The California Tech

VOLUME CIV, NUMBER 26 PASADENA, CALIFORNIA MAY 12, 2003

D. Korta/*The California Tech*

The Capitol Steps turn political scandals into humor at their performances last Friday and Saturday on the Caltech campus. This group of former congressional staff members poked fun at everyone and everything from Martha Stewart to American society.

Capitol Steps Show Injects Humor Into Politics

By LEA HILDEBRANDT

The times are tough and the scandals numerous—which makes it all the more important that we do not lose our humor. This is the philosophy of The Capitol Steps, a group of comedians who performed in Beckman Auditorium at eight p.m. the Friday and Saturday before last, 2003.

Near the end of the show, one of the performers told the audience, "If we come here and can make just one of you laugh, then we know that we really suck." The response from the audience throughout the evening demonstrated definitively that The Capitol Steps do not suck.

This show was for everyone. The members of the audience represented a diverse bunch, ranging from young to old, from liberal to more conservative, from American to foreign. No matter what walk of life they came from, the spectators had a great time.

The show consisted of a multitude of skits, most of them in the form of a song. The troupe made fun of everyone and everything. As the Capitol Steps said themselves, "Whenever you hear about a scandal, go to our Web site and find out what rhymes to it."

In this particular show, their victims ranged from Southwest Airlines to Martha Stewart, from past politicians like Bob Dole to President Bush and company, from France and its citizens to Saddam Hussein and his followers. And last, but certainly not least, the Capitol Steps made fun of American society and its members with songs like "God Bless my SUV."

The biggest hit with the audience was "Lirty Dies," in which one of the artists constructs a funny story by interchanging beginning consonants of words. For instance, after recounting the incident of Trent Lott's speech at Senator Strom's birthday party, the performer concluded: "The storal of my mory is this. If you're ever invited to a pirthday barty and you have to leak at the spectern. Don't piss the moint. And don't spew up your screech."

The Capitol Steps began in 1981 when a group of congressional staff members performed skits at a Christmas party in the office of former Senator Charles Percy. Guests at this party enjoyed the performance so much that they urged the group to perform more frequently and in front of larger audiences. Since then, the group has grown.

The comedians have quit their jobs as Congressional staffers and are now touring the country, spreading their eye-opening wit and humor. The current cast of the Capital Steps has at one time or another worked in the offices of eleven US Senators and seven Members of the House of Representatives. As a note in the program pointed out "Most of these politicians have since been defeated or placed under investigation."

Sights on the Stars, Martin-led Team Launches GALEX Scope

By ROBERT LI

On April 28th, a Pegasus rocket successfully launched the Galaxy Evolution Explorer (GALEX) into Earth orbit.

GALEX is an orbiting space telescope designed to survey other galaxies in the UV spectrum. It was built at a cost of approximately $110 million. First conceived by Caltech professor Chris Martin and his colleagues in 1996, the GALEX telescope is part of NASA's Explorers Program and is currently run as a joint effort between Caltech, JPL and a wide array of scientific institutions across the world including Johns Hopkins University. Caltech is responsible for running all of the mission science operations and has set up an operations center in the Synchrotron Annex where all GALEX scientific data is received and processed.

According to Martin, the primary goal of the GALEX mission is to "measure the rate and history of star formation in other galaxies." To achieve this goal, the GALEX mission will be conducting the first all-sky extragalactic survey. This will allow scientists to compare the UV emissions from nearby and far away galaxies and in doing so understand how the process of star formation occurs and how it has changed over time.

Besides its innovate scientific mission, the GALEX telescope is itself a technical marvel. According to Martin, GALEX will contain the "largest UV detectors ever flown in space." The instrumentation on the GALEX telescope contains many technical firsts including the first near UV (NUV) and far UV (FUV) grism—a spectroscopic grating on a prism that will allow the spectral analysis of UV light—the first UV dichroic beam splitter which will allow simultaneous observations in both the NUV and FUV spectrum and the first large NUV and FUV microchannel plate sealed detectors.

In contrast to the Hubble Telescope, GALEX is much smaller—about six feet tall and the width of your outstretched arms—and is designed to look at large areas of the sky at a time rather than one object at high resolution. This means that the GALEX telescope is designed with a far larger field of view than Hubble and sacrifices resolution for the ability to more of the sky. In fact, the wide field of view of the GALEX telescope, equivalent to two full moon diameters, will allow it to scan an eighth of the sky in each 98 minute orbit.

In addition, the wide field of view makes GALEX the perfect instrument to find objects of interest for other space telescopes like Hubble, the Chandra X-Ray telescope and SIRTF to examine in greater detail. According to Martin, GALEX is particularly complementary to SIRTF because star formation events tend to generate emissions primarily in the form of UV and IR radiation. Currently, GALEX is in a circular 690-km orbit. Scientists are in the process of testing the instruments and so far, all has gone very smoothly. The plan is to turn on the detectors on May 13 and take the first image a week later on the 20th.

RICE U. EXPERT TAPIA SPEAKS ON DIVERSITY

ADDRESSES PROBLEM, SOLUTIONS

Nationally Recognized For Effort to Diversify Higher Education

By TAMMY MA

In light of Caltech's recent emphasis on increasing diversity on campus, Richard A. Tapia came to Caltech to offer his words of advice on crafting a more representative student body in his talk, "Post-Affirmative Action Challenges to Diversity in Higher Education."

The talk, which took place last Thursday in Ramo Auditorium, was part of the Caltech Presidential Lecture Series on Achieving Diversity in Science, Math and Engineering. Dr. Richard Tapia is the Noah Harding Professor of Computational and Applied Mathematics at Rice University. He is nationally recognized for his leadership to increase educational opportunities for minorities and women in the math,

Continued on Page 7, Column 1

Laureate Watson Recaps History of Double Helix

By ADAM SEARS

A large audience of Caltech undergraduates, faculty and local residents showed up on Monday for a public discussion on the history of DNA and bioethics between President David Baltimore and James Watson, who discovered the DNA double helix nearly 50 years ago. The pair share a bond as fellow Nobel laureates and discussed their views on historical and modern biology as it pertains to DNA.

Professor Baltimore began the conversation by reminding the audience of Watson's credentials. Born in 1928, he went to the University of Chicago to become a bird watcher. While there, he instead found a passion for genetics and later sought a Ph.D. in zoology at Indiana University.

