

Freshmen Content With New House Assignments

By JENNY IOFINOVA and ARTHI SRINIVASAN

After three weeks at Caltech, the frosh have gotten used to problem sets, been to the Coffeehouse, and more importantly, finished Rotation and settled into their respective houses.

Rotation week was as hectic as always, with freshmen moving from house to house for dinner each night, meeting upperclassmen, and eventually deciding which house would be a good match for them.

New Pageboys Shannon Greene and Preetha Sinha, both rated Page highly. Greene came to Tech early for volleyball pre-season, and spent a lot of time hanging out with Pageboys, which positively influenced her choice. Like Greene, Sinha was influenced by having made friends at Page, and she said, "I liked all the people and I felt I got along with all of them."

During the evening they found out if they got into Page, the frosh ran through the main corridor, which was blacked out, and were met with whipped cream and Cheez Whiz. Sketchy? Not at all: as Greene commented, "It was nothing bad, I had a lot of fun."

New Flem Tom Tsai enjoyed the lengthy Fleming initiations, commenting that the night of moving furniture into Millikan Pond as well as the Formal Dinner achieved their intended purpose of demonstrating house unity. According to Tsai, Formal Dinner was a little unusual: "There were a lot of bogus things, they made us address each other as 'Brother' and 'Sister', but it was fun."

Chelsea Sharon, a new member of Ricketts, said, "I hung out here every night after dinner, it seemed like there was always something going on, and a lot of my Rotation friends ended up here." She also talked about Frosh Wash, where all of the new frosh were showered then taken out to dinner at an In-

dian restaurant. She was happy with her house assignment and thought the initiations were fun.

Xixin Lu and Wing Yeng, new Rudds, have just experienced Hassle Week, complete with having been about required to wear a cape and underwear. The new frosh also pulled pranks on the other houses, such as stealing shower curtains, and other such random tasks that the upperclassmen saw fit to assign them. The week culminated with the Dogpile and showering wars. Said Lu, "The initiations were a lot of fun, especially when we went into Millikan Pond and sang American Pie." The dogpile was also a favorite.

"Lloyd didn't have any sort of initiation, but had a frosh picnic where [they] played Ultimate Egg, and that was a lot of fun," according to Ryan Huang, a new member of Lloyd. The new Lloyd frosh also participated in "Frosh Elections", where the upperclassmen bolted the doors to the library, the frosh crawled in, were met with fire hoses and were subsequently showered. Huang has chosen Lloyd because "I knew a lot of people in Lloyd, and I liked the rooms and stuff." Huang also was happy that he got to move into a temporary room before moving permanently, because it gave the frosh time to choose roommates.

Park Cram, a new Darb, said that he wanted to live in Dabney because he really liked the people he met there. Although the Dabney frosh did not have any initiations, on the night when they found out what house they were in, the upperclassmen all hugged the new frosh. Said Cram, "Everyone walked up and hugged me, it was kind of funny."

In Blacker, frosh waiting for their house assignment were greeted by a closed gate and door guards. Upon

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L. Tran/The California Tech

An animated President Baltimore explains a point during his Watson lecture on viruses last Wednesday in Beckman Auditorium.

Baltimore Explains Virus' Motivations, Shares Perspective on Epidemic Cause

By ADAM SEARS

What's more evil than a problem set due Friday night? More worthless and less appetizing than Chandler's eggplant pizza topping? More sickening than pre-frosh weekend and more bloodthirsty than Uma Thurmond? According to President Baltimore, the answer is clear: viruses.

Dr. Baltimore delivered an interesting Watson lecture on his favorite topic Wednesday night to an audience in Beckman Auditorium. The media has recently brought the subject to the attention of millions of Americans and other peoples

worldwide, with the rise and fall of the SARS epidemic.

Viruses like West Nile, Ebola, HIV and influenza have become infamous for their impact both at home and abroad. Viruses spread in many ways and many forms of human contact. President Baltimore said that he would occasionally have to explain declining to shake a colleague's hand, when worried about transferring the bugs. He noted, "I think the Japanese learned to bow because they realized they were healthier that way."

Viruses can also be transferred by coughs and sneezes—but usually have some sort of time limit after which drying effects rip it apart. A virus consists of its instructions—some combination of DNA or RNA—and a protein shell. When this casing is ripped apart and the instructions destroyed, it is effectively dead.

It is unclear though whether viruses are really alive in the normal sense. They don't eat, contain no organelles, cannot move and are unable to reproduce without borrowing from other cells.

However, it's hard to think of them simply as minerals or globs of protein. But more practically, Baltimore believes that viruses are "about as alive as anything," and Dean Revel adds that, "Biologists speak of live and killed viruses all the time."

This subject sometimes comes to the foreground when there is talk of completely eliminating a virus and its relatives. For example, consider the virus smallpox, which was effectively eliminated from the human population in 1980. After 13 years of steady eradication, only a few lab samples remained.

Though they were eventually stored in two laboratories in Russia and the United States, the reasoning is not clear. Of course, "the environmentalists were worried," but Baltimore didn't see any reason for storing such a deadly, useless disease. "Why do we keep it

at all?"

The major distinction Baltimore noted between viruses was whether they were "equilibrium" germs or not. An equilibrium virus does not kill its host, but needs it to survive. On the other hand, a non-equilibrium virus has no such obligation and often has a vast pool of friends in another type of host, usually less affected.

SARS and influenza are non-equilibrium type. Apparently, while sometimes a virus evolves to be less harmful to its host, many like HIV seem as though they never will. Baltimore claims that these are the real threats.

Many of these non-equilibrium viruses are truly reckless in their attempts at replication. A typical virus injects its programming into a cell, in order to hijack the manufacturing equipment inside. Once production has begun, the cell begins to fill with replicated viruses. They will then either "bud" from the walls in little lifeboats, or ride the ship into the ground, ultimately filling it to capacity and splitting it in half.

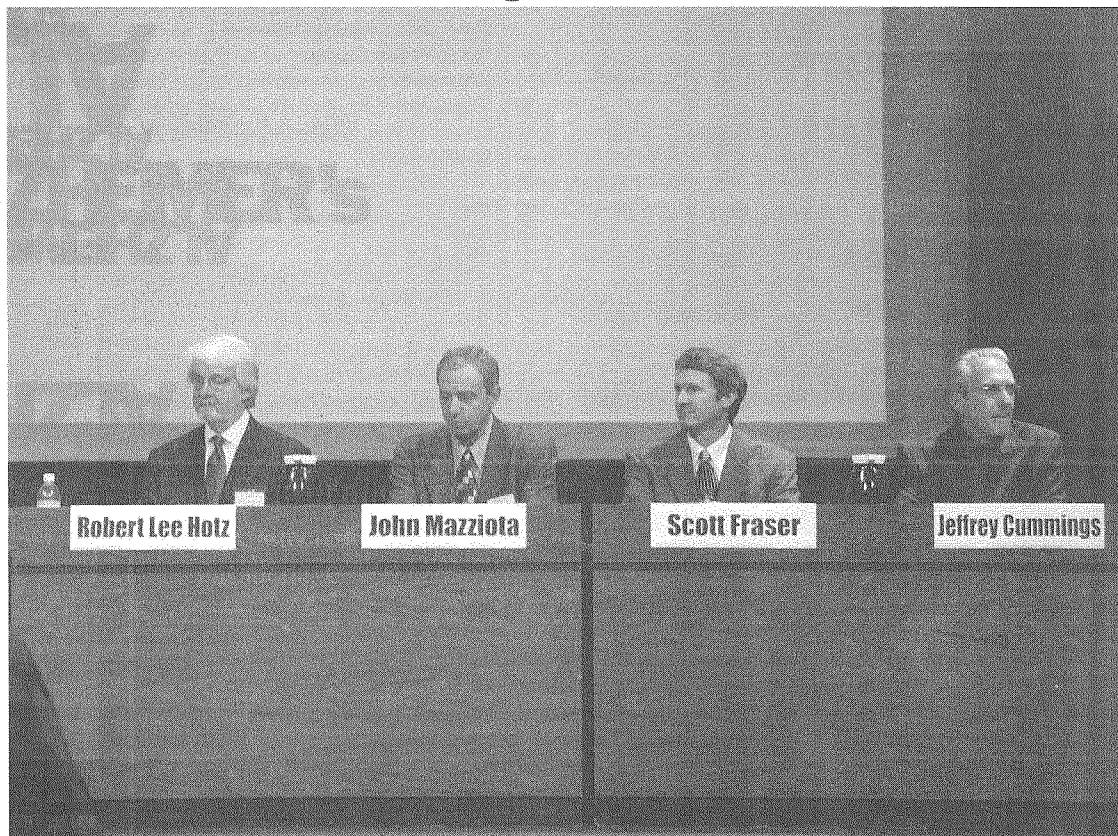
But other viruses are more mindful of the limits of their host, hoping just to be replicated and pass on to the next generation. "Viruses don't want to kill people," Baltimore explained, "they just want to infect their children."

Among other things, many experts claim viruses in part are behind the sicknesses that plague schools and industries when a new wave of people from different areas come together. Baltimore, however, would tend to disagree. He expressed his doubt that such an influx is solely responsible for the rise of ailments at the beginning of the school year, saying, "I don't buy it."

Apart from a few isolated things, Baltimore said that viruses performed no real good in the world. They can cause a beautiful streaking in flowers and are used in providing gene therapy to cure certain diseases, but this has not been per-

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Alzheimer's Forum Delves Into Recent Advances in Diagnosis and Treatment



D. Korta/The California Tech

A panel of experts discussed new discoveries related to Alzheimer's Disease last Tuesday evening before a small audience of students and area residents in Beckman Auditorium.

Variety of Themes, Percussion Illuminates Campbell Concert

By KEVIN BARTZ

A little contemporary, a little traditional and a little original. Sometimes deep, sometimes light and sometimes the longing, hopeless romantic. Behind African drums, Latin shakers and the clang of the bodhran rings a classical operatic voice tinged with the Irish timbre of its Belfast upbringing.

That's Fil Campbell for you—a little of everything. Everything from her flowing a capella ballad "After the Ball" to a textured djembe solo in "Me and My Shadow" to the nearly full-fledged orchestral backup of "Beneath the Calm," her latest CD. "People don't want to hear just one thing," she explained, as husband and drummer Tom MacFarland tidied up what might pass for the Smithsonian's world music exhibit.

"There are so many good songs out there to be sung and so many good ways to hear them." And sing she did last Friday night, to a sixty-strong Winnett Lounge crowd of students, staff and local residents. With over a dozen songs drawn from three solo albums and set to the rhythms of MacFarland's multi-continental percussion fleet, the Northern Ireland folk singer shared a cornucopia of themes, tunes and instrumentals in this month's featured Caltech Folk Music Society concert.

