. Joined a male and a female connector
59. Quickly changing portion of waveform
60. Ham abbreviation for



PUZZLE COURTESY OF RCFAE/DOM

“distant station”

61. One type of filter construction used in the 500 MHz to 1.5 GHz range
63. Army-Navy spec
64. Sets the flip-flop output to “0”
66. College grounds
68. Unit of energy, pl.
69. Ham’s code for “Entire net stand by.”
70. Logical negation, pl.

32. Bands between RF and baseband

33. Circuit for firing a magnetron, abbr.
34. Semiconductor lamp
35. Official Space Shuttle designation, abbr.
37. Permeability-Tuned Oscillator
38. Heatsink feature
44. A radio operator’s name
47. Constellation: The swan
49. A circuit that takes two or more input signals and produces an output that includes the sum and difference of those signal frequencies

DOWN

1. Borealis or Australis
2. Hang the program
3. Galilean moon
4. Amateur Radio Association
6. Point of electrical contact between circuits
7. Powers pneumatic devices
8. Chemical symbol for tantalum
9. International phonetic alphabet letter “O”
10. Transitioned from solid to liquid phase
12. Unit of current
13. Data transmission pathway
16. Portion of a circle
17. A keyboard key
20. Chemical symbol for selenium
22. Chemical symbol for calcium
24. Units of current
26. Make equal
27. Short for modulator/demodulator
31. Symbol of the U.S.A.
50. Chemical symbol for platinum
51. Programmable logic device, abbr.
52. Japanese semiconductor and equipment manufacturer
54. Chemical symbol for beryllium
55. Change connector type
57. Akin to EEs, CEs, AEs, etc.
58. Type of data conversion device, abbr.
61. Stock symbol for Harris Communications
62. Computer communication scheme
65. Chemical symbol for silver
67. Chemical symbol for molybdenum

Answer will appear in the next issue.

< announcements >



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

Got summer plans?

Spend your summer in China, Taiwan, Hong Kong or Singapore in a research-oriented internship at a high-tech multinational or startup company. In a new pilot offered by the college's GLOBE program, students will be matched with college affiliates such as Microsoft Research Asia for a one-of-a-kind opportunity. Applicants must be engineering majors with upper division standing or above (graduate students are also eligible) and must be proficient in spoken and written Mandarin Chinese. Deadline to apply is MONDAY, FEBRUARY 9. For more details and to apply, visit <https://globe.berkeley.edu/index.htm>.

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/>.

Save the date

Construction is almost over! Come celebrate the opening of the new CITRIS Headquarters building (next to Davis Hall) on FRIDAY, FEBRUARY 27, at 2:30 p.m. Details at coe.berkeley.edu/citris-opening.

TXT ENGI

Ask a Kresge librarian your question(s) by texting 66746. Start your message with the keyword ASKENGI. 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.



PHOTO COURTESY OF AUREN HOFFMAN

< career corner >

WITH IEOR ALUM AUREN HOFFMAN

After graduating from Cal, Hoffman (B.S.'96 IEOR) had founded and sold three Internet companies by the time he was 30. From 2003 to 2006, he served as chairman of Stonebrick Group and chairman of the Connector Group (Silicon Valley 100). He's an active angel investor or adviser to several other companies. Today, he's CEO of Rapleaf, which helps business-to-consumer companies give their consumers a better experience by providing automated search services for each consumer.

What do you like about your job?

I have the best job. I get to work with the smartest engineers in the world (many of them Cal grads) and see all the cool things they build.

How did you go about finding your interest or passion?

I once did a summer internship for Pacific Telesis (the holding company for Pac Bell ... which was the inspiration for Dilbert). Everyone got to the office exactly at 9 a.m.

Everyone left exactly at 5 p.m. Most people spent all day playing Minesweeper. This was a great experience because I realized I never wanted to work for a big company and, since then, I never have.