The turning point in his life occurred during his stay at Chicago, when he read Erwin Schroedinger's book, *What is Life?* This intensely influential book discussed the physics and chemistry of life and the specific properties of DNA that made it useful. Though never before inspired to do biology, he realized now that birds were not his calling. Soon afterward, he left to do research at Cambridge, where in less than two years he discovered the double helical structure of DNA.

Collaboration is at the heart of the story of DNA. There were many laboratories working towards solving the structure, all at the same time and often times researchers shared preliminary papers and results amongst themselves. Watson himself shared a laboratory and eventually the Nobel prize with another young scientist—Francis Crick. Each group approached the problem in a different way, however and the final result would not have been possible without help.

Watson and Crick focused on modeling the DNA strand, a method used by Linus Pauling that had had particularly good success lately. Using ball and stick figures, they first manipulated the molecule until it fit several properties found experimentally. Later, after examining new data from colleagues in London, the final version was deter-

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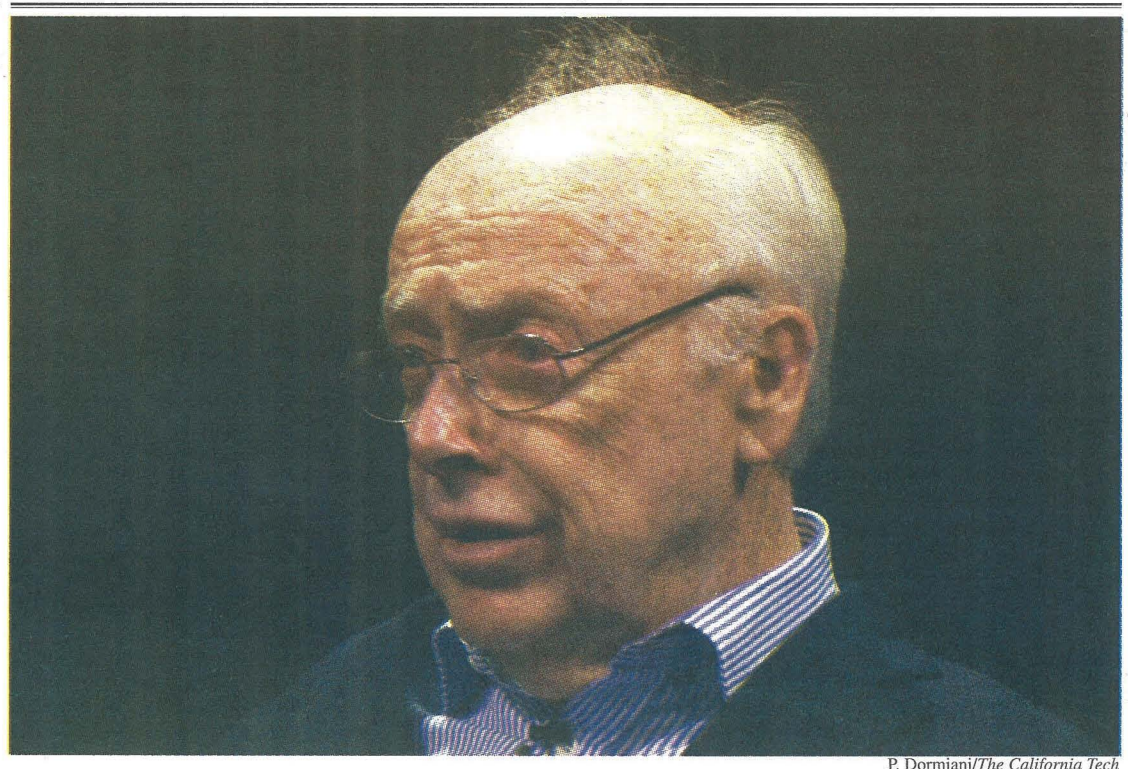


P. Dormiani/*The California Tech*

Nobel Prize winner Dr. James Watson, who with Dr. Francis Crick determined the double helical structure of DNA, had a well-attended conversation with Dr. Baltimore last Monday in Beckman Auditorium.

Nationwide Capital Campaign Gathers Steam

By JON FOSTER

"There's Only One Caltech," the campaign to raise $1.4 billion dollars for Caltech, continues.

Gary Dicovitsky, the vice president of Development and Alumni Relations, spoke with *the California Tech* recently about the project.

As of May 1, a total of $842 million has been pledged or contributed, 60% of the goal. In the past few months the campaign has been quite busy. On March 31, Gordon Moore and David Baltimore opened a campaign celebration and dinner in San Francisco. This event, designed to introduce the campaign to Caltech's many friends and alumni in the Bay Area, brought together around 200 guests and was, according to Dicovitsky, "A wonderful gathering... which brought our message more locally."

The first two capital projects of the campaign are also underway. The renovation of Dabney has progressed the furthest. The Ahmanson Foundation provided a large portion of the total $12 million needed for both the restoration of Dabney Hall and the refitting of Millikan Library to accommodate the staff and administrators who will be relocated there. The project will serve several purposes. Not only will it help restore Dabney Hall, but it will also recreate a library for the humanities and expand the Hixon Writing Center. The work is scheduled to begin in September and should be finished by the end of next school year.

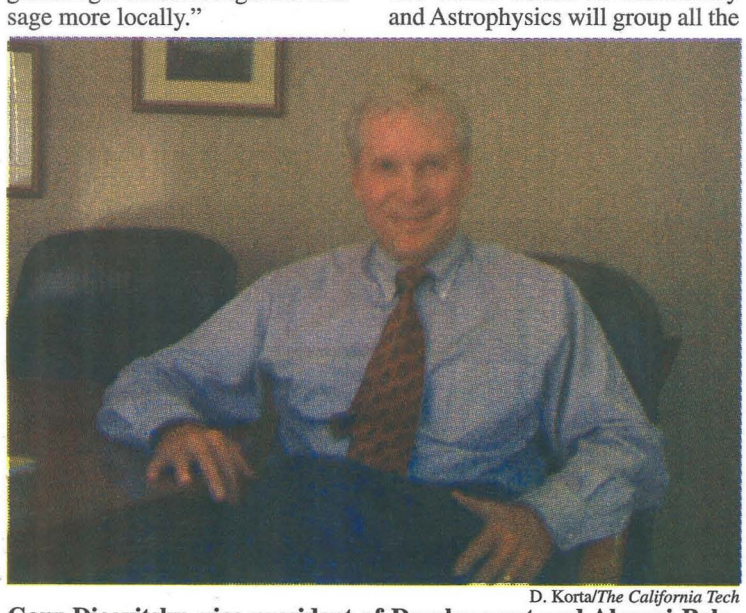
The second capital project is the construction of the new astronomy building next to Keith Spalding. The Cahill Center for Astronomy and Astrophysics will group all the astronomy programs on campus together—currently they are spread out in several buildings, including Robinson, Bridge and Downs. Fundraising continues, helped by the recent $5 million contribution from Caltech alumnus Mike Scott (BS '65).