"She has a unique voice," said Rex Mayreis, who coordinates the society's events. "It's sometimes fragile, sometimes fun; she can be breathy, romantic and cover a range of voices." Music critics agree; The Columbia Gypsy recently praised her "breathy warble with a touch of Irish—warm, pretty and really interesting."

It's a smooth, silky voice, one that illuminates her mix of traditional and modern folk. And more than anything else, her voice is the crown jewel on an act which, anchored by her husband's drums, is distinctly and warmly instrumental.

"The two things that make this performance unique are Tom's percussion and Fil's unique mix of modern and traditional music," said Nick Smith, who heads the Caltech Folk Music Society. "Most Irish and Scottish bands use just one instrument, but Fil and Tom's instruments come from many areas of the world; it gives this a different feel than when it's just one person up there with a guitar."

MacFarland's drums come from three different continents: there's a pair of African congos as well as a djembe for Campbell's deeper harmonic moments; an 18" skin-headed bodhran, a frame drum that's the staple of Irish folk; and an array of South American contrivances MacFarland playfully calls ringers and shakers.

The folk duo assembled its stock over 18 years touring Europe, the U.K. and the U.S. that included a prestigious opening act in the Parliament Buildings in Belfast after the Good Friday Agreement.

"My drums add dynamics to the music; they add color," offered MacFarland. "I try to create a rhythm, but without forcing it on people, without intruding." Indeed, only the most musically astute could catch the onset of MacFarland's drum solo in "Somebody Up There"; it follows sweetly and fluidly from Campbell's overtures to God's watchful eye. Or it sets the tone of mild anger behind Campbell's chiding of childish politicians in "What Are You Gonna Talk About?" Or it embodies the somber undertone of losing a loved one in "I Still Think of You Sometimes."

All in all, in MacFarland's words, "my drum does different things for different songs, the percussions adding sympathy to the melody." His rhythms must be strong and diverse enough, after all, to bring out a variety of themes in a singer and wife who refuses to limit herself to any one thing.

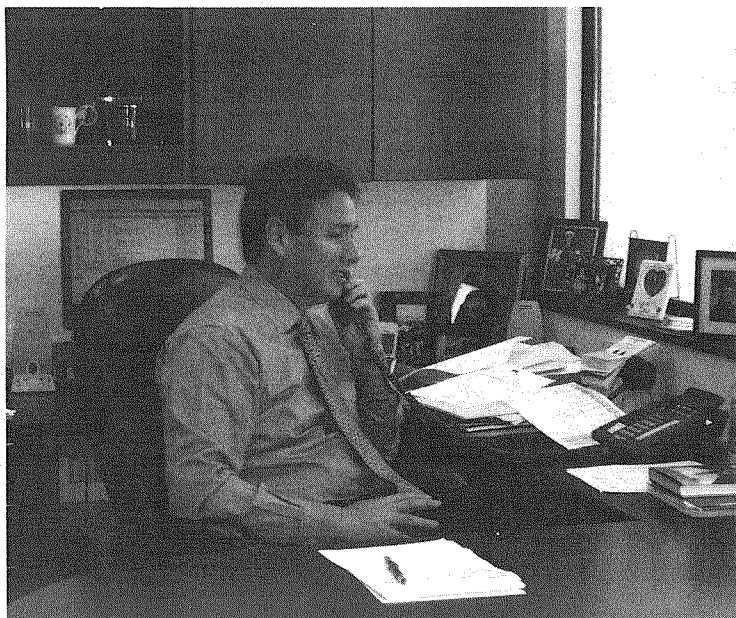
As a publicist for Ireland's biggest folk catches in the last 20 years, she's seen everything from the historical elegance of the Bolshoi Ballet to the antiwar pitch of Bob Dylan.

As a respected music teacher educated at Queens University she trained Irish pop favorites like the Boys of the Lock. And as a beaming five-year-old in her hometown of Belleek, she admired Judy Garland in "The Wizard of Oz."

Put it all together and you have the Fil Campbell of today. "I think what makes me unique is the fact that I've never fit into a category," she said. "I sing songs that have meaning to me and my heart."

Some of her songs reflect her womanhood, like "Somebody Up There," in which she takes pains to refer to God as a "she." Others stem to her historical conscience, such as "Me and My Shadow," in which she laments the death of civilian women in World War II. Still others tell stories of love lost and gained.

It's an eclectic mix, but one that transcends any prescribed notions; what else would you expect from a singer who changed her name from Phil to Fil just because she decided one day that "names kind of classify you." "Listen to the kinds of things Fil and Tom do," said Smith. "They include a variety of themes that can be interpreted in a number of ways; they don't beat you over the head with any one thing. Instead, they allow the meaning to develop inside your heart."



L. Tran/The California Tech

Arriving during an intensive fundraising campaign, new Associate Vice President Bob McQuinn has already gotten heavily involved.

Nobel Laureate Addresses Pasadena, Hails Science as Ultimate Peacemaker

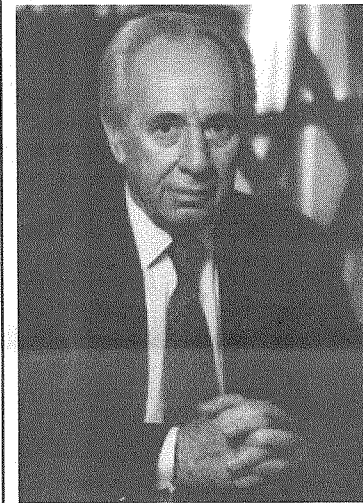
By LEA HILDEBRANDT

Shimon Peres, recipient of the 1994 Nobel Peace Prize, spoke at the Distinguished Speaker Series in Pasadena last Wednesday, October 15, 2003. Chosen through a lottery sponsored by the Caltech Campus life office, ten Caltech students attended the lecture.

Peres, who gave his speech in fluent and eloquent English, held the audience spellbound throughout his talk. Even though the topics of his talk were of a serious nature, he also entertained the audience with his clever humor.

For instance, when speaking about dictatorships of the past and the present, he noted: "I have to say one really nice thing about television: It makes dictatorship almost impossible. But then, it also makes democracy almost intolerable."

According to Peres, the advancement of science and technology gave us reason for hope as we entered the 21st century. As Peres pointed out, the 20th century was possibly the bloodiest century of human history. The two main reasons that caused the wars and killings of the past century were "terrible ideologies based on false assumptions" and the fight to defend



Courtesy of www.speakersla.com

Nobel Laureate Shimon Peres spoke in Pasadena about terrorism and the Middle East last week as part of the Distinguished Speaker Series.

Development VP Brings New Staff, Ideas to Table

By K. SZWAYKOWSKA

Robert E. McQuinn is the new Associate Vice President for Development Operations at Caltech. Formerly Senior Associate Dean at the University of Southern California, then Associate VP of Development Operations at Williams College, the top liberal arts school in the United States, Bob McQuinn joined the Caltech staff this July and has since made himself at home in the Caltech community.

"It is a real honor and privilege to be a member of the Institute," he says. It's an interesting time for the Caltech Development Operations office, just entering into the second year of an intensive, goal-oriented fundraising campaign.

The school plans to raise \$1.4 billion for a wide variety of projects, including renovation of the undergrad student houses, construction of a Campus Center, graduate and postdoctoral fellowships, and SURF funding.

It's a lot of money for a small school to raise and that is what Bob McQuinn is now in charge of. Now and in the future, he will have a big impact on the way Caltech gets its money. Already, Bob is influencing changes in Caltech's fundraising.

"When I came in July," he says, "[there were eight fundraising programs to begin with] Shortly after I

and extend territories.

Throughout most of the 20th century, land and natural resources were crucial for the welfare of a country and its people. This is not the case any more since by the end of the 20th century, science and technology had replaced the importance of land and natural resources.

In fact, Peres said that Caltech presented one of the great hopes for the future since it promotes science and technology, which "call for openness and globality and which cannot be conquered."

Thus, at the end of the century, Peres hoped that since we had gotten rid of the major reasons for war, we had gotten rid of war itself. But, "what used to be Nazism, Stalinism and Militarism is now terrorism."

Peres, however, still has an optimistic view of the future. He again pointed to science and technology as a potential "shield" from terrorism. But, he was not talking about using science and technology to build weapons to kill terrorists. That is not the way to go about fighting terrorism since "terrorism is a danger, not an enemy" and because one also needs to eliminate the motives for terrorism by "promoting economies, providing hope and respecting people".

Instead, science and technology are incompatible with a few essential aspects of terrorism and dictatorships. For example, dictators are generally surreptitious and often dishonest. Science and technology, however, must be transparent.

Also, "there is no such thing as a scientific lie. If you want to do free research, you need a free community". As a concrete example, Peres said that, in his opinion, the greatest accomplishment of technology is China, where the people's access to information has made dictatorship less and less effective.

After addressing the general problem of terrorism, Peres addressed the relationship between Israel and the Palestinians. According to Peres, Israelis "do not want to govern the life of other people" and would "gladly give the Palestinians back their land as soon as they stop the terror".

Peres asserted that Israelis and Palestinians had a clear vision of the future: to have two states for the two people, coexisting as good neighbors. The difficulty is "not to define the future, but to get rid of the past".

Even though he is not satisfied with the pace of progress, Peres believes that the Palestinians are on their way to a more democratic society. He pointed out that "we can see the difficulty of them to build a government, which means that they are close to democracy."

While Peres is supportive of US involvement in Iraq and its war against terrorism in general, he mentioned several times during his talk that he does not support US involvement in Israel. He emphasized that "the US should not make decisions for Israel" and "we need to fight it out ourselves."

Peres's speech was followed by a question and answer session. Members of the audience had submitted questions on note cards as they had entered the auditorium. The moderator then selected a few of these questions and posed them to Shimon Peres.

One of the questions asked was whether Peres thought that the Israeli government should exile or even assassinate Yasser Arafat. Peres emphasized that he was "totally against this". In a little ironic voice he said that "even though Arafat misbehaves, we can keep him like he is—in a corner." He further said that not all problems have a solution and that a bad solution can often be worse than no solution. "Arafat is a problem we have to live with".

Peres received his Nobel Prize in 1994 as a result of his work on the Oslo Agreements signed in 1993 that outlined ways to move towards peace in the Middle East. Arafat and Israeli Prime Minister Yitzhak Rabin shared the prize with him.

He also served as Israel's Prime Minister twice and has held a number of cabinet positions. Peres was head of the Labor Party for over fifteen years. He created the Peres Center for Peace in 1996 to advance joint Arab-Israeli ventures by promoting cooperation and increased contact between the people.

The 2003-2004 Season of the Distinguished Speaker Series is hosting seven different speakers: Shimon Peres, Frank Abagnale, Bob Woodward, Rudy Giuliani, Molly Ivins, Dave Barry and Karen Hughes. For each of these talks, Caltech students are able to enter a lottery drawing to win one of ten tickets.

