



Broken Remote Control Delays Re-Opening of ASCIT Screening Room

Perpetrators of Damage Still Unknown

By Gloria Tran

STAFF WRITER

The re-opening of the ASCIT screening room is waiting on the return and replacement of some damaged equipment, due to arrive within the next two weeks.

As part of the newly revamped SAC, the ASCIT screening room, located in SAC 23, offered a high definition project and 7.1 sound system for students to view TV shows and movies by reservation.

Barely after the room was made available to students, ASCIT had to close the room off because the remote control was "irreversibly damaged," explains junior Tom Gwinn, who oversaw the room's set-up.

As of now, Gwinn, along with junior Christopher Duwan, are waiting on Logitech to send a replacement remote control. "There

are other remote controls we could use, but none of them are programmable, so anyone could mess with the settings, which extremely would complicate things," says Gwinn.

No one has yet claimed responsibility for the remote control's damage. Gwinn believes a tighter security system such as installing a card swipe or security cameras is necessary to effectively upkeep the room. "During rotation, I saw 10-15 prefrash moving around the speakers despite posted instructions to not move anything," comments Gwinn.

After the replacement remote control arrives, the ASCIT screening room should be again available to students. The maintenance of the room shall be passed onto the ASCIT movie chairs. TACIT hopes to continue its Movie Festival showings in the screening room once it opens again.

A Sign of the Times...

By Wesley Yu

STAFF WRITER

An attempt by Housing to remove a Barack Obama sign from a graduate student's front yard has students wondering just how free their speech is on campus. Caltech officials say they were acting to preserve a tax-exempt status on nearly \$2 billion in federal grants.

Evans Boney, the Chair of the Graduate Student Council, was told on Nov 14 by Housing that security would throw the sign away if he didn't remove it himself. "Needless to say, I didn't," said Boney in an email to the Tech. "I'm rarely railroaded into tossing aside something as fundamental as freedom of speech."

Though this issue of free speech is not a priority for the Graduate Student Council, they have requested an inquiry into the political policy of the Institute to ensure it is in keeping with the institute's mission statement.

"Aside from much help from the Caltech Y, I have been fought at every turn when I tried to start being more politically active on this campus, and the level of apathy about politics here is, in my personal opinion, institutionalized," wrote Boney.

In a July email sent to the entire Caltech directory, the Office of Government and Community Relations outlined unacceptable forms of political expression.

Activities that could jeopardize Caltech's tax-exempt status, like using office phones for campaigning or linking candidate sites on Institute web pages, are prohibited.

According to Assistant Vice President of Government Relations Hall Daily, Caltech receives \$200 million in federal research grants and JPL receives over \$1.5 billion each year.

"Can we afford to lose our tax-exempt status?" said Daily in an interview. "The answer is no."

The summer email did not mention any ways in which students could be politically active on campus.

"I always find it a bit chilling to read an e-mail telling me to regulate my political conduct on campus," says Ryan Hamerly, the Social Director of Avery House. "Caltech does not have the power to take away your freedom of speech."

The Leonard Law was passed in 1992 to protect the First Amendment rights of students at private colleges and universities. Under the Leonard Law, students in a public or private California university may take legal action if their school violates their right to freedom of speech.

But the Office of Government Relations says that Boney's front yard sign isn't a constitutional conundrum at all: it involves a clause

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Photo courtesy of Steve Collins

Caltech to Launch *Rocket Girl* Nov. 7

By Vibha Laljani

STAFF WRITER

On November 7, Caltech opens the world premiere of *Rocket Girl*, a stage-production revolving around Mary Sherman Morgan, the inventor of Hydryne – the fuel that powered America's first rocket into outer space.

The play was written by screenwriter and playwright George Morgan, who is also Mary Morgan's son. The play touches upon several scientific, cultural and political themes. It offers a glimpse into the lives and work of rocket engineers then, the pioneering role of a woman in engineering and her struggle in a traditionally male dominated field, and the American-Russian tension, politics, and space race during the late 1950's.

The play is based on interviews with engineers that worked with

Mary Morgan. "The hardest part about writing the play was that there was very little written information available about my mother's life," said Morgan.

It was decided about a year ago that Caltech would premiere *Rocket Girl*, when Morgan sent a copy of the play to Shirley Marneus, who has been with the Theatre Arts at Caltech (TACIT) since the beginning. "I sent one copy to Caltech and one to MIT because I wanted it to be performed at a scientific institute," said Morgan. "I heard from Shirley soon after and she was excited about putting it on. However, I never heard from MIT." The play is directed by Brian Brophy, the director of TACIT.

The cast features JPL engineers and staff, and Caltech undergraduates, graduate students, and staff, who found TACIT through the annual club fair, the TACIT website, the Caltech master calendar

or through actors who have been with TACIT for nearly 20 years. By November 7, the actors will have rehearsed for 4-5 days/week for 4 weeks. "Cast members with larger roles had larger rehearsals, especially Christina Kondos, a freshman who plays Mary Sherman Morgan" said Brophy.

Scientific play *Rocket Girl* provides some freshness to TACIT productions. "There has been a large emphasis on Shakespeare, musicals, and classical and modern American theatre," said Brophy. "However, this year is different because we are doing a world premiere, a brand new play, a true story about America's first female rocket scientist. It is also set against the backdrop of the late 1950's cold war, making it a period piece." This scientific

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Student Solar Initiative Plans to Outfit Watson Lab Nov. 19

By Gloria Tran

STAFF WRITER

After the Olive Harvest Festival last year brought together the entire Caltech community to help harvest olives from the trees on campus, Morgan Putnam, a graduate representative on the Caltech Sustainability Council, was inspired to create a project that would not only improve on alternative solutions but also once again bring together the community.