For the future, Dicovitsky remains cautious but hopeful. The still slow economy and the uncertainty raised by the operations in Iraq has made fundraising difficult, "the whole idea of philanthropy actually being in a bit of a slow down." Still, Caltech has fared better than many other institutions, "in that what we do, we do better than most other places and in some cases, than all other places."

The level of interactions with alumni and friends has remained very high, although the number of large outright gifts is not expected to pick up until the external factors calm down.

Following on the heels of the San Francisco campaign kickoff was another gathering of Caltech friends, this time on the East Coast. This celebration was held in New York this past Thursday, May 9 and also served to inaugurate an association of Caltech friends on the East Coast.

Dicovitsky also expressed his desire to have better communication with the students as this campaign progresses. The campaign's Web site, *http://one.caltech.edu*, now has more up-to-date campaign news—although work continues to update it more frequently—and Dicovitsky plans to look into making sure that publications which receive updates on the campaign include ones read by students.



D. Korta/*The California Tech*

Gary Dicovitsky, vice president of Development and Alumni Relations, heads the "There's Only One Caltech" project.

Courtesy of the World Wide Web

St. Luke Medical Center in Pasadena is Caltech's latest target for JPL-like expansion.

Caltech Lays Claim To St. Luke Medical Center

By DEBORAH WILLIAMS-HEDGES

The California Institute of Technology has entered into a binding agreement to purchase the property and buildings of the former St. Luke Medical Center in northeast Pasadena from the facility's owner, Tenet Healthcare Corporation. The terms of the sale, scheduled to close in late June, have not been finalized. The hospital was closed in May 2002 because of declining utilization.

The property, located four miles from the Caltech campus, will eventually be used to augment Caltech's research mission and other related activities. It is not expected to be used for classrooms or for teaching purposes.

The original building is an important part of Pasadena history. Built in 1933, St. Luke's Spanish-style dome and façade look much the same today as when the hospital opened. St. Luke's manicured lawns, terrazzo floors and wide, winding stairways epitomize the elegance and sophistication of Pasadena's architecture.

"Caltech is excited about the fact that we've been able to identify a substantial piece of property in Pasadena that gives us the opportunity to contemplate strategic research initiatives that otherwise would be limited by our current facilities. This historically significant facility allows us to think very differently about the future of Caltech," said David Baltimore, Caltech president.

"Tenet's goal has been to find a buyer that would preserve this important architectural landmark in the Pasadena community and we're delighted that Caltech has made that commitment. This property has an important tradition in the community that is matched by its new owner, said Trevor Fetter, Tenet president.

Opened in 1933 by the Sisters of St. Joseph of Orange, St. Luke was one of the first hospitals in the San Gabriel Valley. Tenet purchased the facility in 1997. Because of the hospital's age and physical inability to adapt the building to modern hospital requirements, Tenet lost business in recent years to much larger nearby facilities.

Founded in 1891, Caltech has an enrollment of some 2,000 students and a faculty of about 280 professorial members, 65 research members and some 560 postdoctoral scholars. The Institute has more than 20,000 alumni. Caltech employs a staff of more than 2,400 on campus and 4,800 at JPL.

Over the years, 30 Nobel Prizes and four Crafoord Prizes have been awarded to faculty members and alumni. Forty-seven Caltech faculty members and alumni have received the National Medal of Science; and eight alumni (two of whom are also trustees), two additional trustees and one faculty member have won the National Medal of Technology. Since 1958, 14 faculty members have received the annual California Scientist of the Year award. On the Caltech faculty there are 82 fellows of the American Academy of Arts and Sciences; and on the faculty and Board of Trustees, 71 members of the National Academy of Sciences and 45 members of the National Academy of Engineering.

Tenet Healthcare Corporation, through its subsidiaries, owns and operates 114 acute care hospitals with 27,765 beds and numerous other health care services.

Watson Speaks on Gene Ethics, 'Biological Revolution'

Continued from Page 1, Column 2

mined. In retrospect, however, Watson said that his technique could have been better. "The structure is so simple. If we had known any chemistry, we should have proposed it."