The California Tech

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VOLUME CV, NUMBER

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Letters and submissions are welcome; e-mail submissions to tech@ugcs.caltech.edu as plain-text attachments, including the author's name, by Friday of the week before publication. Sorry, the Tech does not accept anonymous contributions. The editors reserve the right to edit and abridge all submissions for any reason. All written work remains property of its author.

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The Florida Marlins celebrate their Game 7 victory that propelled them to their second World Series. A Cubs fan was blamed for a fatal error in Game 6 that many think cost the Cubs the title.

In Area Asian Man's Eyes Ghetto Causes Not Clear

By LIBIN ZHANG

I would like to commend ASCIT President Tom Fletcher for courageously exposing in last issue's Fireside Chat the problem of White people tending to cluster together and live in the seven 'on-campus' Houses. I am a little suspicious of his desire to have "a uniformly shared student culture and set of values," but his reasoning is otherwise sound.

Fletcher commented that, "I do not know what I would find in the Y excomm, but I'm willing to guess similar or slightly better results [similarly low proportion of Asians as the ASCIT BoD or IHC]." Actually, six of the eleven members of the Caltech Y Executive Committee (Ex-Comm) are Asian-American or Asian-Canadian. In statistical terms, that is 55% of the Ex-Comm.

At the California Tech office, the staff is evenly split between the Caucasian camp and the Asian camp. It appears that some aspects of student life can be models of interracial harmony.

Last year, at least five members (56%) of the ASCIT BoD can be considered Asian [Vikram Mittal, Janet Zhou, Basit Khan, Jialan Wang, President Ted Jou and possibly Neda Afsarmanesh]. This year, the Asian BoD population has dwindled to one [Kathryn Hsu].

But other changes have occurred as well: last year Fleming House dominated the BoD; Now Lloyd House outnumbers the other Houses in BoD representation. Whether or not the changes are a

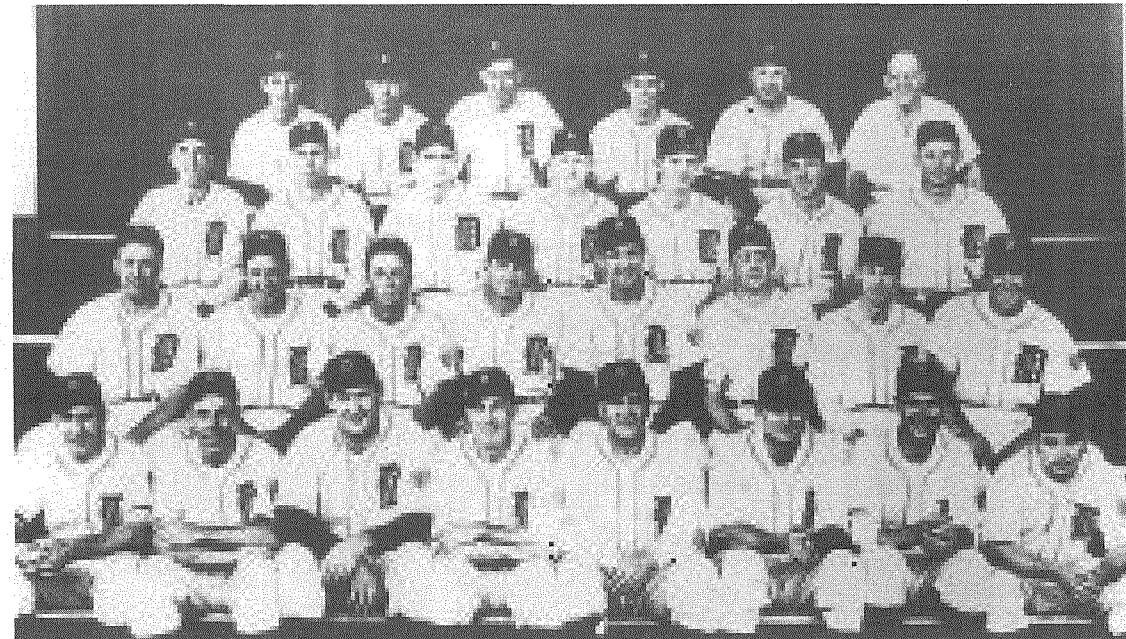
statistical blip or a profound shift in student leadership demographics is difficult to tell.

Tom Fletcher referred to the Asian population as 'ghetto-ised', drawing an analogy from the predicament of American inner cities. Ghettos developed as White people participated in 'white flight' and moved away from the dilapidated downtown to cleaner, newer and more uniform suburbs, leaving mostly minorities in the urban centre.

Since it is the Caltech Asian population that is moving away from the dilapidated seven Houses to the cleaner, newer and blander Avery, the Asians are engaging in 'Asian flight.' So the true 'ghettos' are the Houses where the White people are staying, with crumbling infrastructure and almost complete lack of handicapped access.

Ethnic clustering, or de facto segregation, is not an exclusively Caltech or 'Asian in Avery' phenomenon. There are residences populated by mostly Caltech Eastern Europeans, Thais, or White-Americans. Cities all over the world have ethnic neighbourhoods, which can have names like Little Italy, Chinatown, or the barrios. The March 11 2003 IHC minutes also noted a similar form of clustering:

"[Ricketts President Natalia] expressed concern about how in the past FSI [summer program serving mostly underrepresented minorities] counselors have been mainly House. Natalia noted that this has created an environment where the



The 1945 Tigers lacked Asian representation. Despite increased diversity in 2003, the Tigers nearly tied the record for most losses. Incidentally, 1945 was the last time the Tigers won a World Series, beating the Cubs after a disgruntled fan cursed the Cubs for not letting his pet goat into the Stadium.

Sinking Feeling Confirmed: Cubs Hex Triumphs; Boring World Series Likely

By HARRISON STEIN

I sat there on the edge of my seat, but the Cubs fan in me knew that something bad was about to happen. Last Tuesday, The Chicago Cubs led Game 6 of the NLCS 3-0 with their best pitcher on the mound, needing just five more outs to reach their first World Series in fifty-eight years.

Though the game was clearly in control, I knew the baseball gods had something awful in store. And sure enough, a higher power intervened in the eighth inning when Luis Castillo popped the ball foul.

This should have been the second out, but Steve Bartman, a "Cubs fan" that lives ten minutes from my hometown, knocked the ball out of Moises Alou's grasp. What followed was a comedy of errors that culminated in an eight-run inning for the Marlins.

Even though we had two innings of Game 6 and all of Game 7 to recover, everyone in Chicago knew that this series, this playoff run, this season and much more was over. Flash forward two nights. The league's other cursed team, the Boston Red Sox, led 5-2 in the eighth inning of Game 7, needing just five outs to beat their hated rivals, the Yankees.

Even though it is extremely rare for a team to blow a three-run lead, let alone in the eighth inning, the Red Sox managed to become the second team in three days to accomplish that feat. This time, there weren't any horribly unlucky plays—Pedro Martinez was simply too tired and the Yankees feasted on his dead arm. After the Yankees tied the score, the Sox hypothetically could have regrouped and won, but once again, the game was all but over.

Having lived in Chicago my whole life, I have learned to expect the worst. Our lovable losers have made the playoffs three times in my lifetime and just four times since 1945.

However, this year felt different. We had the best manager in the game, two fantastic pitchers in Mark Prior and Kerry Wood and our

first playoff series victory since 1908. Some Monks in Cambodia even found a goat that had six legs (it was once said that the Cubs wouldn't win a World Series until goats had six legs).

Chicago fans been through a lot in the last ninety-five years, but Game 6 was probably the most bone-crushing defeat ever, akin to being pummeled in the stomach with a ten-pound mallet. Just when I thought there wasn't any way the Cubs could ruin this series, they found yet another way to break my heart.

The Red Sox have been here before, as they are the only team in sports that has suffered more than the Cubs. They've lost four World Series, all in Game 7, watched the Yankees win twenty-six championships since Boston's last title and suffered through the Curse of the Bambino, Bucky Dent and Bill Buckner.

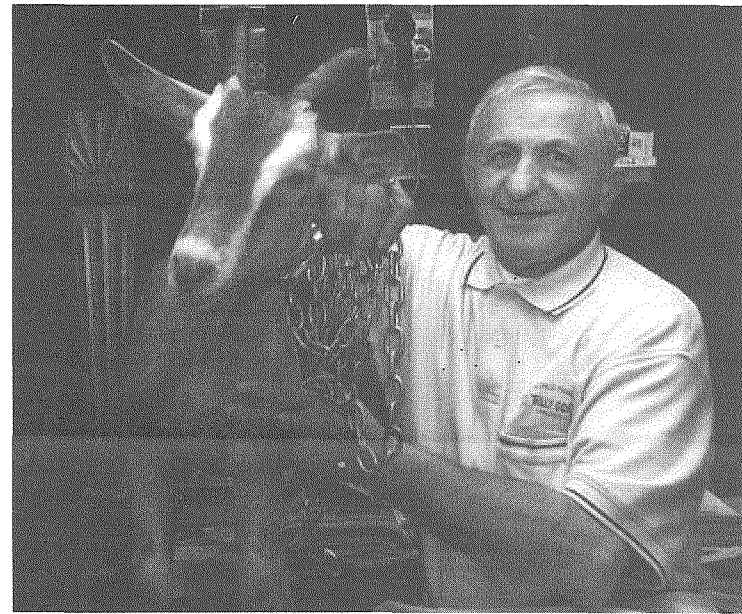
Thursday night might not have been the Red Sox Nation's worst moment, but Red Sox fans are devastated beyond belief, again. A few days ago, my mouth watered at the prospect of a Cubs-Red Sox World Series. With both teams in the Se-

ries, one of them had to win. Now, I sit here, a broken sports fan.

Maybe I'm spoiled from watching the Chicago Bulls dominate the NBA for a decade, but it has never hurt more to be a Chicago fan. I never believed in curses, but after watching the 2003 playoffs, my perspective has changed a bit.

I guarantee that the gaffes in the two games never would have happened if the St. Louis Cardinals, Seattle Mariners or even Detroit Tigers were playing instead of the Cubs and Red Sox. And what do we get for our troubles? A World Series between the Yankees and the Marlins, the most uninteresting matchup since 1993 (and sure to be the lowest rated).

Nonetheless, I can be happy about a few things. The Cubs had an amazing run and they are well equipped to contend next year. The White Sox should compete once they get a new coach, the Bulls look like a dynasty in the making and the Bears...well, they still stink. For now, all I can do is hope for a better tomorrow. Still, it's never been harder to say "Wait Til Next Year," as this year could have been so much more.



Sam Sianis, owner of Billy Goat Tavern in Chicago, poses with a descendant of the original goat that was the source of the famous curse.