In mid-June, Morgan and a group of about ten other undergraduate and graduate students formed the Caltech Student Solar

Initiative (CSSI) to head the first project of installing solar panels on the roof of Thomas J. Watson, Sr. Laboratories of Applied Physics. "The open space, easy grid access for the panels and the five-foot walls surrounding the roof made it the ideal candidate for the first of maybe many student-led solar initiative projects."

After determining that there was room for about 15 kW of solar power, CSSI contacted suppliers and in a competitive bid process, selected Solar Electric Supply.

Most of the funding for the

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Chameau Gets Up & Moving

President Jean-Lou Chameau and Dr. Carol Carmichael will be Pasadena Mayor Bill Bogaard's special guest walkers at a program for Up & Moving Pasadena, a community effort to support fitness for health. They will participate in a 3.3-mile walk around the Rose Bowl Stadium at 7:45 a.m. Wednesday, Nov. 5.

This information was provided by the City of Pasadena Public Affairs Office. For details, please check www.upandmoving.org or call (626) 831-2980.

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Letter to the Editor

A little less conversation...

I preface this editorial by acknowledging I have a limited experience with Caltech, this being my freshman year and all.

At Frosh Camp, I heard it said that Caltech was the world's "playground for math and science." At the time, this statement seemed a little cliché and trite, but the more I thought about it, the more it seemed true. Caltech truly does offer unparalleled opportunities for students in terms of how they choose to express themselves. Look at our club list, the organizations on campus, etc., and you quickly realize that if you have a passion for something, there is a good chance there's a group for you. Moreover, if there isn't, you're more than welcome to go ahead and start one!

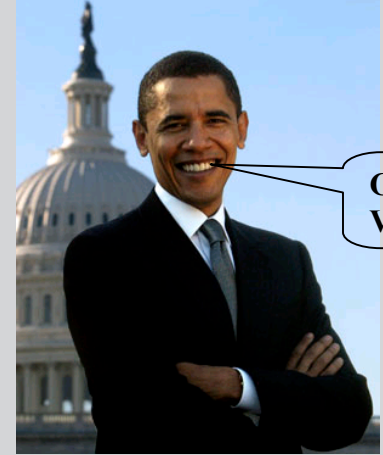
That being said, I must confess I have been reading "The Tech" with some interest and confusion over the last few weeks. More specifically, I have been wondering about some of the editorials recently published which take a more or less negative view of the Institute. The first was Evan Boney's article regarding the election and Housing (Oct. 20), and then ASCIT President Ng's critique (Oct. 27) of the very organization he leads!

I understand that any group cannot be all things

to all people, and with such a diverse student body, the Institute can never satisfy all the desires of every student. However, I wonder why the student body seems to take to complaining, instead of working to try and remedy whatever problem there seems to be. Given that we have an administration that is open to constructive feedback and forward-looking ideas, why are we (as students) hesitant to make our voices heard in a positive manner? There are a many great ideas that come from the student body (Marissa Cevallos' column Oct. 27, the Student Experience Trip, etc.), and we need to be more open to expressing those ideas. When the Institute is our playground, we can make of it whatever we desire. I certainly hope that the students can work together to make a positive change here, and leave something behind that future students can appreciate, rather than simply complain and not take any action.

~ Travis Scholten, 2012

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Tuesday, November 4th
6:10 am – 6:00 pm
Caltech Y

Get out the Vote

Caltech students and local volunteers will be manning the phones and calling battleground states all day to help turn out the democratic vote nationwide. Our instructions on who to call will come within minutes from the Obama campaign HQ in Chicago, so come help us make history! Our goal is to make 20,000 calls on election day, so we need your help! Bring your cell phone. Call Evans at 626-497-5565 for more information or to RSVP.

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Caltech needs more moustaches

By Mike Comstock

WEB MASTER

No doubt winter is on its way to Pasadena and anyday now we should expect temperatures to drop.

While there are numerous articles of clothing to protect everything from your head to your toes from the cold, few of them offer both the comfort and style of a moustache.

Over the years Caltech has

embraced many interesting fashion styles from shoelessness to cloaks. I say it is time for us as a community to accept the moustache.

"Every great achievement deserves a great moustache."

For all those out there who embrace communism or socialism why not sport the Stalin-stache? For those who

are concerned only with the extra

warmth why not go with the full beard? And finally for those who want to express their love for their favorite nintendo character where is the Mario-stache.

Over the years the moustache has been a source of pride for men from Roosevelt to Einstein? Many techers will go on to do great things. Every great achievement deserves a great moustache.



The Stalin-stache from wikipedia.org

From the President's Desk...

What's wrong with ASCIT? Part II

By Caleb E. Ng

COLUMNIST

Last week, I discussed two of ASCIT's major weaknesses: inefficiency and lack of accountability.

Since at least the early 1990s, these and a number of ASCIT's other weaknesses have been well documented. In May 2003, former ASCIT President Ted Jou wrote in his column in the Tech about the ASCIT's problems:

Rarely does anyone complain publicly about club funding, the honor system, or student representation, but there were constant complaints about donuts during third term last year. In my entire time at Caltech, the only ASCIT legislation that was proposed by initiative has been a Bylaw amendment regarding donuts.

When put on a ballot, that initiative received only 40% of the vote, and this reveals a deep divide in the student body's opinion of ASCIT's proper role on campus. This divide has been

growing over the years and has corresponded with a weakening central student government and a decline in student influence on campus.

