



## Caltech ACM Team Aces Regionals, Faces International Competition

By Natalya Kostandova

STAFF WRITER

For a seventh year in a row, a Caltech team emerges at the top of the regional level of ACM International Collegiate Programming Contest (ACM ICPC) to earn a spot at the world level of the competition.

The team, consisting of Nathan Watson, Emil Ibrishimov, and Zarathustra Brady, will travel to Stockholm, Sweden for the international showdown that will take place on April 21, 2009.

With seventy-three teams competing for the top spot in the Southern California Regional Contest, there was a certain amount of expectation of Caltech winning the competition, with the Institute having won consecutively for the previous six years. The Watson-Ibrishimov-Brady team, named "Caltech zomg zergling rush," was seeded first among the four Caltech teams prior to beginning of the contest, but not everybody on the team was entirely sure of the victory.

"With that many people competing, it only takes one team having a really good day in the contest to come out with the lead instead of us," wrote Watson in an e-mail.

Although all of the members of the team, exclusively composed of freshmen, participated in a wide variety of computing contests prior to their entrance into Caltech, none had experienced ACM ICPC before and had to largely rely on guidance from Eric Stansifer, a senior, who coached the team.

"Eric Stansifer warned us that the problems will be annoying and long instead of algorithmically challenging and they were exactly that," said Ibrishimov in an e-mail.

One of the problems, for example, "had a four page problem statement, in which a specification for a programming language was given for us to implement (complete with plenty of ambiguous wording, red herrings, and other headaches)," explained Brady.

The team correctly solved six out of eight problems presented to the competitors. While teams from UCSD, UCLA, UCSB, and Harvey Mudd also completed six problems, they did so slower and with some penalties, allowing Caltech zomg zergling rush to secure the top spot with a non-negligible margin. The international contest, however, offers a higher level of challenge, with teams representing the best from each of the seven continents (Antarctica excluded).

Aside from the geographical location far removed from Caltech and serious competition, the contest in Stockholm promises a significantly more intense set of problems for the teams to work on.

"The problems are supposed to be at a much higher level (algorithmically) in the world finals, along with the other teams," wrote Brady. "We can't expect to win, but that just makes it more exciting."

In the past 10 years of ACM ICPC, the title of world champions went to universities from Russia five times, from Poland and China two times each, and once to a college from Canada. The last time a university from the USA won the competition was in 1997, when the title of champions went to a team from Harvey Mudd College.



## Watson Gets A Solar Makeover

*CSSI completes first solar array of 13.7 kW, aims for 1.2 MW*

By Casey Jao

STAFF WRITER

Watson Applied Physics laboratory is the newest structure on campus to get a solar array.

Working Wednesday through Friday of last week, teams of volunteer Caltech undergraduates, grad students, and post-docs mounted the seventy-two photovoltaic panels on the roof of Watson. When activated, the system will produce up to 13.7 kW of power.

The installation was organized by the Caltech Student Solar Initiative (CSSI), a student-run group that strives "to foster a culture of sustainability at Caltech through sustainability-oriented projects." Applied Physics graduate students Morgan Putnam and Michael Kelzenberg, graduate students studying thin film photovoltaics under Professor Atwater, led the project.

In preparation for the effort, Putnam and Kelzenberg drew up a twelve-page document detailing the panel layout and the objectives for each day. Panel placements were measured to the hundredth of an inch, and the location was chosen to avoid shadowing the solar panels.

However, during the instal-

lation a nearby tree turned out to be taller than expected. It will likely be trimmed to minimize its impact.

While environmentally attractive, solar energy has traditionally been hindered by its high upfront cost. Despite increasingly steep energy prices and affordable solar technology, the average Joe would still need patience while recuperating initial costs. According to the website of Beyond Oil Solar, a solar panel vendor, a typical 200-watt residential solar panel costs roughly \$800. Department of Energy statistics put California electricity at 14.42 cents per kWh, which translates to a minimum nine year pay-off period assuming noontime sunshine for eight hours per day. A MarketWatch article last year cited more sober estimates ranging from sixteen to twenty-five years.

To encourage solar power and alleviate strain on the power grid, many utility companies are offering rebates to anyone who installs a photovoltaic system. For residential installations, Pasadena Water and Power offers \$3.50 to \$4 per expected watt of output.