FSI frosh often decide to be Scurves even before going through Rotations ... As a result, she would like to request a cap of one FSI counselor from each House. Only one from each house was thought to be a little extreme, but as a whole the IHC agreed with her (it was suggested to set the cap at two)."

I am not sure if the cap was put into effect, but it appears that in the past, underrepresented minorities have been overrepresented in one House.

A look at the number of interracial roommates provides an infor-

mal and even closer look at how people like to be with their own kind. Since Whites and Asians are roughly half and half of the total population, half of all roommate pairs should be heterogeneous in a colour-blind environment. Segregation at Caltech is merely a microcosm of the world's segregation.

The perception of race itself is difficult. Should the general terms of White, Black and Asian be based on skin colour, continent of origin, or anthropology? The definition of White (Caucasian) has expanded from meaning pure Western European to European to Indo-European.

Individuals of mixed or Hispanic descent have sometimes become 'White.' Consequently, a growing number of people from northern India to Iran to Morocco to Brazil have turned 'White' in the last century; Perhaps eventually everyone will be considered 'White,' including those of us from Asia east of the Hindu Kush mountains.

Many Asian students and some White counterparts, move off-campus since they are shy and less involved in House activities. It's interesting to note that Western world leaders tend to have last names in the first half of the English alphabet, such as Clinton, Bush, Chretien, Chirac, Fox and so on.

Social scientists suspect that this may be due to Western elementary classroom seating arrangements, where the students are seated in alphabetical order. The front row students, who tend to have last names early in the alphabet, get to be more

involved in class participation and develop better interpersonal skills, which is crucial in politics.

Those stuck in the back tend to become more shy, statistically speaking. Hence, Asian taciturnity may be related to the disproportion of Asian last names in the last half of the alphabet (Wong, Xiao, Zhang, Yang and so on). Recent waves of immigration have also brought many people with less developed English skills.

How should the Caltech community address its de facto segregation? Since I first mentioned the segregation of Asians into Avery on April 22, 2002, with an article on the segregated 'white' and 'colored' chalk facilities in the Sloan building, I have given the issue much consideration.

Greater minds in the federal government have tried to tackle the much bigger housing segregation problem prevalent in American cities. However, I doubt creating minority-majority electoral districts, or introducing a shuttle between Avery and the Seven Houses will work well. I also fail to see the effect of issuing cute statements about diversity.

Besides becoming an elementary school teacher and seating students in a non-alphabetical order, the race gap can only be bridged by greater interracial social interactions or by an 'urban renovation' equivalent. When the North Houses are rebuilt and the South Houses are patched up, perhaps there will be less 'Asian flight.'

Trashed Houses Hinder Fundraising; Anti-Social Students Need to Think

By TOM FLETCHER

So You Want a New House

As many of you are surely aware, Caltech has been trying to raise money to renovate and rebuild the student houses for a while now. A few years ago, plans were drafted, discussed and fund-raising started. There has been little change since then.

The word from development and alumni relations is that, try as they might, they cannot get donors to commit money to the student houses. One concern, preserving the houses' names, has scared off the hypothetical egomaniac donor, but it is the litany of other concerns that is holding up the project, primary among them being the physical condition of the houses.

According to development, many large donors are afraid to commit money to building new dorms because they perceive that Techers will "trash them" immediately. They use the current status of the houses as justification for their belief that despite our thorough grounding in humanities and social science, we don't understand maintaining property.

As much as I believe this to be baseless, that's the problem: a belief doesn't need proof to propagate. Only explicit proof to the contrary will convince people that their current belief is wrong.

What can we do? To start, maintaining the current state of the houses should be our goal. Remember, the houses get back their unused damage money to spend on house events and purchases, so there is a financial incentive to being respectful. We also need to make a clear statement that much of the degradation of our living conditions is from the houses being old, not from students.

Are 1170 Del Mar, 150 Chester, or Avery "trashed?" No, they are not and I think in good part, that is because they are not over forty years old.

Until we work to remove this notion that it is the condition of the houses that is holding back fund raising efforts, we cannot draw at-

tention to other causes of development's inability to raise money and unless we fix this perception, we may find ourselves without new houses for a long time.

Whom I Met With This Week

I met with most of the Student Affairs administration this week (Margo, Erica and Tim) in various settings. I began meeting regularly with Margo again and I still need to talk with sophomores who were in Ch/APH 2 to word an apology letter to British Petroleum to ease the fallout from last year. We also discussed the role of the career development center and the career day held last week.

In meeting with Erica and Tim, Jeremy Pitts and I raised a number of student concerns and gave them a three house tour to familiarize them with student life.

I firmly believe that the administration cannot effectively create and enforce policy without a deep and nuanced understanding of student life and I think we have started making progress toward this.

Opportunities to Improve

Whether it was the inflammatory headline, or the concept in the article, I was pleased to see people discussing the subject I brought up last week. I think most schools are afraid to consider the issue of schisms in the student body.

Caltech spends a token amount of money on Hispanic and African-American students, a little on international students, but the one group that maybe needs some of the most help in integrating into the Caltech culture receives very little administrative assistance.

While this is an administrative shortfall on one side, we need to consider the responsibility of the students too. Students who are content to sit in their room and disappear are doing a disservice to themselves and the school. It is completely unsupportable to believe that success in science is predicated solely by your grades and test scores at this school.

Success in the academic world is

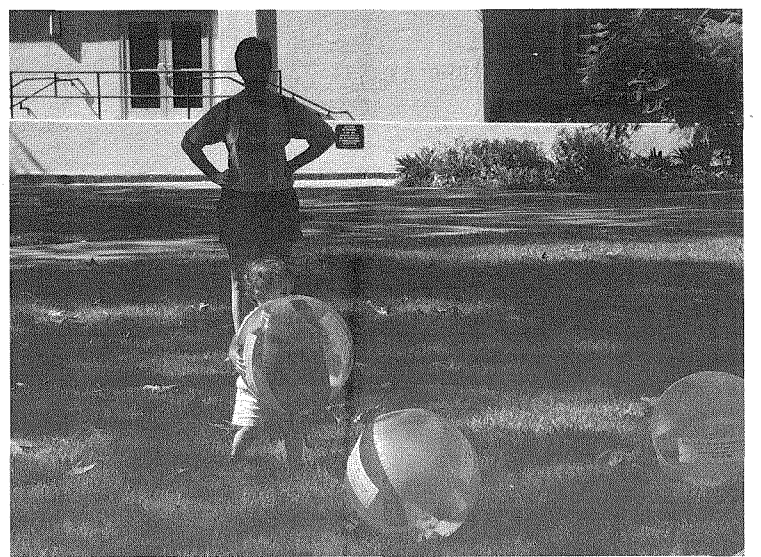
built on effective communication, the ability to write grants and effective networking. These things are not in any core math book and can only be learned from interacting with others.

The house system is ideal for this purpose and not making the most of it is a loss for everyone involved. Think about it just for a few minutes after reading this: will your Ma 2a grade be more important in your life than your ability to interview before the NSF? And how do you get better at it? Think about it.

Peace out Caltech,

Tom Fletcher

PS: Hope your SURF presentations went well!



V. Tran/The California Tech

A future member of the Caltech community enjoys the beach balls spread on the lawn near Chandler to advertise for Career Day, which was sponsored by the Career Development Center.

Dean Explores Levels, Limits Of Humor, Shares Joke Repertoire

By JEAN-PAUL REVEL

Are you having fun yet? Well, are you? I suppose that the answer to the question will depend on whom I am talking to. Few will want to admit that they are not having fun here at Tech. Why, such an admission might even mark you as being unfit for attending CIT.

If you have to clench your jaws so hard that you can't laugh, let only smile, as you concentrate on Math, or Physics or Chemistry or whatever...then, well, it is easy to worry that this one time, admissions did make a mistake. Everyone else, you think, has time for fun.

But between you and me that's all bull, expecting to enjoy it all, all of the time. I would be surprised, shocked, actually totally unbelieving if any of you had found that last homework set really totally unalloyed fun to do.

And besides what does that mean, to have fun? There are so many things that could fall in that category that it is truly difficult to define. We can recognize that warm and pleasant feeling inside of us, but it is more difficult to tell if other people are having fun.

One objective way to find out of course would be to could stick them into an MRI machine and look at their brains and see the neurons in their pleasure centers light up. But an MRI is a bit big to carry around all of the time.

In everyday life we have to be content with less scientifically sophisticated indicators, may be just a twinkle, uplifted corners of the mouth or crinkles in the corner of the eye, may be an outright smile. Only if the stimulation is sufficient will there actually be an out-loud laugh, letting everyone around know someone is having fun, real fun. And what kind of stimulus will cause such a clearly detectable outburst?

In many case some event or story becomes especially amusing because there is an unexpected outcome, an element of surprise. The slapstick of the three stooges, the subtler humor of a Charlie Chaplin, the punch line of many jokes, all depend on unpredictability.

I recently read the story of the Scotsman arguing with the train conductor trying to collect his fare. "You are charging me too much argued the Scot, look I am standing up, I don't even occupy a seat, I shouldn't have to pay as much as that fellow over there spreading all over the bench."

And so, on and on. Eventually, tired of the heckling, the angry conductor takes drastic action and throws the Scots' suitcase out the window right into the river the train was passing over. "Hey mon!" yells the Scotsman, "first you rob me and now you are also trying to drown

me bonny son!"

Surprise? Sure, and also, more than that. On the net I came across the words of a Dr. Eisenberg, D.C., Ph.D., writing about "Humor is no laughing matter": He explains "Essentially, humor derives from five basic sources: surprise, ridicule, absurdity, exaggeration, distortion, and exploitation".

I can't figure out whether the good doctor (I just figured out that DC stands for Doctor of Chiropractic) is joking or not. Number one it is clear he can't count, I would not let him touch my vertebrae, and he might manipulate the wrong one.

Number two, several of the "sources" he mentions can be boiled down to surprise or ridicule or absurdity. Exaggeration or distortion are not funny by themselves, but become funny when they unexpectedly reach the benchmark of absurdity.

Number three (and here it is not only the good doctor who overlooks this aspect), one can be surprised, think that something is absurd or distorted etc. all without engendering any laughter or even silent merriment.

It is curious that laughter is not only an indicator of positive feelings, but can also generate such feelings. It is contagious. In a self-sustaining reaction, laughter by itself can bring on more laughter and fun.

Some gloomy winter Sunday morning, as we are bound to have very soon now, when mood drags you in the dust of despair (wow, catch that metaphor) turn on NPR and there they are, the irrepressible Tappet brothers guffawing at the slightest provocation, or even without a discernible reason at all, as a kind of speech defect.

You know, some people go Hmmm Ummm, after every few words they utter. Click and Clack, instead, maniacally roll with laughter without any provocation to speak of, and hearing their cackle, one can't help it, one feels a smile coming on and irrational but unavoidable satisfaction spreads over all but the gloomiest of us. When too blue to even want to laugh, the only remedy is to snap off the set.