Currently, only the ASCIT President works with the administration on a regular basis. All the other ASCIT officers have jobs related to internal issues – a relic of ASCIT's past. If ASCIT wants to shift its focus, some major restructuring will need to be done, which should probably start with a stronger focus on student representatives to campus committees. A number of comprehensive reform packages have been proposed over the past two decades. Unfortunately, these have at best been adopted in a piecemeal fashion. The patchwork revisions have created confusion and inhibited effectiveness and efficiency.

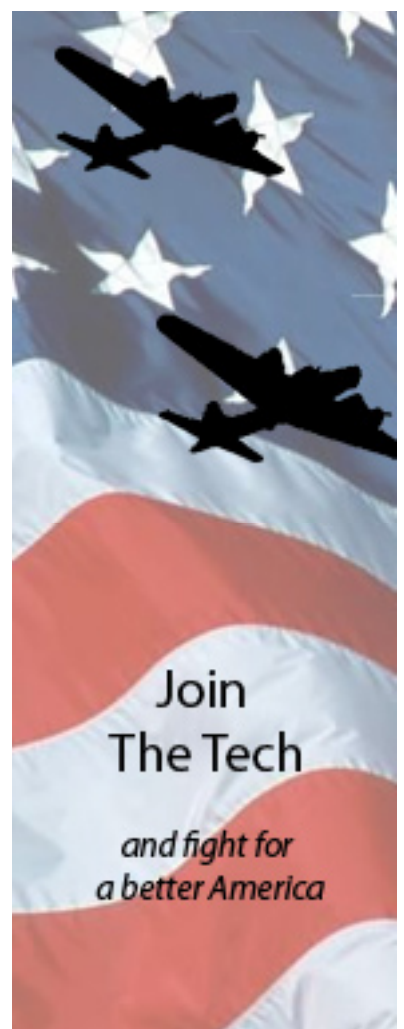
Worse, they have muddied the definition of ASCIT, the services it provides, and its role in representing and advocating student issues for the betterment of the student experience. Recent stopgap measures have emphasized the

constraints of the current setup.

At last weekend's ASCIT leadership retreat, the Executive Committee presented preliminary findings from its in-depth study. The committee reiterated a "recognized need for a comprehensive package of reforms." As a result, they presented an ambitious and comprehensive proposal to fix these problems and formalize the stopgap measures.

The committee has begun to refine its proposal through presentations and discussions within the ASCIT leadership and your house presidents.

Over the next few weeks as we move beyond the early drafting stages, we hope to broaden the discussion to include the entire student body. In the meantime, if you want to know more, feel free to talk to your ASCIT leaders at Coffeehouse hours.



First Amendment issue points to tax-exemption rules, housing contract prohibitions

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of the Housing contract prohibiting "alterations" to Caltech rental properties.

"It's really a contract issue," said Daily. "I'm not saying it's not a First Amendment issue, but it's a housing contract that is at issue here."

According to Tim Chang, Housing has since changed their stance on the issue of signs. Their new policy is that "yard signs are ok in the window of a residence, and possibly also taped to the door."

"The policy was really just because of an incident ten years ago that involved residents talking of 'one upping' each other with the potential of neon signs and billboards. None were actually put up, but they tried to outdo each other by escalating the signs that were already up," said Chang. "We're just trying to maintain mutual respect between residents. I mean, it's analogous to prohibiting guns in Caltech housing."

"My feeling, though is that in this case it's not that big of a deal since California is so left leaning already," said Chang. "A single sign isn't going to change anything."

The sign Boney put up is still in his front yard, now with an attached notice: "Any effort by Caltech staff to remove this sign will be seen as a violation of my First Amendment rights and will result in a lawsuit."

Rocket Girl World Premiere

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play inspired the production of Bertolt Brecht's *Life of Galileo*, to be put up during the spring term.

Revolving around the fuel - Hydne, the play involves a lot of scientific calculation. Did director Brophy manage to follow all the chemical reactions or did he "act" his way through it? "The play does have a lot of scientific calculation about reactions of chemicals and getting the right proportions of chemicals to form the propellants," said Brophy. "At one rehearsal, all the actors - the JPL engineers and Caltech students - had a long conversation about the accuracy of the science and math in the play because the playwright was trying to ensure the accuracy of his science. He knew the audience watching the play would say things like 'Well, using Unsymmetrical Dimethylhydrazine (UDMH) is not going to work because of the density. However, if you take a small part of UDMH and replace it with Dth you will get a better combination of propellants.' I had no idea what they were talking about. However, as a professional actor and director I need to make that work dramatically. One can read the script as one likes, yet, in a play there has to be something compelling about UDMH!"

Brophy has many hopes from this production. "I hope that the students who come see the play

will get excited and want to take my intro to acting offered during the winter term, and participate in the *Life of Galileo*, which has a cast of 50. I want the students in the play to get more serious about their acting and continue participating in the TACIT experience. My personal feeling is that science and culture cannot exist independently and theatre is the mediating agent that can merge the two. I would like students to merge the analytical and emotional sides of their brain through theatre, which will enable development of their emotional intuition and allow them to better tap into their creative scientific capacity. Finally, I would like the faculty, administration and local businesses to see the advantages of theatre on campus and provide funds so we can become a fully functioning theatre department with our own theatre rather than being just a program."

The play will be performed on Friday November 7 at 8:00 p.m., Saturday November 8 at 8:00 p.m., and Sunday November 9 at 3:30 p.m. at the Ramo Auditorium at Caltech. Tickets are priced at \$18 for general Admission, \$9 for seniors, and students who are 18 and over with ID, and \$5 for Caltech students and children under 18. For more information about tickets please contact 626.395.4652.