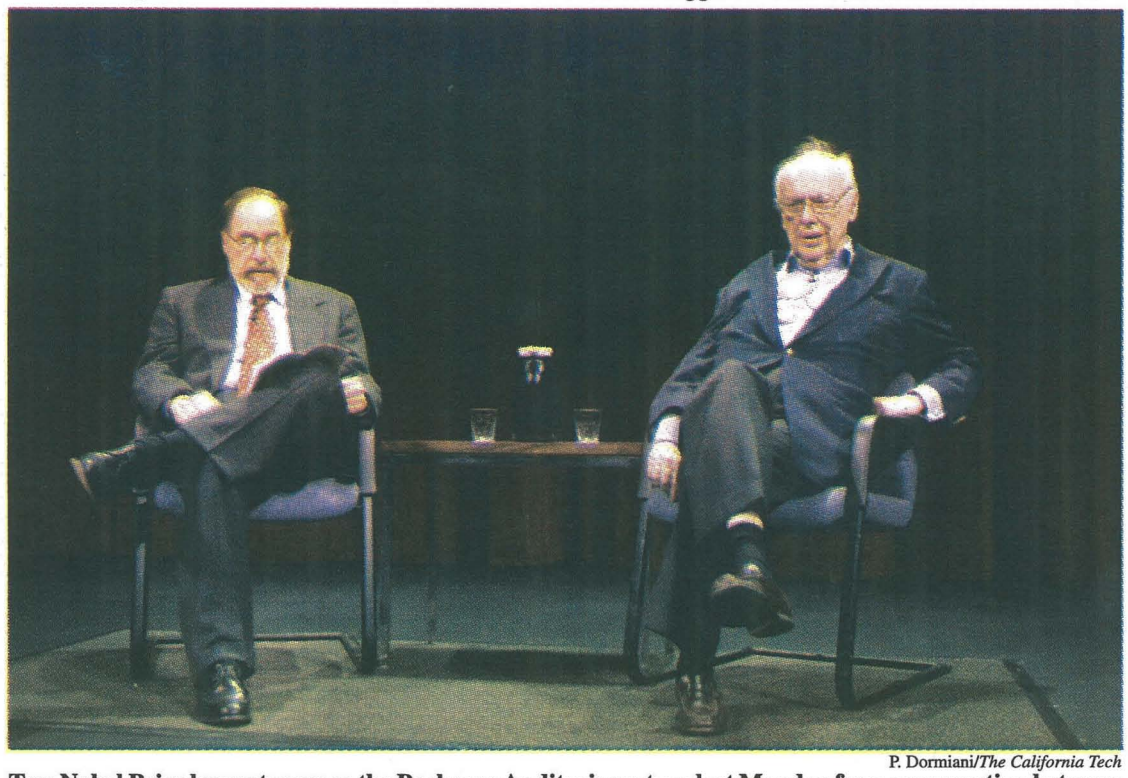
In fact, there are many examples of when a bit of chemistry might have aided their efforts. Watson cited one time when he attended a seminar given about the latest experimental results intended to explain DNA's structure. Misunderstanding one of the terms used by chemists in the presentation, Watson hurried back to the lab, to work out the implications. What he got was a "twenty-fold water model difference," temporarily confusing his team. In addition, Watson's Ph.D. advisor at Indiana, S. E. Luria was known to have a cynical attitude for the chemists of the day. "Luria always thought chemists wanted money," Watson remembered. Although his thesis was written on the effects of x-ray radiation on viruses, perhaps it was Luria's lack of emphasis on harnessing the rays in modern chemical methods that led to Watson's slipup with crystallography terms.

Watson started and lived through a biological revolution. Before the era of gels and genes, when modern machinery and the corporation mentality became necessary for a research project to succeed, Watson spent hours in his office fiddling with the model. He still occasionally uses a slide rule and freely admits getting a "B" in his first biology summer course and a "C" in calculus. Yet it is his perseverance and resourcefulness that led to one of the most influential discoveries of the century.

According to Professor Meyerowitz, Chair of the Biology Division at Caltech, the structure Watson and Crick proposed was so exciting because it just made so much sense. "The discovery of the DNA structure led fairly directly to our current understanding of DNA replication and therefore control of cell division, of protein synthesis and our ability to read genomes." Research has not been his only contribution to the field of biology, though. He's written a few textbooks and a couple personal accounts of his discovery which have inspired a whole generation of geneticists. As director of the Cold Spring Harbor Laboratory in New York, he turned around a nearly failed institution. In addition, notes Meyerowitz, "he was one of the primary proponents of the human genome project, which was started in large part due to his efforts."

When asked about the biggest ethical question facing the field today, Watson expressed his views on gene screening. While many privacy advocates are up in arms about testing for diseases, Watson is all for them. In fact, he is in favor of a project to sequence the 10% most useful parts of DNA from much of the population. For him the biggest ethical violation is that we "have the genes, but we're not testing for them. Watson also believes cancer could be cured in 10 years, using a "Manhattan style project."

Whatever his opinions, his impact on biology is legendary. Watson's new book, published almost a month ago, makes another attempt at communicating the triumphs and challenges of biology to the masses, from molecular structure to Mendel. It just goes to show that with everything he does, from the advanced to the elementary, our dear Watson makes a difference.



P. Dormiani/*The California Tech*

Two Nobel Prize laureates grace the Beckman Auditorium stage last Monday for a conversation between Dr. Baltimore and the famed Dr. James Watson, the scientist who discovered the DNA double helix nearly 50 years ago.

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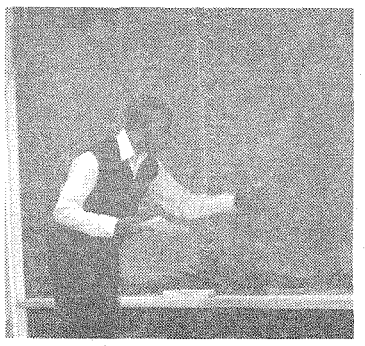
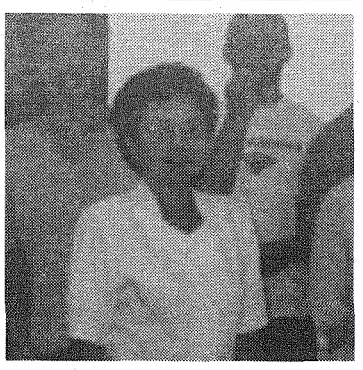
ASCIT TEACHING AWARDS 2003: SAMPLE NOMINATIONS

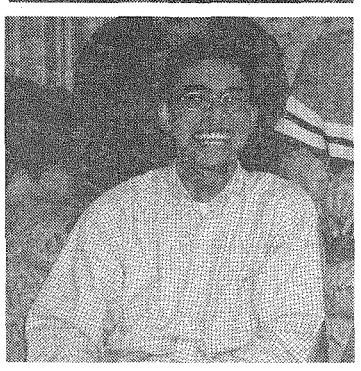


"Dr. Goins does a great deal for undergraduate math majors. In addition to making Math 5a fun and understandable, he also co-founded and co-runs the undergraduate math club, which helps provide guidance to undergraduate math majors and which helps facilitate much needed faculty/staff interactions."

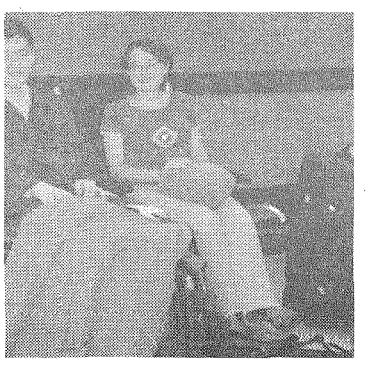


"Dr Hirai teaches elementary Japanese. She is always very cheerful, very patient in class, and comes up with various interesting ways to conduct lessons. Everyone in the class is involved through exercises on the blackboard, pairwork, or class-wide discussions and interaction. There is never a single dull Japanese class. Dr Hirai also takes her initiative to organize things like a trip to the Japanese American museum. Last term, she also made delicious mochi for us to try. In short, Dr Hirai really cares about her teaching and her students, and really deserves an award."