Can you imagine living with such characters? So, absent the Magliozzi brothers' boisterous mirth, where does the sense of something amusing come from? Actually in many instances something gets to be funny, instead of just plain surprising or absurd, when it happens, or we inflict it on, other people.

I just attended part of a Meeting in Biology celebrating the hundredth anniversary of the birth of George Beadle, a beloved Nobelist (born in Wahoo

TX, is that absurd enough for a laugh?) and for many years the chair of Biology at Caltech.

It turns out that one evening Max Delbruck, another eminent member of the Division, called his colleague Beadle and made believe he was the organizer of a meeting of the American Cancer Society at the Biltmore downtown, and where was Professor Beadle who was supposed to deliver the address in less than an hour? The puzzled Beadle hurried to try to meet this unexisting obligation.

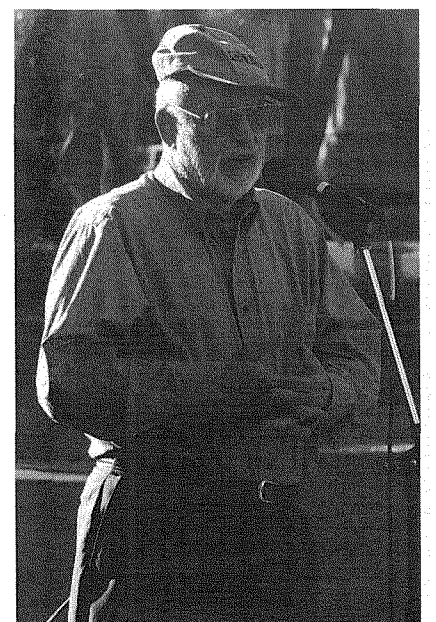
That was only funny because the victim was good-natured and the prankster on par with him. Can you imagine this to have been a joke if it had been perpetrated on a student in the lab? It would be harassment if a Prof had sent a defenseless student on a similar wild goose chase. It would also not be funny at all if that 5 year old had really been in the suitcase.

Circumstances determine if something is seen as funny. A prank pulled on a classmate ends up as funny, because it puts them in the face of ridicule. In such a prank the prankster enjoys a sense of power over the victim. Gently done, may be even the victim may think the episode funny.

Pushed a little too far however it gets to smack of harassment. Put downs, teasing, can all be good fun even if not always good clean fun, if they don't go too far and reach the proper target. What can be fun among peers, may be crude, vicious, insensitive, intolerable from the perspective of others, even another student not part of your "in" crowd. But that's no news to anyone at Caltech anyway. We are all aware that we should at all times consider those around us.

"Laughing is the shortest distance between two people." said Victor Borge. That's only true when both can laugh.

A bientòt



Courtesy of www.caltech.edu

1170 Del Mar is an example of the better kept housing on campus. The dirty character of student housing is largely due to the age of the houses, rather than student recklessness. Unfortunately, the appearance of the houses put off potential donors.

Author and Activist Physicist To Speak on Iraq Occupation

By DEBORAH WILLIAMS-HEDGES

PASADENA, Calif.-Rahul Mahajan, a Caltech alum who holds a Ph.D. in physics, will present the first keynote address in the 2003-2004 season of the Social Activism Speaker Series at the California Institute of Technology. A strong critic of U.S. policy in Iraq,

Mahajan will speak about "The Bush Doctrine at Home and Abroad: Militarism Meets 'Globalization.'" This event will take place on Thursday, October 23, at 8 p.m. in Baxter Lecture Hall on the Caltech campus and is free and open to the public.

Mahajan graduated from Caltech with a B.A. in mathematics in 1992 and received his Ph.D. in physics from the University of Texas, Austin, in 2002. An activist since 1994, he has worked on social and politi-

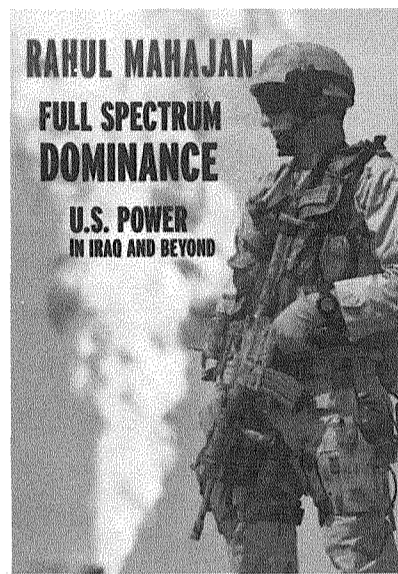
cal issues ranging from corporate globalization to the Israel-Palestine conflict.

Mahajan has served in leadership positions in a number of national organizations including Peace Action, the nation's largest grassroots peace group, and the National Network to End the War on Iraq. He has written over 50 articles and op-ed pieces for publications such as USA Today, the Houston Chronicle, and the online magazine, Znet. His most recent book is *Full Spectrum Dominance: U.S. Power in Iraq and Beyond*. Mahajan's previous book was *The New Crusade: America's War on Terrorism*.

This is the fifth year for the Social Activism Speaker Series, which focuses attention on current social and political issues by inviting prominent activists to share their experiences and perspectives with the Caltech community and the public. This series is coordinated with the help of the Caltech Y, and is made possible by contributions from the Moore-Hufstедler Fund, Student Affairs, the Alumni Association, Campus Life, the Diversity Program Fund, the Graduate Student Council, Jack and Edith Roberts, and the Associated Students of Caltech.

Baxter Lecture Hall is located in the center of the Caltech campus. Parking is available in the lots south of Del Mar Boulevard between Wilson and Chester Avenues, and in the Wilson Avenue parking structures between San Pasqual Street and Del Mar Boulevard.

For more information, visit <http://sass.caltech.edu> or contact Greg Fletcher, Caltech Y, (626) 395-6163



courtesy of www.rahulmahajan.com

Rahul Mahajan, alumnus of Caltech and author and antiwar activist will give a talk entitled "The Bush Doctrine at Home and Abroad: Militarism Meets 'Globalization'" next Thursday.

Two Busy Weeks of ASCIT Minutes: Debts, MHF, DVD Library, little T

October 7th, 2003
12:05 PM,
Olive Walk

Present: Joanna Cohen, Tom Fletcher, Kim Hiscox, Kathryn Hsu, Galen Loram, Jeremy Pitts, Anna Sczaniecka, Will Coulter, & Corinna Zygorakis.

Guests: Leo Stein, Julia Ma, Kim Pependorf, Matt Walker, & Others.

Agenda

1. Call to Order
2. The ASCIT BoD will meet on Tuesdays at noon from now on.
3. We are Scientists are coming to play on either Friday, October 24th or Saturday, October 25th in the RF Courtyard. The BoD would like to give them \$100 for their services, but the social budget is practically empty. The vote on the manner is postponed until after the Social Director has been appointed. Interviews for Social Director will take place on Tuesday, October 14th.
4. The BoD would like to invite *the Totem* to an ASCIT meeting. The hopes are to discuss funding early on so that this year's *Totem* induced budget crunch does not repeat itself.

5. On Tuesday, October 14th, Baltimore which will make the names of the recipients of the Moore-Hufstедler Fund public.

6. There is talk of tweaking the Resolution that was passed at the end of last term so that it conforms to the Faculty Bylaws. This would mean that chairs of various committees would have to sign on anything released by the committee. In the future, ASCIT secretary will also have to confer with Fiona Tindall in regard to faculty committee meeting notifications.

7. The Alumni Association wants to see more interaction between students and alumni. They also hope to focus more of their efforts on helping Caltech students find internships/jobs through alumni.

8. The Council for Undergraduate Education (CUE), which is headed by David Goodstein, needs student representatives, one regular and one alternate. The BoD will conduct interviews for these positions at 9:00 pm on Sunday, October 19th.

9. The BoC has been meeting with the faculty in Astrophysics, Chemistry, and Math. The BoC talk at Frosh camp went well. All of the freshmen know Galen because he set himself on fire. He and Harris will attend house BoC talks for quality assurance. BoC statis-

tics for the last year will be released soon, although, they do not seem to differ much from the previous ten years.

10. ASCIT is currently running at a loss of \$4,352.80 due to lower than expected ASCIT formal ticket sales and *Totem* overspending.

11. The IHC has successfully completed rotation. Also, the Student Curriculum Advisory Committee (SCAC) is looking for student representatives.

12. Student Affairs has expressed interest in funding club events.

13. Will Coulter will meet with the *little t* on Thursday, October 16th to discuss their progress. There have also been complaints of poor *Totem* distribution. As for the ASCIT Photocopier, the card reader has magically disappeared. No one seems to know who took it or where the money used to go. The DVD's also are being readied as quickly as possible for the Coffee House with new barcodes and jewel cases.

Meeting adjourned at 12:47 PM.

Respectfully Submitted,

Anna Sczaniecka
ASCIT Secretary

October 14th, 2003
12:08 PM
Olive Walk

Present: Joanna Cohen, Tom Fletcher, Kim Hiscox, Kathryn Hsu, Galen Loram, Anna Sczaniecka, & Will Coulter.

Absent: Jeremy Pitts & Corinna

Zygorakis.

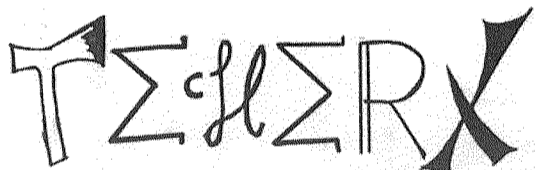
Agenda

1. Call to Order
2. The new ASCIT Social Director is Abe Fetterman.
3. Interviews for Council for Undergraduate Education (CUE) representatives are going to take place at 9 pm on Sunday, October 19th.
4. The Moore-Hufstедler Fund approved a \$50,000 proposal for an artist in residence. Some students have expressed concern that such a large fraction of the fund was allotted for something that could potentially only benefit a handful of students. Efforts are being made to ensure that artist in residence will reach out to as many students as possible. The Moore-Hufstедler Fund also approved \$1000 for the ASCIT DVD library, under the condition that the collection be made accessible to grad students.
5. We are Scientists are coming to play at midnight on Saturday, October 25th in the RF Courtyard!
6. Galen is going to meet with the Chem. E Department this week. He is also going to attend a conference at the San Diego Center for Academic Integrity and accept an award in the name of Caltech.
7. The proofs for the *little t* have been sent to the publisher and Will Coulter will meet with the *little t* business managers on Friday, October 17th. One of the senior pages was also left out of the *Big T*.

Meeting adjourned at 12:49 PM.