Photo by Jonathan Tsai

Blood Drive Exceeded Red Cross Expectations, But Blood Battle Postponed Due to Scheduling

By Brian Peng

STAFF WRITER

Students turned out last week for one of three annual blood drives, donating a total of 120 pints of blood. The "Blood Battle" itself, however, was postponed to next year.

The American Red Cross held a blood drive on Monday and Tuesday to benefit 150 hospitals in need around Southern California. In order to gain support and attention for the cause, the event was publicized as the "Caltech vs. MIT Blood Battle."

"The Caltech vs. MIT Blood Battle began when MIT contacted me last year and asked if there could be an annual blood drive," said Nicole McAdam, an

event organizer and coordinator for the American Red Cross. "Whoever collects the most gets a trophy." In actuality, the amount of blood collected is based on a person percentage. The American Red Cross uses such a formula due to the large difference in the student population at Caltech and at MIT.

Unfortunately, this year's Blood Battle did not take place because MIT backed out of the scheduled date. It will be postponed to February 2009, when the American Red Cross has their next blood drive.

Still, the amount of blood collected for this event exceeded organizers' predictions. "We have blood drives 3 times a year," said McAdam, "and we usually get around 300 [pints] total."

Correction

Last week's article on sustainability incorrectly reported that the Wilson Parking Structure would be the largest solar structure in Pasadena. This should have said the Holliston Parking Structure.

CSSI's green projects offer opportunities for community participation

CONTINUED FROM PG. 1

project, the administrative support and the engineering for the installation are done, reports Putnam. The installation of the solar cell array is scheduled for November 19th through 21st. There will be two 4-hour shifts each day. Student volunteers will go through a training prior the installation and will be provided with free food. Putnam hopes to get a large amount of the community to get involved in this project.

The cost of the installed solar cell array after the rebate from Pasadena Water and Power is \$64,000. The Caltech Facilities Department will cover half this cost and assume maintenance of the array for its lifetime, esti-

mated to 25 years. The other half of the cost will be covered by an MHF grant, which was awarded this fall.

"We [CSSI] worked extensively with Facilities and would like to especially acknowledge John Onderdonk, the Caltech Sustainability Programs manager. He's worked with lots of student groups to make their projects a reality. Jim Cowell, the associate vice president of Facilities has been extremely supportive as well," says Putnam.

Once the installation is completed, a years' worth of renewable energy credits are available to students with a donation of \$30 to the Sustainability Projects Fund, which will be overseen by GSC and ASCIT. In exchange, students will receive a sticker for

that academic year, stating that they paid for the generation of a years' worth of green energy units for a laptop.

Approximately 150 solar power laptop certificates will be given out with the hope of generating about \$5000 a year. This in turn will provide funding for smaller future student-led green projects such as campus gardens and composters for undergraduate and graduate housing.

"Administrative support and funding are there; we only need student interest in sustainability. With something as big and influential as the energy market, I think we should take a bigger interest," concludes Putnam.

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Please RSVP on Facebook event "Caltech Euro Party 2008"

Olive Harvest 2009 : Q & A

By Tim Black, Anthony Chong, Dvin Adalain, and the rest of the Olive Harvest Planning Committee

Last November we held the first Caltech Olive Harvest Festival. We enjoyed the company of Caltech and JPL faculty, staff, postdocs, students, and family members as everyone came together not only to harvest olives, but to enjoy tasting exhibits, educational “Edible Tours” of campus, and of course share a delicious meal during the gala feast that fed over 2000 people as it stretched down the Olive Walk. Last year’s Harvest Festival received great responses from administrators, the media, and even a handful of students, but more importantly it provided a unique atmosphere to discuss Caltech and its place in its community and its environment. So, we suggest you mark your calendars now for Caltech’s Second Annual Olive Harvest Festival on November 7th. The olive trees are beginning to sag with the weight of their fruit this year and we are looking forward to having a successful harvest again this year. In addition to all of last year’s events surrounding the Festival, we’re adding new events and new contests to get even more people involved this year. To clear up some of the details, we’ve arranged a Q&A with some of the organizers for this year’s harvest. Of course, some of you may have still other questions. If you’re looking for answers, please feel free to email the organization committee at oliveharvest@caltech.edu.

What’s for Dinner?

“To start the dinner, the tables will have a large loaf of bread, olive oil, hummus, babaghanoush, assorted olives and pita bread. The waiters will bring platters of spanakopitas and falafels. A large Greek salad will be followed by fried calamari, beef and vegetable skewers, vegetable skewers, rice and baklava for dessert.” (Peter Daily, Senior Director of Campus Dining)

What time does dinner start and where am I supposed to sit?

“Dinner will start at 5:00 pm. Since the time will be changing the week prior to the dinner, we will be pushing darkness shortly after the beginning of dinner. The seating will be along the Olive Walk and the lawns between the South Houses and the Athenaeum. This year there will be tables designated for each of the eight houses along the Olive Walk – look for the signs. Some of the Alums, faculty and staff may be joining the house tables to dine with the students.” (Peter Daily)

Will there be an open bar again?

“There will not be an open bar this year. Near the Athenaeum, there will be a cash bar.” (Peter Daily)

What if I don’t want to go to the dinner, how do I get my board meal?

“This is the board dinner for all Feynman and Avery Plan undergraduate students. If you let the board manager know, a late plate can be arranged and be picked up in the C-Store.” (Peter Daily)

Will there be free food in the afternoon again this year?