As an increasingly popular alternative to purchasing and maintaining expensive solar modules, a party may enter into

a Power Purchase Agreement (PPA), in which an external party finances the installation and maintenance of the panels and sells the electricity generated to the original party at a low predetermined price. Little investment is required of the original party. Most of Caltech's solar projects will be financed through PPAs, and Caltech will pay 13 cents per kWh, slightly lower than what it would normally pay the Pasadena utility companies. The array on Watson, however, was a student led initiative and is not part of the official Caltech Sustainability Roadmap found at [sustainability.caltech.edu](http://sustainability.caltech.edu). The panels were funded by the Moore-Hufstedler Fund, Caltech Facilities, and the Graduate Student Council.

Over the next eighteen months, CSSI will work with the Caltech Sustainability Project to add up to 1.2 megawatts of solar power to Caltech's power grid. Watson and Holliston Parking Structure have already received solar makeovers. Future candidates for solar arrays include the North and South Wilson Parking structures; Braun Athletic Center; Baxter; and the to-be-completed Cahill astrophysics building.

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## Advice from Gordon Gekko

By Mike Comstock

WEB MASTER

"...You own the company. That's right -- you, the stockholder.

And you are all being royally screwed over by these, these bureaucrats, with their steak lunches, their hunting and fishing trips, their corporate jets and golden parachutes.

The new law of evolution in corporate America seems to be survival of the unfittest. Well, in my book you either do it right or you get eliminated...

The point is, ladies and gentlemen, that greed -- for lack of a better word -- is good.

Greed is right.

Greed works.

Greed clarifies, cuts through, and captures the essence of the evolutionary spirit.

Greed, in all of its forms -- greed for life, for money, for love, knowledge -- has marked the upward surge of mankind."

-Gordon Gekko "Wall Street"

This speech now pre-dates

the birth years of most undergraduates at Caltech, but in light of recent changes in our economy, it deserves to take center stage once again.

This month, CNN published an article cataloguing the public's distaste for the "big three" flying their corporate jets to Washington to plead for taxpayer money.

Indeed, with Uncle Sam now playing the role of "my rich uncle" it does seem that once again corporate America is moving towards survival of the unfittest.

Have any doubts? Just look at the 300 billion dollar check the government issued CitiGroup.

What did Citi do to deserve this reward?

Simple - fail at banking.

That's right. While many hard working people get paid a pittance for being good at their jobs, Citi managed to get gifted 2% of the country's gross domestic product for being incompetent.

Perhaps we people in general have been trying too hard to get things right and need to work a bit more at getting things wrong.

Now I know what many of you are thinking (besides the ones who are thinking "I don't care"). Many are thinking banks hold a special place in economics. The government isn't bailing out the bank to reward it for doing a bad job. It is bailing out the bank to stop America from falling into another Great Depression at record pace.

That's fine. I wholeheartedly agree that our government needs to do *something* about the situation.

But what now?

Do we just accept for granted

that Citi cannot fail?

If that is the case, I cannot imagine a job that would be easier than running Citibank. All you have to do is not fail. But if you fail it really appears to make no difference at all.

Here is what I find baffling: at the start of last week you could buy all of Citi's shares for the bargain basement price of under 25 billion.

So why did Uncle Sam pay so much more and not just buy over the company?

Surely a 25 billion dollar gift (contingent upon the purchase of Citi) to a bank that *didn't* run itself into bankruptcy would make more sense.

I am oversimplifying this because it makes no sense to purchase a loss, even for \$0.

But my point is this: Gordon Gekko said it best "... do it right or get eliminated."

If the government needs banks to stick around, they should supply the willing, healthier banks with the funds necessary to acquire failing banks.

Letting these businesses fail will no doubt create tougher times, but these times are necessary.

Instead of propping up mismanaged messes, why not allocate funds towards better health care and unemployment to help people through the harder times?

Politicians have a difficult time looking beyond four years into the future, but this decision comes at the expense of having a grossly inefficient economy in the future.

The current bailout plan is a service to no one.

## Letters to the Editor

This is my take on the story about Housing denying graffiti in Lloyd. My personal opinion is that, although houses are institute property, they are still meant to accommodate students and "student" culture.

Houses should be considered "houses" for students and as long as none of the house residents complain about something that is well inside the house, remains inside the house and does not damage any housing property or makes them unusable should not concern housing or any other person.

I would like to think that my culture is not determined by an administrative office or some other body, and the institute has as much responsibility to ensure that as they do to protect their property.

Tanvir Ahamed Bhuyain  
UG Freshman

Dear Housing,

I'd like to complain about the extensive amount of delicious food given to students during Thanksgiving.