"Colin was an incredible teacher during the class that I took with him, BEM/Ec 146. The class attendance stayed around 100%, with people coming not just because the lectures were incredible for learning the material, but beacuse they were actually fun and interesting. Peppered with anecdotes, his lectures managed to drive home the material in a way that would make the class laugh two or three times every period. It's the sort of teaching that I remember from the best teachers in high schools and, with the exception of Camerer, have found entirely lacking at this place."



"He is the nicest professor I've had in my three years so far here. He is very patient in class, and tries to present lecture material in various ways fitting the different way people learn, giving out lots of handouts. Whenever I email him about quesitons, he writes back within ten minutes. When I pass by his office, he is often seen helping a student. He is very organized and his lectures flow very swiftly along, a testament to the fact that he knows this subject very well. He makes every effort to accommodate the students' wishes, whether it comes to putting notes online, giving reading assignments out (instead of leaving the students to search for the pertinent material in the book), holding special tutorial sections on Matlab, etc. He is very supportive to us; it's nice to have a professor who doesn't gaily say, "I've made the next homework set even harder than the last!" He seems genuinely concerned about our education, polling us to see what our learning patterns are like. Finally, he is modest and friendly. I think he is an excellent example for all professors."



DAVID GOODSTEIN

Dr. Goodstein was the lecturer for Ph 1a, and though it's the only course that I've taken with him, I'm already convinced that he's an amazing lecturer. More than once was he applauded following his lectures; it is probably no small matter that on the final day of Ph 1a the students attending his lecture gave him a standing ovation. As a lecturer he is witty and charismatic; up close he is kind and patient. My only regret about Ph 1a is not having had the opportunity to interact more with him. He is amazing."

BRIAN KWAN

Brian [Kwan] is the Ch 41c head TA. He is the most prepared TA I have ever seen, always on the ball. He has, on many occasions, stayed an hour or more after office hours to help students. He explains the material better than the textbook or even the lecturer, in my opinion, and knows the right pace at which to go. On one occasion that I know of, another TA did not show up for office hours. Brian then took a couple of hours from his work in the lab to hold office hours for us. The hardest-working, genuinely caring, and simply good TA I have come across. Brian deserves this award."

"Katalin Grubits was an outstanding TA for Ph 2b. She explained the difficult concepts of quantum mechanics in a way that pretty much anyone could grasp and apply when it came to problem sets, quizzes, and the final exam. Katalin was always willing to stay in section or office hours as long as anyone still wasn't understanding the material. It was Katalin who actually made quantum interesting and enjoyable, despite the fact that I had little love for physics while I was on core. Of all the many TA's I've had in my time here, Katalin was by far the best and truly deserves to recognized for her efforts."

LUKE EKKIZOGLOY

"Luke [Ekkizogloy] is a great guy. He is currently TAing EE 90, where he devotes a lot of time to helping people with their projects. He is very accessible at all hours of the day, and very encouraging as well. Everybody gets stressed taking EE 90, but he tries to make us all cheer up."

JEFF COPELAND

"You could always find Jeff [Copeland] working in Kerckhoff at any given time of the day — well, that just makes him a biology grad student — but what made him a great TA was that no matter how tired he was, he was always happy to help us out in genetics lab, explain things until you understood them, and to just joke around with. He did so much for the lab class, using his own time to set up crosses, schedule the labs, and sending out e-mails, keeping everyone updated about what was going on. He made the class a lot of fun to go to."

The Minutes

ASCIT Minutes.

May 7th, 2003, 12:01 PM, SAC 33

Present: Joanna Cohen, Tom Fletcher, Kim Hiscox, Kathryn Hsu, Galen Loram, Jeremy Pitts, Anna Sczaniecka, Andrea Vasconcellos, & Corinna Zygourakis.

Guests: Manny Garcia, Tuan Hoang, Jessie Kneeland, Mike Lammers, Ben Lee,Tim Wan,

Agenda

1. Call to Order

2. Crippling Depression is going to publish a book of their comics and they are requesting money from ASCIT to help subsidize their startup costs. The BoD is reluctant to fund them because Ben Lee, Mike Yeh, and Tim Wan will make several thousand dollars in profit if they sell all 500 books. Instead, the BoD will cut their losses in half by buying up the remaining books if they don't sell enough copies to break even. Vote: 6-0-1, approved.

3. Manny brought in a cost sheet for the Jamroom equipment. Two speakers, a power amp, a guitar amp, mic stands, and mics from Guitar Center cost $1600, but Manny might be able to get a discount.

4. Officer Reports

Tom still needs an Excomm. He asked the IHC to ask their respective houses for representatives, but so far there has been little interest. Tom may have to appoint students himself.

Galen met with the biology faculty on Friday May 2nd. Next Thursday, May 15th, he wants to hold an open mic session about the honor code. Tom says that a lot of alumni have expressed interest in this so it might be nice to get them involved.

Joanna is getting an ASCIT credit card.

Anna put the most recent minutes online, but she still needs to update some of the committee lists.

Kathryn is still waiting for SFC final reports from people. Committee sign-ups and teaching nominations will come down on Wednesday, May 7th. Sign-ups for study abroad, art, and public events committees will go up soon.

Jeremy says that the committee representatives have been selected by the IHC. Vote: 7-0-0, approved.

Kim says that ASCIT Formal is looking more expensive than she previously thought. The Ritz wants to charge $75 per plate for dinner - which is way too much. Hopefully Tom Mannion will be able to negotiate theprice. If that doesn't happen, then instead of dinner there will be appetizers, dessert, and an open bar. Ritz is also charging exorbitant amounts for table assignments, which the BoD says they can do that themselves if necessary. On the upside, Kim already had a DJ and photographer.

MATRIX RELOADED ON WEDNESDAY NIGHT courtesy of Tom Mannion and ASCIT. AWESOME! Tom Mannion requested $1300 from ASCIT to help cover ticket

costs. Vote: 7-0-0 approved.

Andrea has scheduled publication interviews for Sunday, May 11th at 7 PM.

Corinna says that clubs have started to request money.

Committee Representation Resolution Discussion:

Mike Lammers had a few concerns. For one, the meeting summaries should be short and should not be full-length minutes because it would discourage students from signing up. Also, if multiple students are on a committee, only one summary should be required. Jesse Kneeland was concerned that the BoD feels the need to 'police' other students.