“Olive oil, bread, escargot,

of olives picked, we will be giving away raffle tickets to win gift certificates to places like Chipotle. In addition there will be olive-themed games for the entire Caltech community. Join us for hot “olive” (potato) and olive branch limbo. Winners will each get a free bottle of olive oil.” (Anthony Chong, Olive Guy, Ruddock House)

therefore, our oil satisfied the requirements for an “extra virgin” rating. However, there are other parameters that are important for rating olive oils. For example, taste can be rated into a number of categories. Our oil had a nutty taste. There was some olive fly activity on campus and some olives were affected by this activity. This year, the trees were monitored

Harvest, including volunteer opportunities.” (Erin White, Events Assistant for Campus Life)

How do I get a free t-shirt?

“To get a free t-shirt you will have to register as a volunteer. We had a lot of folks show up last year, register, get their free t-shirt, and leave, so this year we’ll be handing out t-shirts to our volunteers when they bring us their first batch of olives. If you want a t-shirt but you don’t want to volunteer, I believe the bookstore will be selling a similarly designed souvenir shirt.” (Erin White)

When will the olive oil be available for sale?

“We are anticipating to have the oil back early December. However, I do not know exactly when it will be released for sale.” (Delmy Emerson)

“As soon as it arrives back on campus, bottled, we will make it available. The goal is to have it here well in time for people who want to use it for holiday gifts.” (Tom Mannion)

Are you doing that stupid lottery thing again?

“Sales will, most likely, be done on a first come/first served basis with a limit on number of bottles purchased.” (Tom Mannion)

Why are you charging so much for just olive oil?

“The proceeds from the sale of Caltech’s olive oil are deposited in a Caltech gift account that supports not only student activities, but also Caltech’s financial aid programs. Your purchase is therefore going to contribute to Caltech and its activities in many ways... This olive oil will not be sold in any store and is a testament to the great teamwork of the entire Caltech community. Isn’t that worth more than ‘just olive oil’?” (Dimitris Sakellariou, Chief Business Administrator for Student Affairs)

“Exact pricing this year is still to be determined, but I do hope to have a certain amount allocated to students at a student only price.” (Tom Mannion)

Where do you see the Olive Harvest Festival going in the future?

“I think this event will continue to grow into a week long celebration of Caltech’s past, present and future. There is so much to be proud of as a student, faculty member or staff member that this is an important time to enjoy that and develop a sense of stewardship for the institute” (John Onderdonk) “We hope for an annual event that fits two sustainability models, one in relation to the environment, and one in relation to financing the venture. I expect a festival that becomes self-sustaining financially is just around the corner.” (Tom Mannion)



Photo By The Olive Harvest Planning Committee

and the edible tour will all be available from 11am to around 4pm.” (Tom Mannion, Ass. VP of Student Affairs and campus Life)

What other exhibits will be there?

“There will be various sustainability related exhibits on display from the sustainability program and student clubs such as the Student Solar Initiative, the Biodiesel Club, the Electric Car Club, Net Impact and Engineers for a Sustainable World.” (John Onderdonk, Manager for Sustainability Programs)

What incentives are there for me to go pick olives?

“Last year, not as many undergrads participated as we hoped. So this year we came up with some ways to encourage people to participate. There’s going to be a competition for which house can pick the most olives. When you turn in the olives you pick, they’ll be weighed and added to your house score sheet. The house that picks the most olives will win a dinner at the Pres Res. People who have already graduated from your house can still participate on your house team, so invite your alums to come join you.” (Tim Black, Olive Guy, Blacker House)

What if I don’t care if my house wins anything?

“Besides rewards for houses, you can also expect individual prizes. Exclusively for undergrads: for every pound

What if I’m a grad student?

“If you’re a grad student, this is your perfect excuse to take a break from lab and enjoy some time outside. Better yet, bring your lab buddies with you. We’ve organized a grad student competition as well as the undergrad competition. Teams of eight will compete against each other and the team that picks the most pounds of olives will win a 5-course meal at Tom Mannion’s. You can form teams by recruiting postdocs, faculty, family members, whoever you want, however each team must have at least three grad students... You can still sign up by emailing oliveharvest@caltech.edu or by just checking in with the registration desk on Harvest Day.” (Danielle Brown, GSC Sustainability Advocate)

What sort of yield do you think we’ll get this year?

“We are anticipating a higher yield. Last year, we produced over 500 bottles. This year, we anticipate to double or triple the production.” (Delmy Emerson, Director of Facilities Management)

Last year’s oil didn’t taste very good and I heard it was fly infested. Will it be any better this year?

“Last year, the oil was actually tested for free fatty acids (FFA), peroxide value (PV) and UV absorbency. Our oil results were well under the newer FFA established limit... and...satisfied the PV parameter. Additionally, the UV absorbency was under the established limit... and

and sprayed regularly in order to minimize the olive fly activity on campus. We are hoping to achieve a good oil rating and the taste will vary depending on the oil blend. We hope to obtain a good mixture of green, red and black olives.” (Delmy Emerson)

Do we really have to go to ladder training to pick olives?

“No. But if you want to climb the orchard ladders, then yes, training will be required. Grounds personnel will be available in the festival area to help and train people who may want to use the orchard ladders.” (Delmy Emerson)

Do I have to register as a volunteer to pick olives?