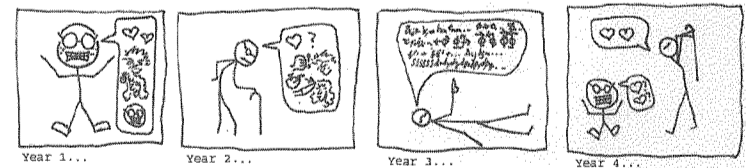
Respectfully Submitted,

Anna Sczaniecka
ASCIT Secretary

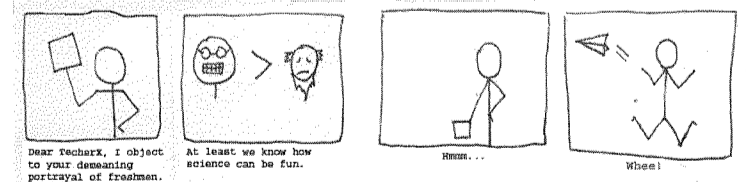


A comic by Shao Yi Lee

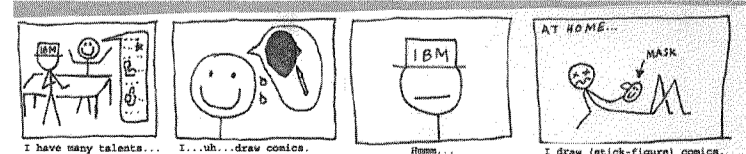
The Origin of Species



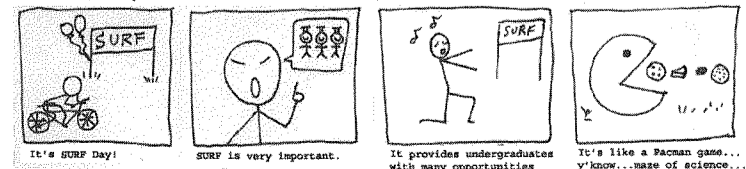
Frosh Protest



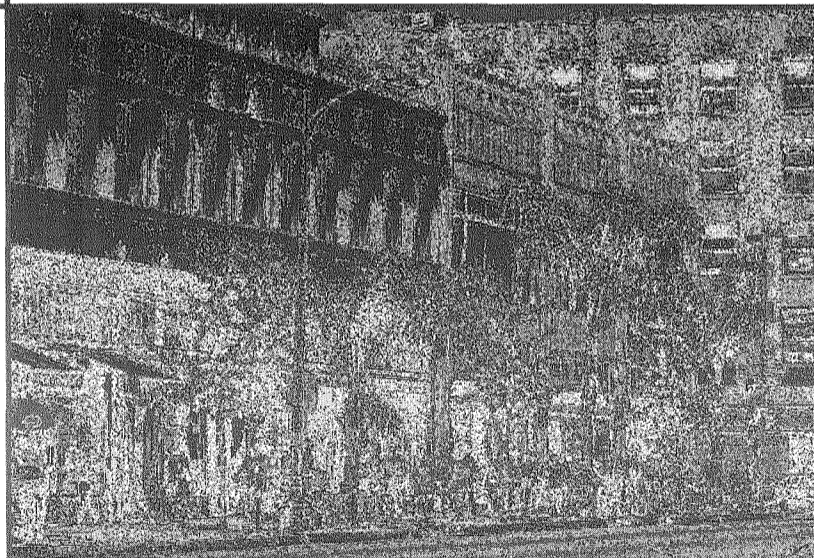
Career Day



SURF Day



Be A Hometown Hero



Bring your meetings home to Pasadena!

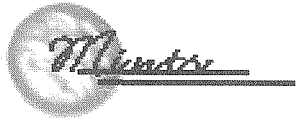
If you belong to an association, corporation or other group that holds meetings or conventions, why not bring them home to Pasadena?

Pasadena's accessibility, first-class meeting facilities and renowned leisure pursuits make it the ideal meeting destination. You will be a hero for suggesting Pasadena to your group. Additionally, your meeting will generate tax revenues for our city's general fund, which benefits everyone. But how can you get the ball rolling?

Just call Matt Hourihan at (626) 795-9311 or e-mail him at mhourihan@pasadenacal.com. If your group decides to meet in Pasadena, you could be eligible to receive one of several fabulous prizes!

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Women's Center Events:

Fall 2003 Open House
 Date: Tuesday, October 21, 2003
 Time: 4:00pm - 5:30pm
 Place: Women's Center
 Please join us as we welcome new students, staff, and faculty to campus and unveil the work of graduate student and photographer, Sarah Monahan. Open to the whole Caltech/JPL community.
Safety on the Streets. RSVP required! Wednesday, October 22, 7:00pm - 8:30pm. Whether taking a stroll around town, walking to and from campus, or just running errands, it is important to know how to protect yourself. In this workshop, safety and self-defense expert, Lauren Hines, will discuss current tactics used by perpetrators, how to respond to being followed, skills for confronting harassment, and safety in parking structures, elevators, and while using ATMs. Learn assertiveness strategies and physical techniques to help keep yourself safe.

Women's Wellness Series: Wake Up to Sleeping Well. RSVP required! 12:00pm-1:00pm. October 23, 2003. Nearly 35 percent of Americans complain of difficulty with either falling asleep or remaining asleep. For these millions of sufferers, sleep-related disorders can result in loss of productivity at work, strained relations at home, loss of strength or stamina and a huge range of other problems. Dr. Jane Wallace, from Huntington Memorial Hospital, Sleep Center, will discuss sleep disorders and strategies for a better rest!
Women's Intro to Self-Defense. RSVP required! Saturday, October 25, 1:00pm-5:00pm. Offers participants an introduction to the physical techniques involved in self-defense. Participants learn a variety of hands on techniques along with the opportunity to rehearse verbal role-play scenarios.

Women's Outdoor Adventure Series: *Graduate Women's Hike. RSVP required! 9:00am. October 25, 2003. Stretch your legs and make some new friends. These hikes are easy to moderate so all levels are welcome!

On March 12 and 13, the Dance Troupe will present the first ever **Caltech Dance Show** presenting the dance talents of the Caltech community. We are eager for a wide variety of dance styles; so, auditions will be open to all members of the community.

The first part of the process will consist of a written proposal. Choreographers will submit information describing their intended piece's music, theme, style (country of origin if applicable), and staging (likely number of dancers, lighting concepts, etc). The point of the proposals is to get people to start working on their dance pieces. Proposals will be due on November 17 and are available at <http://troupe.caltech.edu>. There will be an audition in early Winter quarter where the dancers for each piece will perform; costumes will not be required at this stage. For more information, contact Robin Deis (deis@its.caltech.edu). More details will be provided as the year progresses. We look forward to giving Caltech a chance to showcase its dancing talent.

Dance Troupe Fall Classes. There will be eight classes in each professionally-taught dance series. All classes meet in the Braun Gym multipurpose room. No special clothing or shoes are required for the beginners' classes. To attend classes, simply show up with a Caltech ID or gym membership card. RSVPs are needed for the bellydancing class (Kathy.Kelly@caltech.edu). To be added to our mailing list, please e-mail troupe@caltech.edu. For more information, see our website: troupe.caltech.edu

Hip-Hop for Advanced Beginners
 Thursdays, 9:30-10:30 PM, starts 10/9
 Professional Instructor: Collette Sibal
 Trial class fee: \$5
 Caltech students full term fee: \$30 (\$3.75 per class!)
 Other Caltech community members full term fee: \$40 (\$5 per class!)
Beginning Bellydancing
 Saturdays, 12:45-1:45 PM, starts 10/4
 Professional Instructor: Leela
 Trial class fee: \$5
 Caltech students full term fee: \$30 (\$3.75 per class!)
 Other Caltech community members full term fee: \$60 (\$7.5 per class!)
 CLASS SIZE IS LIMITED so RSVP to Kathy.Kelly@caltech.edu
Beginning Ballet

Wednesdays, 10-11 PM, starts 10/8
 Instructor: Julie Liu
 FREE!
Advanced Ballet
 Mondays, 10-11:30 PM, starts 10/6
 Instructor: Catharine Larsen
 FREE!

Caltech is offering **Guitar Classes** for the fall term on Tuesdays starting October 7. Beginning 4:30-5:30 p.m., Intermediate 3:00-4:00 p.m., Advanced 5:30-6:30 p.m. in the Student Activities Center (SAC) Room 1. Classes are free to Caltech students, and staff is space permits. The instructor is Darryl Denning. For more information, contact him at ddenning@caltech.edu or x. 2923.

Scholarships:

The Financial Aid Office has applications and/or information on the following as well as additional undergraduate scholarships. All qualified students are encouraged to apply. Our office is located in the Center for Student Services M/C 110-87.

The **Monster Scholars Program** offers one \$2,500 scholarship in each of the following categories: College-bound high school students; Undergraduate students; Graduate students; Non-traditional students; Nursing students. The Financial Aid Office has applications and/or information on the following as well as additional undergraduate scholarships. All qualified students are encouraged to apply. Our office is located in the Center for Student Services M/C 110-87.

Glamour's Top 10 College Women Competition is open to any woman who is currently a full-time junior, at any accredited college or university in the U.S. or Canada, during the 2003-2004 academic year. Among the qualifications for the scholarship are: leadership, experience, involvement on campus and in your community, excellence in your field of study and unique, inspiring goals. The prize includes a \$1,500 cash prize, a trip to New York City, opportunities to meet with top female professionals, and national recognition in Glamour's October 2004 issue. Include a transcript, a list by year of your activities on and off campus, a 500-700 word essay describing your most meaningful achievements and how they relate to your field of study and future goals, a black and white photograph, (for identification purposes only) and a letter of recommendation.

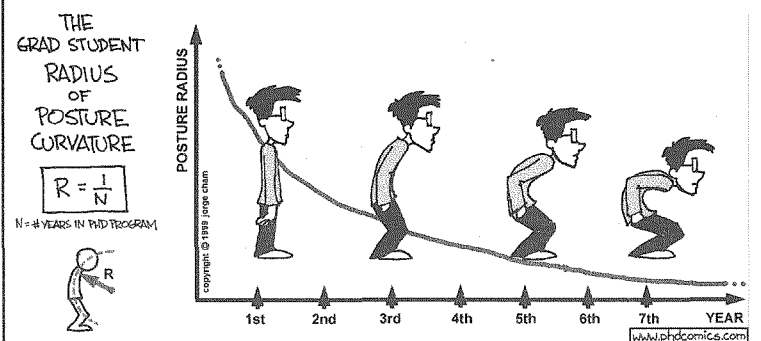
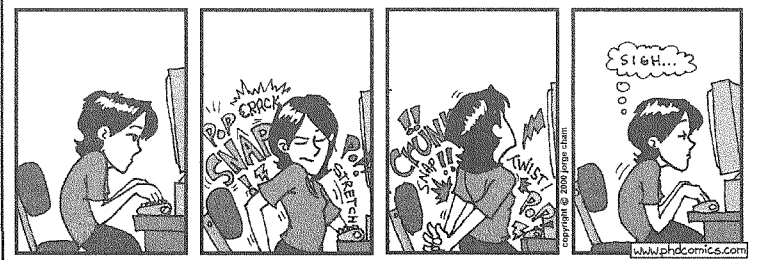
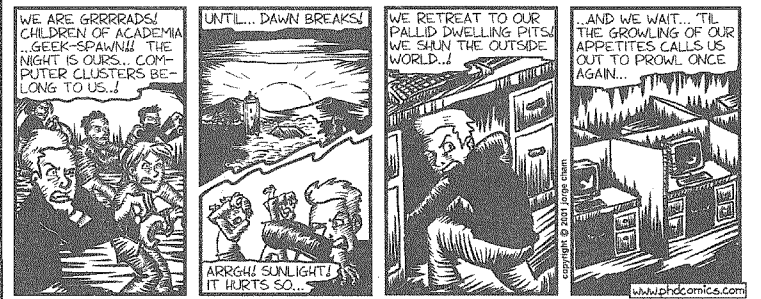
All materials must be received by February 10, 2004. Applications are available in the Financial Aid office or you can email: TTCW@GLAMOUR.com.