Kathryn explained that there are in fact students who do not attend meetings and they should be held accountable for their actions. More discussion on this resolution to come.

Meeting adjourned at 12:52 PM

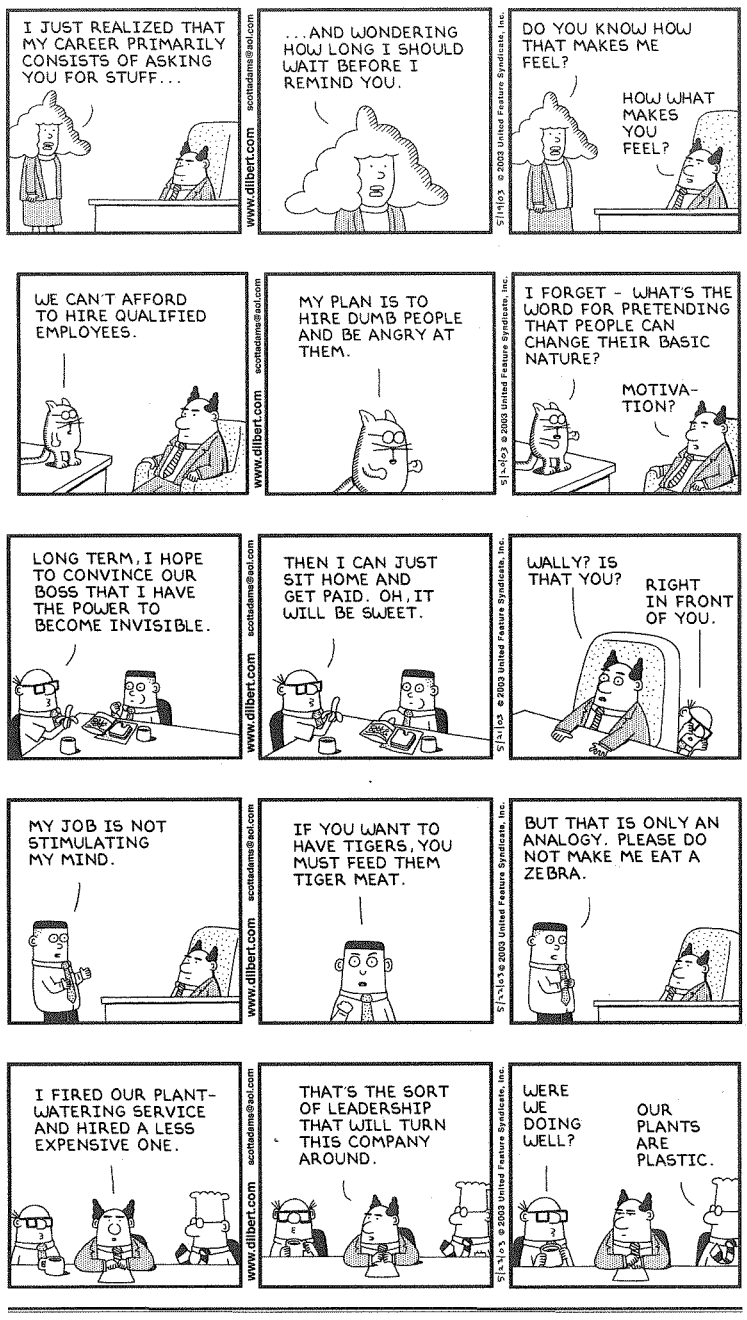
Respectfully Submitted,
Anna Sczaniecka
ASCIT Secretary

Student Affairs is pleased to announce that the following offices will be open from noon to 1:00 p.m. every weekday during the academic year. This change was prompted by the comments from undergraduates on a survey conducted in preparation for the Student Faculty Conference. Many students indicated that they are free during this time and would like to avail themselves of our services during lunch. We are delighted to be able to respond to this student request.

The Offices that will be open during lunch include:

Athletics, Physical Education, and Recreation
Bursar's Office
Career Development Center
Dean of Students
Financial Aid
Graduate Studies
International Student Programs
Minority Student Education
Registrar
Residence Life and Master of Student Houses
Undergraduate Admissions
Women's Center
Caltech Y

Athenaeum Tennis Ladder. All Athenaeum members and their families are invited to join the Athenaeum's managed singles and doubles tennis ladders. Once per month, ladder managers will post matches to be completed by the end of the month. Players contact each other to arrange mutually agreeable date and time to play. Matches are formed between players within a few ladder rungs of one another. The ladder includes both men and women and all levels of play are welcome. For doubles play, one team member must be a current Athenaeum member. Each year trophies will be awarded.



Signups welcome at any time. For more information, contact Rich Dekany at rgd@astro.caltech.edu.

Build Bridges at your Leisure

Most people equate leisure with recreation and amusement. However, leisure is simply defined as free time that one can spend as one pleases, with no requirement for amusement or entertainment. How we should choose to spend our leisure time has been under philosophical debate at least as far back as Aristotle. In his Ethics, he wrote that leisure is the state of life necessary to achieve happiness, and happiness is the goal of life. Aristotle's idea was that the best use of leisure time was in contemplation in order to transcend one's own human nature, but without neglect of practical human virtue. Leisure time and happiness may seem in short supply among Caltech students, but that is the very reason we should use leisure time carefully. Using your leisure time for community service may not quite reach Aristotle's standards of transcending human nature, but I doubt he would be opposed to it.

Building Bridges is a student run club founded specifically for doing community service. Whether you want to do community service in order to achieve fulfillment in life, or simply to help you get into graduate or professional school, Building Bridges can use your help. Perhaps your worldview has broadened, and you realize that there a lot of people whose lives are worse than your own, unlikely as that may seem. Perhaps you need community service hours to put on your transfer application, or to fulfill a court order. We have programs to donate gifts to children all over the world, food and clothes drives to benefit the homeless, and tutoring and mentoring programs to benefit disadvantaged students. Even a few hours a month makes a difference, and is enough to put on your resume. You can even get paid if you have federal work study.

Our biggest yearly event is the Race for the Future on May 17th. This is a running event which raises money for a college scholarship. Last year we raised over $1000, which was awarded to a local high school student. The entry fee is $15 for adults, $10 for students, and $5 for children under 10. T-shirts, food, and prizes donated by local businesses are given out or auctioned off at the race. All proceeds go into the scholarship fund. We encourage everyone to attend, including faculty, staff, and relatives. If you are unable to attend, donations are still welcome. The race will be held on the Caltech athletic fields. For more information visit http://www.its.caltech.edu/~bbridges/race.html or email bb-excomm@its.caltech.edu.