“Certainly not. We are still working on the www.olives.caltech.edu website and are hoping to have an online volunteer registration form up and running soon, however even if you can’t register online you can register in person at the registration/info desk that will be set up on the Olive Walk in the morning or on the Court of Man in the afternoon. We prefer all volunteer harvesters register online or the day of so we can keep track of what segments of the Caltech community are most involved, but we certainly aren’t going to stop you from picking olives if you really don’t want to register. I should mention, if you want to register for our mailing list you should go to olives.caltech.edu/participate. We send out updates periodically with information about the Olive

Einstein's Cosmic Messengers Shake Beckman

By Dennis Callahan

STAFF WRITER

On Thursday night Caltech hosted the world premiere of "Einstein's Cosmic Messengers," an astrophysics-infused multimedia concert by Andrea Centazzo aimed at artistically interpreting the relativistic phenomenon of gravitational waves.

The event took place in Beckman auditorium as an interdisciplinary effort to describe, celebrate and interpret the cosmic waves, a major consequence of Einstein's theory of gravity that has fascinated physicists for nearly a century. The event featured three segments, each designed to complement the other two in an ambitious effort to uniquely combine science, technology and art. Caltech's renowned Feynman Professor of Theoretical Physics, Kip Thorne, first described the science behind astrophysics and relativity, followed by Jay Marx, executive director of LIGO, or Laser Interferometer Gravitational-Wave Observatory, who described the principles and capabilities of the extraordinary technological effort to first detect the elusive waves. The centerpiece of the evening was a whirling artistic exploration of gravitational waves by Andrea Centazzo, an award winning percussionist and multimedia artist.

Thorne's introduction to what he termed the "warped side of the universe," filled with black holes, colliding neutron stars, and, of course, gravitational waves,

was more than appropriate for the mixed audience of children, students, professionals and retirees. He managed to describe, without a single equation, not only Einstein's prediction of the waves, but also the process of their creation and their ultimate relevance and value to science. His almost childlike enthusiasm for the subject justified his introductory quote from Einstein, "Everything wants to be where it ages most slowly." Indeed, the majority of the audience most likely paid for the gasoline fair to the auditorium with their Social Security checks. Still, the ability to instill the excitement of science in people of all ages is something only a few can pull off, and Thorne certainly deserves this distinction.

Jay Marx, executive director of LIGO, did an exceptional job at describing both verbally and graphically how the giant interferometer works. It had been mentioned that the detection of gravitational waves would require unprecedented sensitivity, but when Marx mentioned the actual number (detection of displacements of 1/1000th of the size of a proton) it must have been hard even for the non-student to take him seriously. Any doubts were soon cleared when he revealed recent data which showed that after years of refinement, LIGO had finally reached its target sensitivity. This excitement was soon extinguished, though, when he revealed the anti-climax,

that LIGO had not yet actually observed any gravitational waves after 2-3 years of operation. Marx remained optimistic, though, as he described future plans for modifications of LIGO as well as an outline of a future non-terrestrial based interferometer labeled LISA, or Laser Interferometer Space Antenna. Marx remained convinced that both the improved LIGO and eventual realization of LISA would certainly provide us with observation of gravitational waves in the future. Although the fact that the waves had not yet been observed may have been a disappointment for some, it does not conflict with the evening's intentions, as it must have encouraged the audience to stay informed with current developments in astrophysics.

In what was most likely the world's first ever musical interpretation of gravitational waves, Andrea Centazzo ended the evening in an appropriate display of percussion, vibration, resonance and imagery. The concept of the performance was conceived by Centazzo and Michele Vallisneri, a theoretical physicist at JPL, and the multimedia written and compiled by Centazzo. The artist sat surrounded by percussion instruments, synthesizers and, of course, his MacBook, emanating vibrations from the stage in what must have been an audio wave analog of two colliding black holes. An animated Centazzo spun and

pounded amid a backdrop video montage saturated with images of historical scientists, numbers, equations, spinning galaxies and computer simulations of propagating gravitational waves. The video was appropriate accompaniment for a mostly percussion-based musical piece, but was not without its imperfections. The relevance of a number of images was not immediately clear, and the video segments shot with real actors may have been a bit too much. Einstein did not wear that much hair gel! It may have been difficult for some viewers to understand his musical interpretation, but not as difficult as it may have been for Centazzo to interpret something that has yet to even be observed. Ultimately, the five part performance demanded one of the most essential qualities of any great scientist, patience. In the end, those audience members who possessed this quality were not disappointed.

The bridge between science and art has never been easy to construct, but with these three masters plugging away from opposite ends, on Thursday night we may have gotten as close as we're ever going to get.

The Tech

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Caltech Community Fair



Photos By Jon Tsai

Costumes and a pumpkin carving contest graced this halloween's community service fair. Stop the Traffick, an anti-people trafficking organization was one of the community service programs present this year (pictured in the upper right).

Sports Briefs

Women's Volleyball plucks Golden Eagles in 3-2 victory

The Caltech women's volleyball team avenged three previous losses by scoring a 3-2 (20-25, 25-14, 25-21, 25-21, 16-14) win over West Coast Baptist at home on Thursday. The Beavers won the game in dramatic fashion by breaking the Golden Eagles' serve on game point 14-13 and scoring the last two points of the match for the team's first win this season.

The game seemed to be headed towards a familiar collapse in the fifth and final game as the Beavers gave up the early lead by allowing the visitors to go on a five-point run. Caltech lost its home opener to Southwestern in the last game 16-13.

"We started celebrating too early," team captain Katie Peters said. "But once they held a 14-13 lead, [we told ourselves] that there was no way we were losing that match, it was not happening."

The Beavers sported a dramatically improved defense in the victory, scoring 11 blocks to West Coast Baptist's 2. Freshman Theresa Juarez led the way with eight for the Beavers.