Attention Future Teachers: **The James Madison Memorial Fellowship Foundation** makes available at least one graduate-level fellowship worth up to \$24,000.00 in each state. James Madison Fellowships emphasize the framing, principles, and history of the Constitution. Current and prospective secondary school teachers of American history, American government, and social studies are eligible to apply. Applications and additional information are available at www.jamesmadison.com. The deadline is March 1st annually.

The **Measurement Science Conference (MSC)** has established a scholarship to fund students in an Engineering, Science or Quality Assurance degree program. The scholarship program places emphasis on experience or accomplishments related to the application or advancement of measurement science technology. To be considered for one of five, \$1,000 scholarships, individuals must: have completed at least 24 units of upper division courses in an Engineering or Science Degree Program or five courses in a Masters Program in Quality Assurance; have an overall grade point average of 3.2 or greater; be a U.S. citizen; be able to attend the Measurement Science Conference on January 16, 2004 in Anaheim. Submit an application before November 28, 2003. Applications are available in the Financial Aid Office.

National Council of Jewish Women/ Los Angeles provides scholarships year-round for women, regardless of religious belief or ethnic background, who reside in Los Angeles County. The organization focuses on each applicant's dedication to her chosen path and her financial need. Applications are available in the Financial Aid Office.

The **Air Force Reserve Officer Training Corps (AFROTC)** offers 2 year to 3.5 year scholarships in all majors. The scholarships are generally capped at \$15,000 per academic year towards tuition and fees, with an annual book allowance of \$480 and \$200/month stipend during the school year. Full-time student status, AFROTC program involvement, and a minimum of 2.5 cumulative GPA is required to be eligible. For more information visit www.usc.edu/afrotc/.



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 Email: st.henri@earthlink.net

The Dean of Students Office needs tutors in all areas-- help is especially needed with the main Institute requirements e.g., MA1, MA2, PH1, PH2, CH1, etc. The pay is \$11.00 - \$13.00 an hour. If you are an upperclassman and would like to be a Deans' tutor please stop by the Deans' Office to see Sandra Estes located in room 210 of the Center for Student Services building, to complete an application.

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STA TRAVEL
 WE'VE BEEN THERE.

Moore Foundation Gives \$17.5Mil to TMT Study

By ROBERT TINDOL

PASADENA, Calif.—The dream of a giant optical telescope to improve our understanding of the universe and its origin has moved a step closer to reality today.

The Gordon and Betty Moore Foundation awarded \$17.5 million to fund a detailed design study of the Thirty-Meter Telescope (TMT). This new grant allows the California Institute of Technology and its partner, the University of California, to proceed with formulating detailed construction plans for the telescope.

An earlier, more modest, study completed in 2002 resulted in a roughed-out concept for a 30-meter-diameter optical and infrared telescope, complete with adaptive optics, which would result in images more than 12 times sharper than those of the Hubble Space Telescope.

The TMT—formerly known as the California Extremely Large Telescope—will have nine times the light-gathering ability of one of the 10-meter Keck Telescopes, which are currently the largest in

the world.

“Caltech and the University of California will work in close and constant collaboration to achieve the goals of the design effort,” states Richard Ellis, director of optical observatories at Caltech.

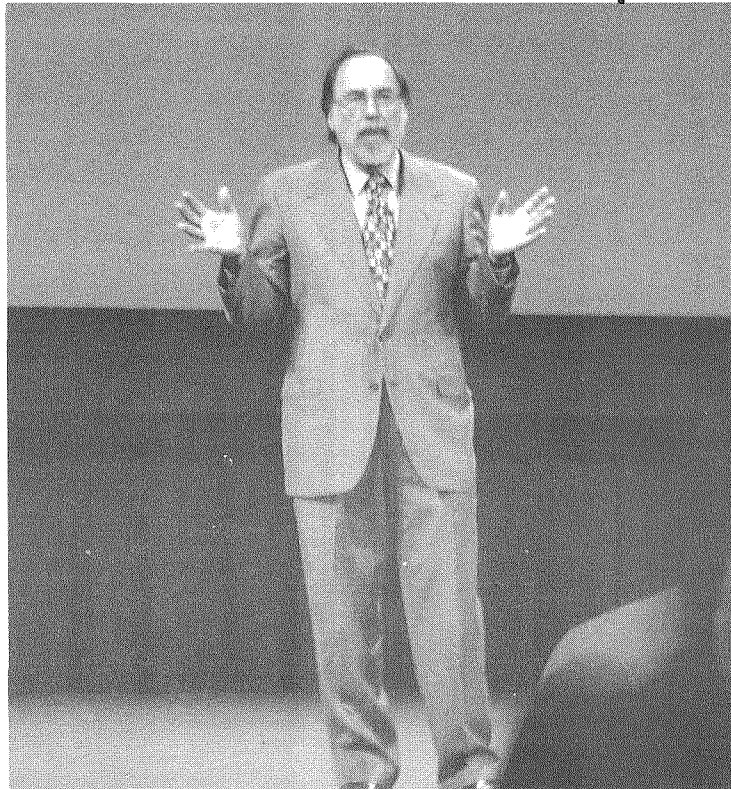
“We’ve had promising discussions with the Association of Universities for Research in Astronomy and the Association of Canadian Universities for Research in Astronomy, both of whom are considering joining us as major collaborators. Constructing and operating a telescope of this size will be a huge undertaking requiring a large collaborative effort.”

According to Ellis, the Gordon and Betty Moore Foundation’s early funding will provide crucial momentum to carry the project to fruition. “The major goals of the design phase will include an extensive review and optimization of the telescope design, addressing areas of risk, for example by early testing of key components and staffing a project office in Pasadena.”

With such a telescope, astrophysicists will be able to study the earliest galaxies and the details of their formation as well as to pinpoint the processes which lead to young planetary systems around nearby stars.

“The key new capabilities promised by the Thirty Meter Telescope will include unprecedented angular resolution, necessary to resolve detail in early galaxies and forming planetary systems

Baltimore Addresses ‘Viruses, Viruses, Viruses’ in Wednesday Watson Lecture.



L. Tran/The California Tech

During his Watson lecture, President Baltimore humorously explains why he is sometimes reluctant to shake his colleagues’ hands.

Continued from Page 1, Column 5

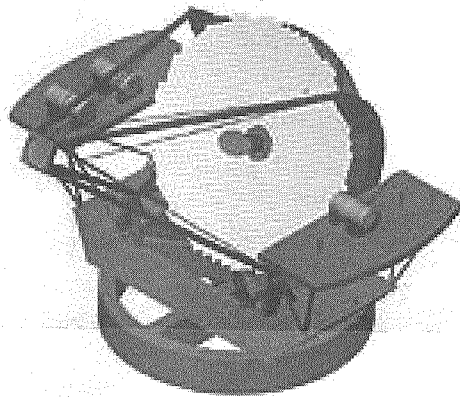
fectected yet.

Biology major Kasia Gora ‘06 argued, however, that viruses were very useful in inserting genes into DNA, such that just about anything you wanted could be expressed using the virus as a “vector.”

Baltimore talked very little about his own niche in the subject, reverse transcription viruses, for which he shared a Nobel Prize in 1975 with Renato Dulbecco and Howard Temin.

The Prize was awarded for their work in studying “the interaction between tumour viruses and the genetic material of the cell.” The men were working separately. Baltimore at the time was a professor at MIT.

But if they are really so worthless, then why did they arise in the first place? “Asking a question like ‘Why did they arise?’ is not very useful,” Dean Revel responds. “There does not have to be a why, just an opportunity. Living things have managed to find ways to make it in many a priori hard to imagine environments.”



courtesy of Caltech Archives

This computer generated model of the Thirty-Meter Telescope shows a rough image of what the telescope will look like when completed.

and of course the huge collecting area for studying the faintest sources, which are often the most important to understand, but are beyond the reach of current facilities,” adds Chuck Steidel, professor of astronomy, who chaired a science committee charged with making the case for the proposed facility.

Following the Gordon and Betty Moore Foundation-funded design study, the final phase of the project, not yet funded, will be construction of the observatory at a yet undetermined site in Hawaii, Chile, or Mexico. The end of this phase would mark the beginning of regular astronomical observations, perhaps by 2012.

Ellis says TMT is a natural project for Caltech to undertake,

given its decades of experience in constructing, operating and conducting science with the world’s largest telescopes. Before Caltech and the University of California’s jointly-operated Keck Observatory went on-line in the 1990s, Caltech’s 200-inch Hale Telescope at Palomar Observatory was the largest optical instrument in the world.

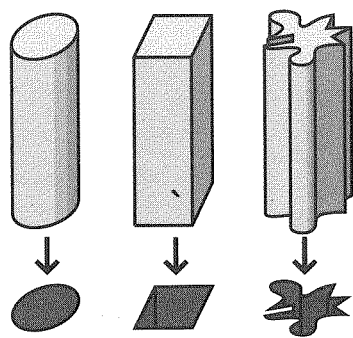
Today, 54 years after its first light, the Hale Telescope is still in continuous use as a major research instrument. “This project takes Caltech’s success in ground-based astronomy to the next level of ambition,” Ellis says. “The TMT will also build logically on the successful demonstration of the segmented primary mirrors of the Keck telescopes, a major innova-

tion at the time but now recognized as the only route to making a primary mirror of this size.”

Caltech is currently in the process of hiring a project manager to lead the technical effort for the TMT.

The Gordon and Betty Moore Foundation was created in November 2000 with a multibillion-dollar contribution from its founders. The mission of the Foundation is to seek and develop outcome-based projects that will improve the quality of life for future generations. The majority of the Foundation’s grant making concerns large-scale initiatives in four general program areas: the environment, higher education, science and San Francisco Bay Area projects.