"Run one, may be even two or three, or run none but be sure to join the fun and support the goals of Building Bridges.....See you all at the North Field by the Brown Gym at Caltech."

-Jean-Paul Revel, Dean of Students

"My own running days lie fifty years in the past, but I urge you to get out and support this good hearted event."

-Dr. Steven Frautschi

"I ran during last year's races in one of short sprints. I had never ran track AND I had a sprained knee. I thought the event was for a good cause so I decided to come out anyway and I'm glad I did. It was fun to participate and cheer people on."

-Kevin Shand, Class of '02

"Even if you don't feel like running yourself, you can still donate money and know that your generosity is being put to good use."

-Kevin Tse

"I was really impressed last year by the organizers who put it together; they got many sponsors and a huge turnout, student and non-student: one lady got her toddlers to run, and there were several really old guys who ran a lot faster than me! Unlike your typical race, it was relaxed and

carefree; the organizers cheered us on and fed us well. This event made running fun, which says a lot."

-Debbie Angela Lee

"It was a fun and very enjoyable day knowing that we were running for a good cause, and everyone had a good time because there were competitors of all skill levels."

-Gustavo Olm

Offices Open. Student Affairs is pleased to announce that the following offices will be open from noon to 1:00 p.m. every weekday during the academic year. This change was prompted by the comments from undergraduates on a survey conducted in preparation for the Student Faculty Conference. Many students indicated that they are free during this time and would like to avail themselves of our services during lunch. We are delighted to be able to respond to this student request.

The Offices that will be open during lunch include:

Athletics, Physical Education, and Recreation
Bursar's Office
Career Development Center
Dean of Students
Financial Aid
Graduate Studies
International Student Programs
Minority Student Education
Registrar
Residence Life and Master of Student Houses
Undergraduate Admissions
Women's Center
Caltech Y

CORRECTION

The picture on the front page of last week's issue was a picture of Dabney Library, not Sherman Fairchild as stated in the caption.

Courtesy of L. Stolper

Students pose at this year's leadership lunch, which honored recipients of this year's slate of leadership awards

Student Leaders Take Home Yearly Awards

By LAUREN STOLPER

The deans hosted a lunch at the Athenaeum on April 24, to honor and recognize this year's winners of the leadership awards.

Doris Everhart Service Award

Joy Qiu '03 is this year's winner of the Doris Everhart Service Award. This award is given annually to an undergraduate who has actively supported and willingly worked for organizations that enrich not only student life, but also the campus and/or community as a whole, and who has, in addition, exhibited care and concern for the welfare of students on a personal basis. Qiu's active involvement with the Caltech Y, leading community events such as visits to the Pasadena Boys and Girls club and rebuilding Pasadena, is particularly admirable.

Bibi Jentoft-Nilsen Award

Neda Afsarmanesh '04 is this year's winner of the Bibi Jentoft-Nilsen Memorial Award. This prize is given in memory of Bibi Jentoft-Nilsen, Caltech '89, an exceptional student leader, who was director-at-large of the ASCIT Board of Directors, president of Blacker House, and on the Curriculum Committee. She was one of the stars of the cross-country, track and field and soccer teams. After her untimely death in 1990, a fund was established to recognize outstanding student leaders. Afsarmanesh was selected for her service to the students as ASCIT upperclass director at large, her contributions to the Alcohol Committee and Words Matter Committee, as well as her active role in the Fleming House.

Hinrichs Memorial Award

Ted Jou '03 and Martha-Helene Stapleton '03 are the winners of the 2003 Hinrichs Memorial Award. This award is given in memory of Frederic W. Hinrichs, Jr., who served for more than 20 years as Dean and professor at the Institute. The award bearing his name is made annually to seniors who throughout their undergraduate years have made the greatest contributions to the student body and whose qualities of character, leadership, and responsibility have been outstanding.

Jou was selected because of his exceptionally capable leadership and service to his fellow students during his time at Caltech. In particular, his role as ASCIT president has made a positive difference to the campus community.

Stapleton was also selected because of her exceptionally capable leadership and service to the students during her years at Caltech. In particular her role as the President of the Associated Students of Caltech and the President of the Caltech Latino Association of Students in Engineering and Science, as well as her work on many committees, such as the Vice President for Student Affairs Selection Committee and the Task Force on Undergraduate Residence Life Initiatives, have made a positive difference to the campus community.

Mabel Beckman Prize

Mona Sheikh '03 and Sindy Tang '03 have won the 2003 Mabel Beckman Prize. This award is given in memory of Mrs. Beckman's many years of commitment to Caltech's educational and research programs. This award is for academic excellence and outstanding leadership skills, a commitment to personal excellence, good character, and a strong interest in the Caltech community.

Sheikh was selected for the qualities of outstanding leadership and service that she has shown her four years at Caltech. Her contributions as the Senior Class Co-President and the editor of the yearbook are particularly admirable.

Tang was also selected for the qualities of outstanding leadership and service that she has shown during her time at Caltech. She has served as the president of the Asian Pacific Student Union, the Vice President of the Hong Kong Student Association and the Treasurer of the Society of Women Engineers.

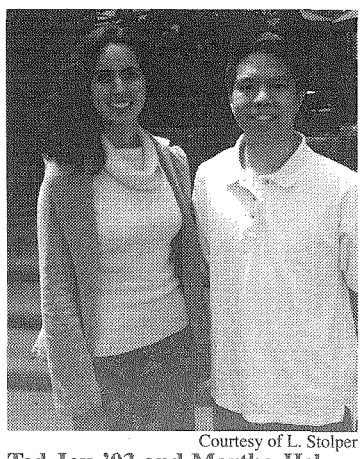
Sheikh and Tang will be honored with the Mabel Beckman Prize at commencement on June 13.

Deans' Cup, Master's Award

Deans' Cup and Residence Life and Master's Award are presented to undergraduates whose concern for their fellow students has been demonstrated by persistent efforts to improve the quality of undergraduate life and by effective communication with administrators.

Iram Bilal '04 and Vikram Mittal '03 each received the 2003 Deans' Cup. Bilal is majoring in engineering and applied science and business economics; and Mittal in engineering and applied science.