"We just really started feeding off of each other [as the game went on] and played with energy and determination," Peters said. "We were really scrappy and started making a bunch of plays."

In addition to an improved defense, Caltech scored many easy points off of service aces to

demoralize the Golden Eagles. Junior Lisa Yee led the team with seven, just two fewer than the entire West Coast Baptist team.

Playing in front of a partisan home crowd seemed to energize the Beavers and frustrate the visitors. West Coast Baptist hitter Carmen Lopez seemed visibly flustered by the crowd's antics.

"We were comfortable playing in our own gym," Peters said. "It's nice having people you know [cheer you on]. They kept it fun. The fans were definitely a part of [the win]."

Beaver forward Tyler Volkoff honored as male athlete of the Week

Caltech forward Tyler Volkoff was named SCIAC male athlete of the week following his game-winning goal in the final minute of regulation against Cal Lutheran on Oct. 22. It's the first time a Beaver athlete has received the title this season. Volkoff also set a Caltech season scoring record with six goals on that shot.

"It's a good feeling to have that goal recognized because it wasn't easy," Volkoff said. "[But] the win against Cal Lutheran was the most exciting

part."

Playing in his third year, but first full season at Caltech, Volkoff has exploded into an offensive threat.

"Tyler is by far the most dangerous forward that I have coached in seven years at Caltech," head coach Rolando Uribe proclaimed.

Although better conditioning has played a role, according to him, the change was mainly mental.

"[Coach Uribe] had a really instructive coaching plan this year and that made me a better player," Volkoff said. "[He taught me] mostly not to be shy about taking shots [and to] take more time to possess the ball. Every time I got the ball freshman year I was so surprised and nervous that I either gave it away or took bad shots."

"Now I try to bring the ball down and look for a pass or start to dribble because I'm confident that I can beat most of the SCIAC goalkeepers. I'm not intimidated."

Compiled by Yang Yang

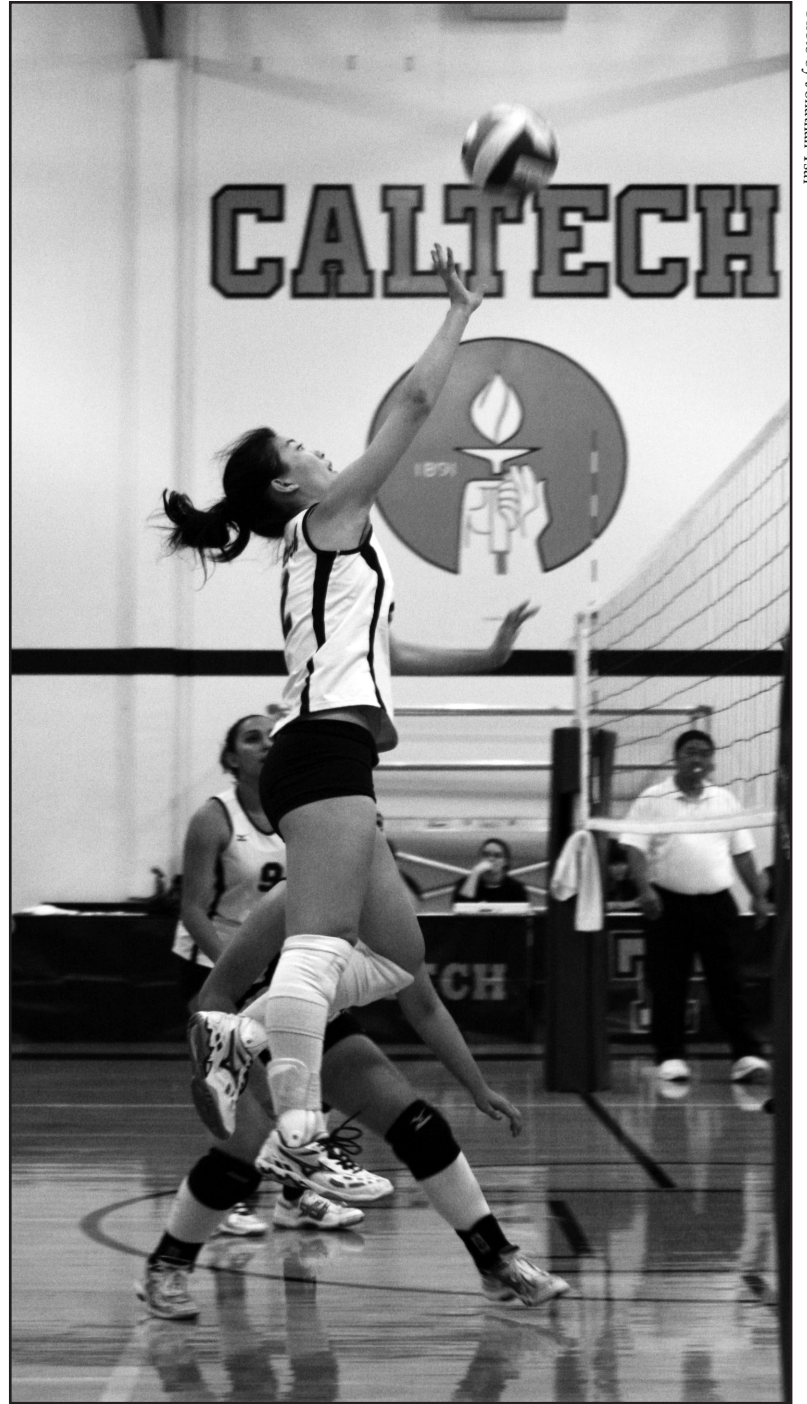


Photo by Jonathan Tsai

Freshman Vivian Yang goes up for the spike during Caltech's 3-0 loss to Occidental on Tuesday.