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It wouldn’t be clear to every firm that a man with an M.F.A. in poetry was the right choice to head an automated block trading unit. Or that a designer of solar-powered race cars was the right woman to help launch a new venture in computational chemistry. But after we talked to them, it was clear to us.

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The D. E. Shaw group will host an information session on Monday, November 10 at 3:30 PM in the Chris Brennen Conference Room at the Student Services Center. On-campus interviews will take place November 11. To apply for an interview, log on to <http://www.career.caltech.edu/students/recruit.htm>. If this isn’t possible, please send a resume and cover letter stating your GPA and standardized test scores, broken down by section where applicable, to oncampus@deshaw.com. Open sign-ups begin October 21 and end November 9.

Members of the D. E. Shaw group do not discriminate in employment matters on the basis of race, color, religion, gender, national origin, age, military service eligibility, veteran status, sexual orientation, marital status, disability, or any other protected class.

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Differing Rotation Views Voiced by Upperclassmen

Continued from Page 1, Column 2

learning that they were in Blacker the new Moles mingled with the upperclassmen in a water-filled courtyard. Initiations included a visit from the Pope of the Church and Hovse of Blacker, as well as several scarier visitors. For the Blacker frosh, at least, it's not over yet.

The freshmen generally agreed that Rotation was a good way to meet people, but that the receptions got boring after a few nights. They commented that they had for the most part decided where they wanted to live after just a few nights.

According to Sinha, "It was nice to meet so many people, but it was also hard because you're getting used to classes and stuff at the same time." Tsai said, "By the middle of the week, most people have already chosen a house or don't really care where they end up." Cram noticed, "It kind of got boring because everyone asked the same questions, but I guess there's no better way to do it." Greene agreed: "I felt like I was on autopilot." The frosh did, however, agree that Rotation is essential for a suitable house assignment.

The upperclassmen had differing opinions on Rotation. Said Kulsoom Hasan, '06, a member of Ricketts, "I didn't go to many of the receptions, because I felt I'd have plenty of time to get to know the frosh better later."

Dan O'Hanlon, '06, of Dabney House member, had a different view: "If I could change one thing about Rotation, I'd make it so you ate dinner in the house you rotated out of, because you don't get an accurate impression of the house just by living there. I'm one of the few guys who says make rotation longer."

The revision Rotation process this year involved a new rating system of the houses. The IHC changed the familiar house ranking to a rating, on a scale of 1-10, of at least four houses by each frosh, in order to get a more absolute idea for how the freshmen felt about each house.

Said Jeremy Pitts '03, chairman of the IHC, "there's a difference between being completely in love with a house and feeling okay about each house, and we tried to take that into account this year."

He further commented that it seemed to work well, but what will

Carnegie, Knight Grants Allow Voting Project to Move Forward at CIT, MIT

By JILL PERRY

PASADENA, Calif. - It's election morning. In the old days you would track down your voter's pamphlet to find your precinct, open a map, figure out how to get there, and determine how you would fit voting into your work day—before work, after work, on your lunch hour, etc. But today, you shuffle to your computer in your pajamas, cast your vote, and go start the coffee.

How far in the future is this scenario? It's a little closer than it once was, thanks to a \$643,085 grant from the John S. and James L. Knight Foundation and \$273,200 from the Carnegie Corporation to the Caltech-MIT Voting Technol-

determine if this method was helpful will be if the freshmen are happy in their houses, which will come out in the Rotation survey. The survey should be available later in the term or early next term.

After a hectic week for both freshmen and upperclassmen, most people seem very happy with their house and the new freshman in it. Said Pitts, "[Rotation] is worth it, and it's been done so long that it's gotten to the point where it's the best way to do something not fun."

ogy Project, to explore the challenges and opportunities of Internet voting.

The Knight Foundation grant will fund the model of a more accessible voting system that would lower voter confusion, allow the visually impaired to vote without assistance, and improve the accuracy and usefulness of voter registration. It would also fund a study of electronic voting system security.

The Carnegie grant will fund multiple efforts as well: a conference on the sociological and technological issues surrounding electronic voting; an examination of the potential uses of the Internet to solve problems with the voter registration system; and an examination of the possibility that Internet voting may introduce a digital divide in elections.

In terms of Internet voting, the researchers will investigate the many security questions that arise—how do you ensure that voters vote only once and are free from coercion, and how can voters be certain that their votes are confidential. Additionally researchers will consider how voters who don't own computers will be able to gain computer access in order to vote.

According to Shuki Bruck, Moore Professor of Computational and Neural Systems and Electrical Engineering at Caltech, "Internet voting will happen, and will help in making our democratic decision process more robust. The key question is how long it will take our society to get it right. Solving the technological challenges is only one piece of the puzzle, addressing the

social and political issues of this paradigm shift seems to be a more complex challenge."

The researchers on both campuses include political scientists, engineers, sociologists, and individuals who study the interaction between humans and machines.

"Recent events in California, Maryland, and elsewhere have shown that election reform can be undermined when suspicions are raised by voting technologies. These two grants will help us shine a brighter light on the more troubling aspects of electronic voting, hopefully in ways that will support a robust voting technology industry while also assuring the public that their votes are being counted as cast," remarked Charles Stewart, associate dean of humanities, arts, and social sciences and professor of political science at MIT.

The John S. and James L. Knight Foundation promotes excellence in journalism worldwide and invests in the vitality of 26 U.S. communities. Carnegie Corporation of New York was created by Andrew Carnegie in 1911 to promote "the advancement and diffusion of knowledge and understanding."

As a grantmaking foundation, the corporation seeks to carry out Carnegie's vision of philanthropy, which he said should aim "to do real and permanent good in the world." The corporation awards grants totaling approximately \$80 million a year in the areas of education, international peace and security, international development, and strengthening U.S. democracy.

Art Committee Selects Alternative To Vectors: Subtle Art, Pasadena Festival

By CHRISTINE CHANG

After the controversy which enveloped the campus over the Vectors monument to be built on the Broad/Beckman lawn, the Campus Art Committee finally formulated a new plan as to how to utilize the money set aside for public art which would have been spent on Vectors.

Instead of commissioning one enormous sculpture, the Committee intends to divide the money between two or three smaller, site-specific pieces of art which will be scattered across campus. This new art will serve as part of "The Tender Land," a Pasadena art festival scheduled for next October.

"We hope the art will increase awareness as to how technology affects the Earth," said John Bender, the graduate representative on the Campus Art Committee. The art will connect to the interactions between humans and nature, the theme of "The Tender Land" festival.

With \$60,000 at their disposal, or one percent of the budget from building the Broad Center that must be spent on public art according to Pasadena law, the Committee intends to hire two to three artists at \$20,000 or \$30,000 per artist.

Much of the \$2 million needed for the construction of Vectors came

from donations from people such as Eli Broad. This money which was set aside specifically for Vectors is no longer available for the Committee to use, which limited their choices in commissioning new artwork to replace Vectors, which was a Richard Serra project commissioned by President Baltimore and philanthropist Eli Broad.

Also taking into account the vehement opposition to the construction of a massive monument such as Vectors, the Committee opted to commission two or three smaller, more subtle pieces. "We decided to go more basic and engage the people from Caltech so it becomes more about Caltech," said Bender.

Still in the process of contacting and screening artists, the Committee intends to invite the artists, once they are chosen, to the campus to visit and speak with the faculty. They hope the artists will gain inspiration from the work of the faculty and exciting research happening in the laboratories.

Depending on the artist, the committee also hopes the Caltech community can get involved by allowing the faculty or students to aid in the conception and construction of the artwork. "We hope [Caltech] will be interested, intrigued and want to get involved," Bender said.

The Committee also wishes to

merge the fields of science and art through the art, proving to both the science and the art world that there is an element of art in science, such as in the energetic lines of a seismograph.

"We want to raise Caltech's awareness of art, broaden Caltech's view of art and immerse the art community in science and technology, as well as connect with people who wouldn't normally think about science," said Bender. Participating in the festival and commissioning the new pieces of art would also attract more attention to Caltech and draw more visitors to the school.

Plans for this new art project remain tentative as the Committee contacts new artists. Throughout the project, the Committee has collaborated with the Art Center, engaging the help of Steve Nolan in connecting with different artists and performing curator duties.

No firm deadline and location have been set for the new pieces of art which will adorn the campus. In keeping with the spirit of allowing Caltech to inspire the chosen artists, the Committee intends to allow the artists to choose where they wish to put their work and what kind of work to build, as long as the piece is publicly accessible every day.

Caltech will serve as one of eleven institutions which will participate in "The Tender Land" art festival. The festival will run from October 1, 2004 to January 31, 2005. At each of these eleven locations, the artwork of both regional and international artists will be showcased for the public.



Courtesy of I. Parveen Bilal

Members of the Caltech Society of Women's Engineers Executive Committee pose at the 2003 SWE Conference in Birmingham, Alabama. The club won an award for best newsletter.

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Thirty-Meter Telescope: Now Caltech can not only boast about having the brightest, but also about having the biggest.



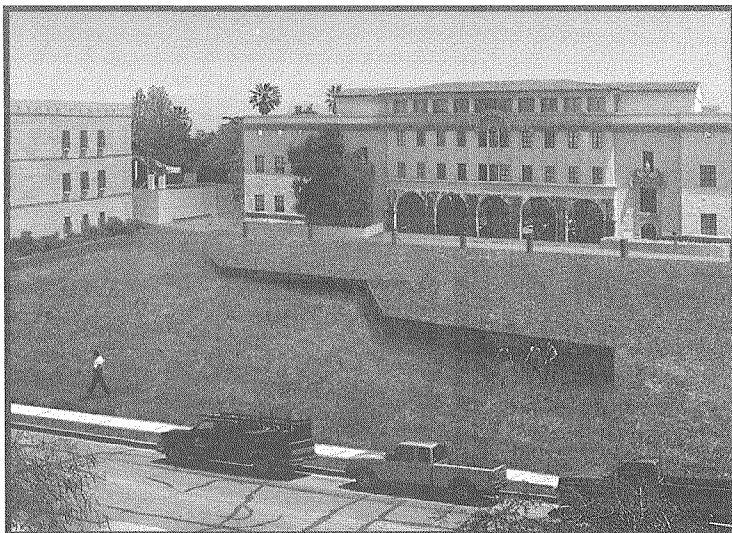
Chinese Space Program: China sends the first *taik* out order into space. Don't forget to bring a little Soyuz sauce.



Vectors: With its replacement chosen, there's not much to protest in this issue. But it's only a matter of time somebody points out the next art dispute.

The California Tech

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Courtesy of www.caltech.edu

An artist's rendition of how the Vectors sculpture would look after its completion on the Beckman Lawn. That plan was scrapped after an outcry of dissatisfaction from the campus. Instead two or three smaller sculptures will be built around campus, and Caltech will help to host an art festival.