Seriously, how much fatter do you want me to get? Generally, my most strenuous form of exercise comes from walking to Lake and back for lunch on the weekends, assuming we're not tired of C-Store food.

Anyway, the point is, Thanksgiving has the potential to be a four-day period of starvation for Techers who stay on campus, because Chandler is closed and it's too cold to walk to Lake! Instead, I had the opportunity to eat three Caltech Thanksgiving dinners-- twice at Avery and once at Lloyd-- plus some random leftover desserts in Ruddock.

I'm pretty sure I gained 5 pounds, although I am currently avoiding all scales like the plague.

Next Thanksgiving, I hope to see a complete lack of free, delicious food around campus.

Sincerely,  
Sarah Marzen  
Tech staff

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## From the President's Desk...

*Make a Difference. Get Involved.*

By Caleb E. Ng

COLUMNIST

This term, we have collectively explored issues from the Caltech Bubble to the Caltech Syndrome to what is wrong with ASCIT. Through these diverse issues, a recurring theme has been one of introspection, self-criticism, and subsequent self-improvement.

Looking ahead, I see another important opportunity for such self-improvement.

As we prepare to wrap up this academic term, we anticipate the end of another kind of term—the terms of our current batch of ASCIT officers. In less than two months, our student body will have a new president-elect.

I have had the pleasure of working with a very thoughtful and competent group. I think I speak for us all, though, in hoping we will leave a foundation for next year's officers to make even greater strides.

As most of you know, ASCIT fundamental *raison d'être* is for the improvement of the Caltech

undergraduate student experience.

Because of this, we have made a conscious effort to hear and give serious consideration to each of your concerns. So, in a sense, most of you have already been involved in making a difference. Beyond that, all students can contribute to improving their own student experience directly; all you need to do is get involved.

A year ago, the Student Experience Report raised many soul-searching questions. None of these questions has a simple answer. Many remain open-ended.

For those of you who are looking to get involved, which of these and other questions do you hope to pursue? What aspects of the student experience do you hope to improve and how? The answers to these questions will impact everything from the role you pursue to your actions while in office.

Equally important are those who will be your partners in pursuing these answers. Do you know like-minded people who want to make a difference and

impact similar problems as you? You should encourage them to get involved; you will be meeting with and calling them at odd hours over the course of the next year. Look for these people all across campus.

It is an incredible honor to serve your fellow students. At the same time, it is also a significant responsibility. Give both of these aspects due consideration, because there are great and small ways to serve, but each of them makes a difference.

Just consider today—we were hoping to organize an event to recognize the significance of World AIDS Day, especially in a year when the Nobel Prize in Physiology or Medicine was awarded to those who discovered HIV. Because we lacked the manpower, this proposed event never saw the light of day.

Any current or past officer would be happy to talk to anyone interested in getting involved in ASCIT. One good place to talk to current officers is Coffeehouse Hours, which will be held tonight and tomorrow.



[pres@donut.caltech.edu](mailto:pres@donut.caltech.edu)

## Olive Harvest 2008 by the numbers...

Data courtesy of Erin White

we recorded 420 volunteers at our check-in table.

last year, we picked 1,460 pounds of olives.

this year, we picked about 2,400.

the grounds department supplemented this crop by picking some trees the week before the harvest...bringing the total up to 6,300 pounds.

after pressing all the olives, our harvest yielded 127 gallons of oil.

The 2008 Olive Harvest Festival Oil is goes on sale Tuesday, December 2nd at the Bookstore. The oil will be sold for \$17.29 on a first-come-first-served basis, with a limit of 2 per customer.

Congratulations to all contest and raffle winners:

Label Design Winner  
Tencia Lee

### House Picking Competition

1st Place: Ruddock House-285.5 lbs

2nd Place: Avery House-246.5 lbs

3rd Place: Blacker House-231.5 lbs

### Graduate Student Picking Competition

Winner: Team Markis-118 lbs

Runner-up: Olive Lucy-110.5 lbs

### Raffle Winners\*

Alex Boulgakov

Alta Fang

Andrew Price

Brian Peng

Christina Lee

David Carrega

David Choy

Eduardo Gonzalez

Eva Nichols

Giordon Stark

Grace lie

Helena Zhang

Jennifer Hu

Kristina Flavier

Laura Conwill

Robert Karl

Samuel Yang

Tatyana Saleski

Tony Wu

Viet Anh Ntuyan Huu

Wubing Ye

\*Claim your prize at the Campus Life Office.