Upcoming Games

Nov. 4

Women's Volleyball vs. Pomona-Pitzer
7:30 P.M.

Nov. 5

Men's Water Polo at Occidental
4:00 P.M.

Nov. 6

Women's Volleyball vs. Whittier
7:30 P.M.

Men's Soccer at SOKA University of America
7:00 P.M.

Nov. 8

Men's Soccer vs. Alumni
11:00 A.M.

Women's Volleyball vs. Alumni
2:00 P.M.

Women's Basketball vs. Alumni
5:00 P.M.



The Weekly Scoreboard

Oct. 25

Men's Soccer at La Verne L 6-3

Men's Water Polo vs La Verne L 17-10

Oct. 28

Women's Volleyball vs Occidental L 3-0

Oct. 29

Men's Water Polo vs. Redlands L 24-1

Men's Soccer at Whittier L 3-1

Oct. 30

Women's Volleyball vs. West Coast Baptist W 3-2

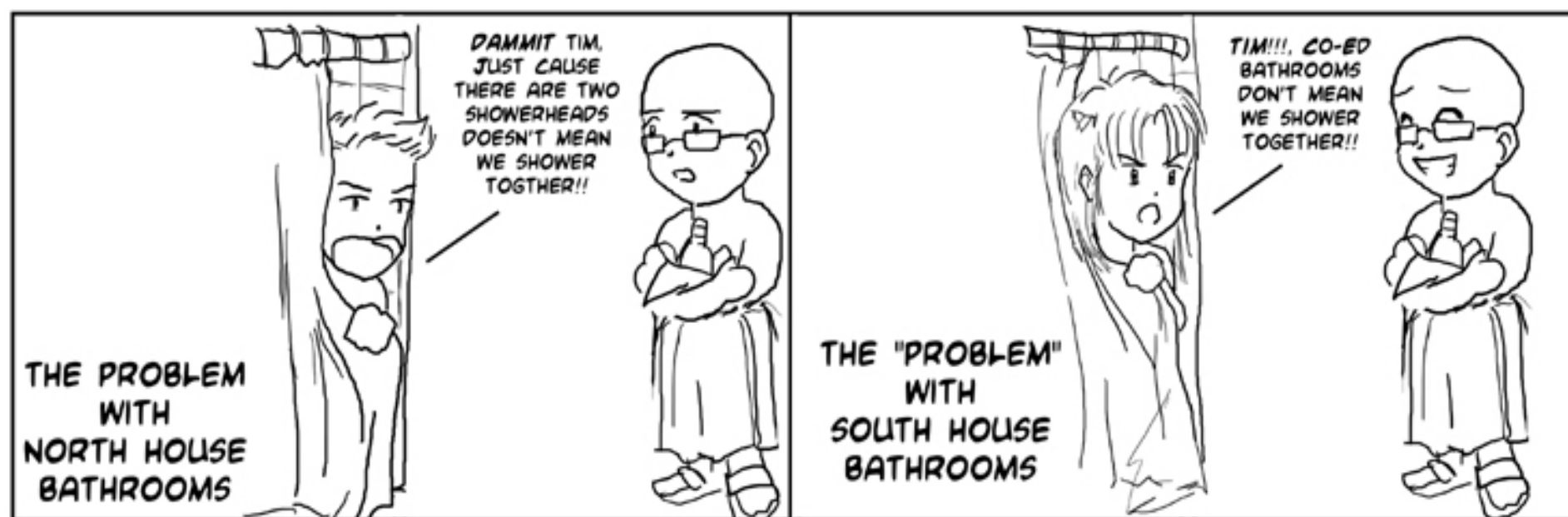
Nov. 1

Men's Soccer vs. Pomona-Pitzer L 3-0

Men's Water Polo at Cal Lutheran L 19-3

Women's Volleyball at La Verne L 3-0

Comics

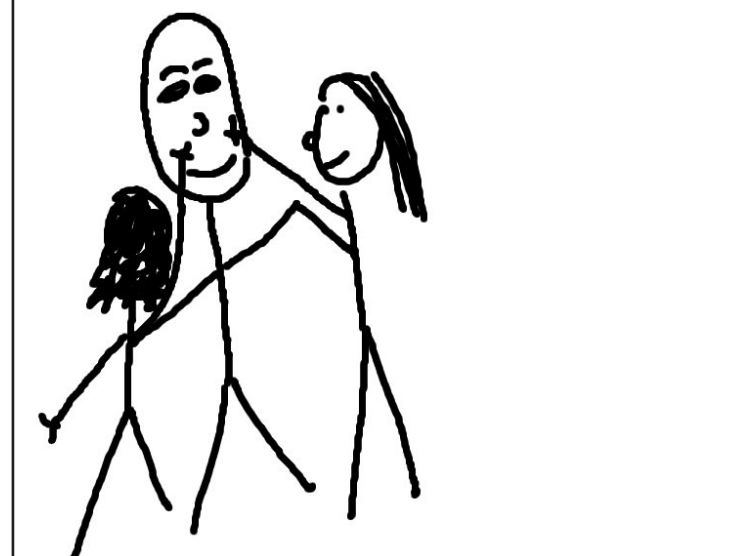


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We pay \$5 - \$15 for original student comics email:

tech@caltech.edu

The ladies all wonder: what could be the simplest explanation for how Occam kept his face so baby-smooth?



Sine Error by Mark Eichenlaub



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Crippling Depression courtesy of Tim Wan, Mike Yeh, Ben Lee