What do you recommend students do during school to prepare for a career?

Don't concentrate on getting good grades. That's not going to get you any job. Only grad schools look at grades. Concentrate on building the skills to solve hard problems and apply knowledge. And spend time building cool things that you can be proud of and show off to others.

What's the secret to landing a job?

Never check a job board. Spend time determining which company is right for you and apply directly to the company. Don't send your resume to the recruiter. Apply directly to the hiring manager and tell them, in less than three sentences, why you are special.

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

You should have three and only three criteria: One, work with people you can learn from. Two, work on really hard problems. Three, work with people you like who will make you happy.

< of note >

Obama's plan for engineers sounds good to me



PEG SCHOENFELDER PHOTO

COE on Facebook

Join COE's official Facebook group "Berkeley Engineering" (type = education) and the new *Engineering News* group, "I Read Engineering News at Least Once a Semester." Plus,

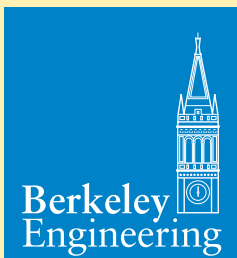
check out this unofficial group, which currently has 193 members. It's our new favorite:

I Got Babakued!

Description: You completed the problem sets. You memorized tables of Fourier transforms. You worked through past exams. You bribed a TA for hints on what was coming ... But when the exam hits, it hits hard. Convoluting becomes convoluted, your integrals diverge, and you get an imaginary answer where it should have been real. No, what you got wasn't a graduate-level exam – you got Babakued!

(Dedicated to EECS lecturer Babak Ayazifar, pictured above)

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We've got a new president in the White House, and with him, a promise of drastic new policy. Whatever your political inclination, it's hard to deny that the past administration has had a rather stifling effect on science and technology development.

So which of Barack Obama's policies directly impact us engineers? Chief among his initiatives are advancing climate-friendly energy development, modernizing Internet infrastructure and increasing funding for students and researchers in science and technology.

Obama plans to create a "Clean Technologies Deployment Venture Capital Fund," funded with \$50 billion over five years to bring sustainable new technologies from the laboratory to the market. In total, he plans to invest \$150 billion over the next decade to promote various types of renewable and sustainable technologies. These include biofuels, plug-in hybrids, large-scale renewable energy sources and a new digital electricity grid. Some of this money will also go toward doubling funding for clean energy research at universities and national labs. Coincidentally, both UC Berkeley and Lawrence Berkeley National Laboratory fall under this category ... Sounds good to me.

Other important goals are to strengthen the broadband backbone in the United States and protect network neutrality. Obama recognizes that the knowledge-based economy needs more support in order to grow. First, he wants to bring broadband to the whole country by fostering public-private partnerships and optimizing the use of the wireless spectrum by directly funding it through the Universal Service Fund. Second, he understands that the open nature of the Internet is responsible for much of its success, and he pledges to ensure network neutrality going forward. For many of us, it is clear that Internet service providers should not be allowed to decide



RACHEL SHAFER PHOTO

EECS JUNIOR Max Zheng

what content gets prioritized, and it's great that Obama also recognizes this.

Obama's policies are especially good for current students. He plans to create new research grants aimed toward young scientists and engineers, which will probably go into effect right as current students move into research roles. Obama also plans to launch an online database to match science and technology financial aid opportunities with students interested in these fields. He hopes this will be especially helpful for first generation college students. Science and technology education has been chronically underfunded, and these new initiatives aim to fix that.

Of course, with the sorry state of the economy shackling him, it's possible that Obama may not be able to fully implement these ambitious plans. But stepping onto this bold path is an admirable start and sets powerful precedents. It sends a message to our youth, that we will support them in science and technology careers, and to the world, that the United States of America is still dedicated to being a potent force for innovation.

—Written by EECS junior Max Zheng. This essay first appeared in the Fall 2008 issue of *California Engineer*.