## Outside the Caltech Bubble

### World

At least 183 people were killed in the terrorist attacks in Mumbai, India. The attackers invaded the Taj hotel and other targets. The terrorists reportedly singled out British and American tourists. Suspicions that the terrorists were harbored by Pakistan has strained relations between the two nations.

### Finance

The stock market had a much stronger week this past week as Citi received government help and the latest reports indicate higher than expected sales on "Black Friday."

The Detroit "Big Three" continue to await word from Congress as to whether they will receive government aid in the forms of loans.

### Politics

Rumors abound of how Barack Obama will appoint Hillary Clinton secretary of state.

### Other

The space shuttle Endeavor returned safely to Earth this week after a long and troubled flight. The flight was plagued by faulty plumbing and a lost tool bag.

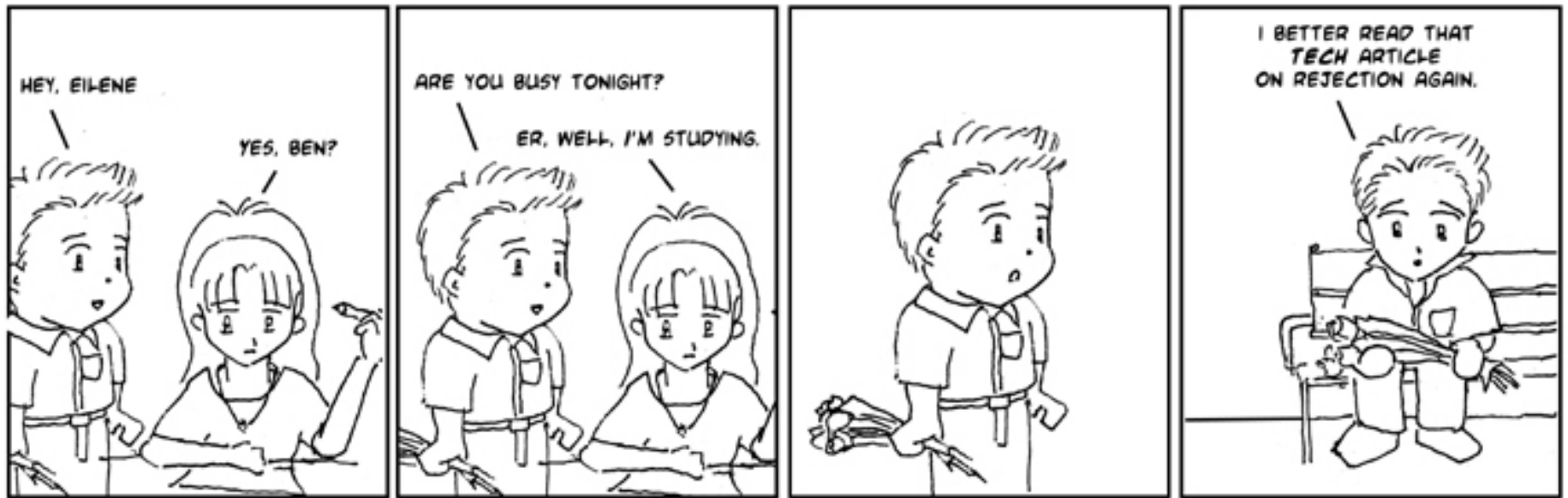
President George W. Bush granted a Presidential pardon to a man convicted of poisoning Bald Eagles in Missouri.

Two men fatally shot each other after an argument erupted in Toys 'R Us during Black Friday sales.

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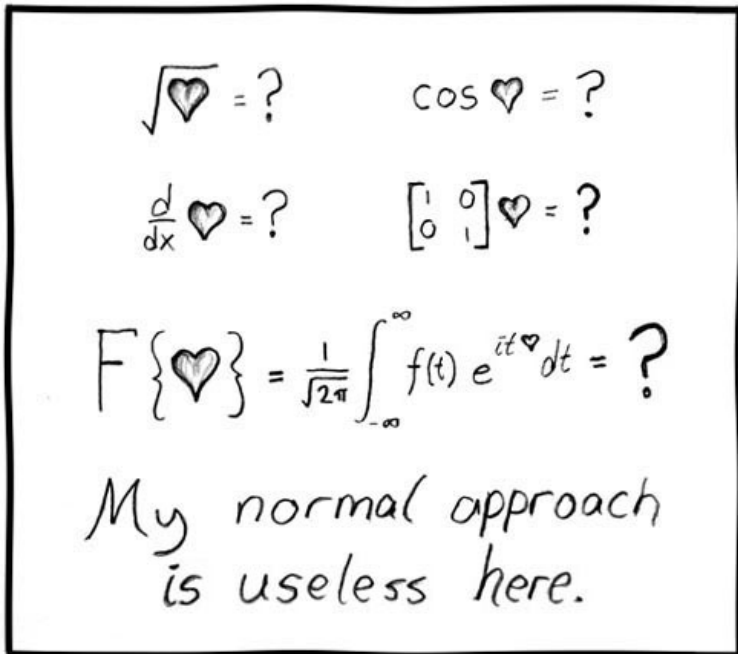


## Crippling Depression by Tim Wan, Mike Yeh, Ben Lee



## Comics by xkcd

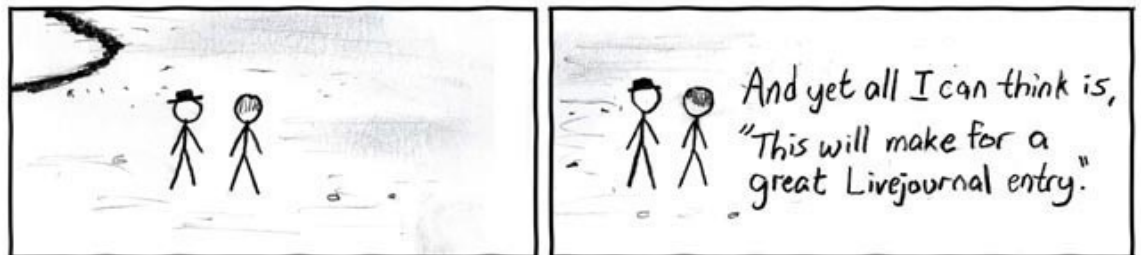
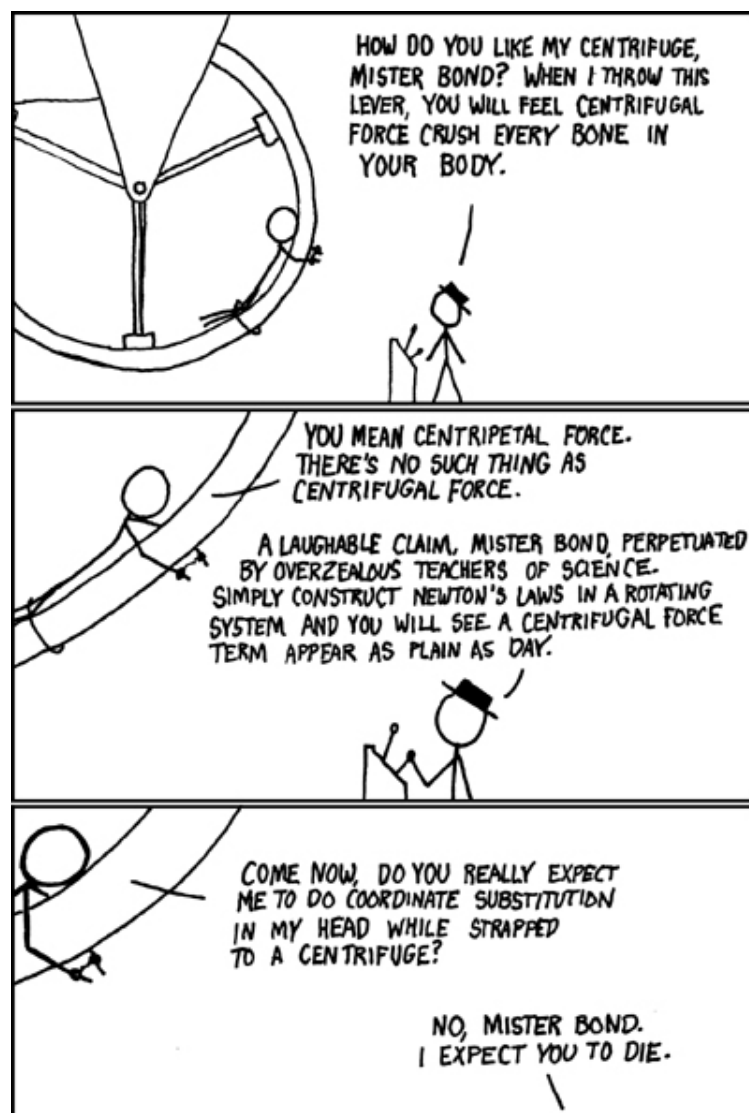
Useless



Bored with the Internet



Centrifugal Force



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