James Pugh '03, Dana Sadava '03 and Jonathan Toomey '03 were awarded the Residence Life and Master's Award.



Courtesy of L. Stolper

Ted Jou '03 and Martha-Helene Stapleton '03 are this year's Hinrich's Award winners.

Committee Resolution, Frosh, Alumni

By TOM FLETCHER

Committee Reporting

The ASCIT BoD worked with the IHC this week to draft a resolution to create a committee reporting mechanism. I talked about all its benefits last week, so there's no need to re-toot the horn, but I wanted to keep you all informed on its progress. Below is the revised text we hope to pass. I think it will accomplish the goal of maintaining accountability, keeping us all informed, and ensuring that the students' voice is heard. Without further ado…

Resolution XXVI:
Committee Oversight

Section I: ASCIT recognizes the need for supervision of committee representatives and the need for them to be accessible and accountable to the community.

Section II: Representatives to Institute committees are required to submit to the BoD short written summaries of all meetings they attend in their capacity as a representative. These summaries are to be disseminated to the student body via whatever means are deemed necessary (e.g. *The California Tech*, Donut website, etc.). If there are multiple representatives on a committee, only one summary needs to be sent.

Guidelines for a summary:
- List of students in attendance.
- List of agenda topics covered.
- Any additional explanation of topics covered deemed necessary by the representatives.

Section III: Failure to attend and/or submit summaries from two or more meetings of the representative's committee will be deemed as grounds for recall and immediate replacement by the committee alternate. If there is no alternate, a temporary appointment will be made by the BoD until a proper replacement can be obtained by the appointing body.

Section IV: In the case that the proceedings of a committee are confidential (e.g. UASH), a note documenting attendance is sufficient.

A Gaggle of Editors

Yesterday, the ASCIT BoD appointed new editors and business managers for ASCIT publications (Totem, little t, and the Big T). At the time of this writing, these interviews haven't actually happened yet, but I'd like to thank everyone that signed up, especially for positions where there was more than one candidate (giving us a choice!). For those of you who missed it but are interested, track these people down and volunteer to help. Editor does not mean "do everything by myself," and even if it sometimes does, that's not the way it should be. So, if you're so inclined, pitch in!

Whom I Met With This Week

This week's meeting with Margo Marshak was as successful as normal. We discussed a wide array of pressing and future issues. One of the most pertinent is the decision to only enroll about 185 students in next year's frosh class. You may have already heard this based on how your room picks went (if you've had them), but regardless, it is a major boon to the student body next year. Classes will be smaller, rotation will have more one-on-one time, and there will be less of a housing crunch!

We also had a chance to discuss a few upcoming information gathering efforts around campus. The Career Development Center is doing research into a leadership certification program. The idea behind the program is that it would provide training for motivated student leaders to do a better job running clubs, houses, even ASCIT.

The other is the Caltech Diversity Statement that is being prepared. Focus groups will be meeting throughout May to determine what our campus vision is for diversity. Is diversity important to you as a Caltech student? Does your education suffer because there are fewer minorities here than at any other elite institution in the country? Or, to be perfectly honest, does it not matter at all? If you have an opinion on this issue, and you are interested in helping to set this policy, contact Sharyn Slavin Miller, Assistant V.P. for Student Affairs in the Student Services Center.

I also met with Debbie Hall (current president of the Alumni Association) and Tom Tisch (newly elected president). They're interested in raising the profile of the Alumni Association and want to get involved with students to a larger degree. They're interested in getting alumni to come to house dinners, set up some recruiting fairs, and subsidizing new social events. If you have ideas you'd like to share, just pop over to the Alumni House on Hill or tell them to me or a House president. The alumni really want to help, they just need us to tell them how we'd like to be helped.

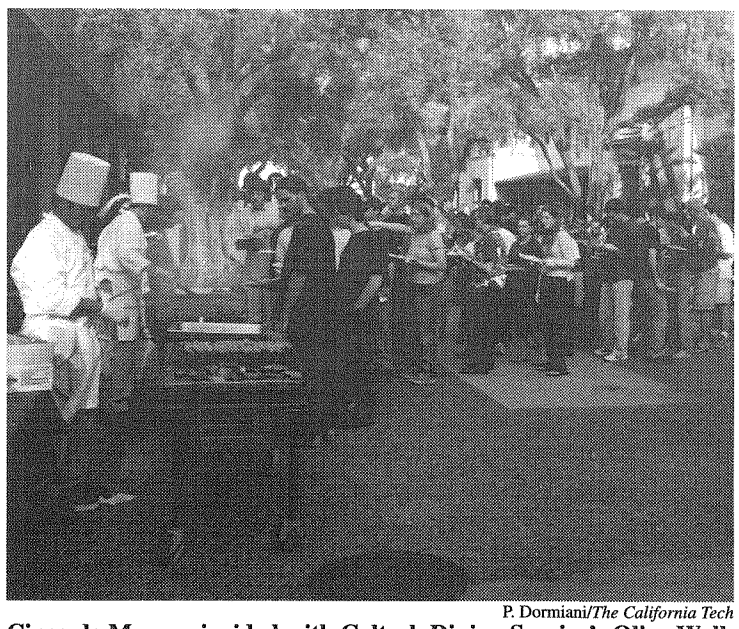
Moment of Zen

I disappeared for parts south of here this weekend to go hiking in the Torrey Pines State Reserve (*www.torreypine.org*) in La Jolla. The drive there was about two hours on the I-5, and the hike was as long or as short as we wanted to make it (there are many splitting trails). The air was fresh and salty, the early morning sun was bright but not roasting, and the local joggers/hikers were nice. I got the idea from a book called "Walks of California," and according to the book, this is one of the four best "coastal" hikes in Southern California. Based on how easy it is to pop down for a short day trip, how cheap it is ($4 to park in the reserve), and how refreshing it was to be sitting on sandy bluffs overlooking the Pacific while watching dolphins (did I forget to mention you could see dolphins swimming through the waves? Well, you can!), there's no reason *not* to go next weekend! And hey, if you know some alumni in the area, it's easy to crash there for the night (they'll be happy to see you).

Peace,
Tom

P.S.: Matrix: Reloaded on Wednesday! Thank you Tom Mannion! And professors to whom I owe homework on Thursday: Can I have an extension? I feel a torrid bout of stomach flu coming on…

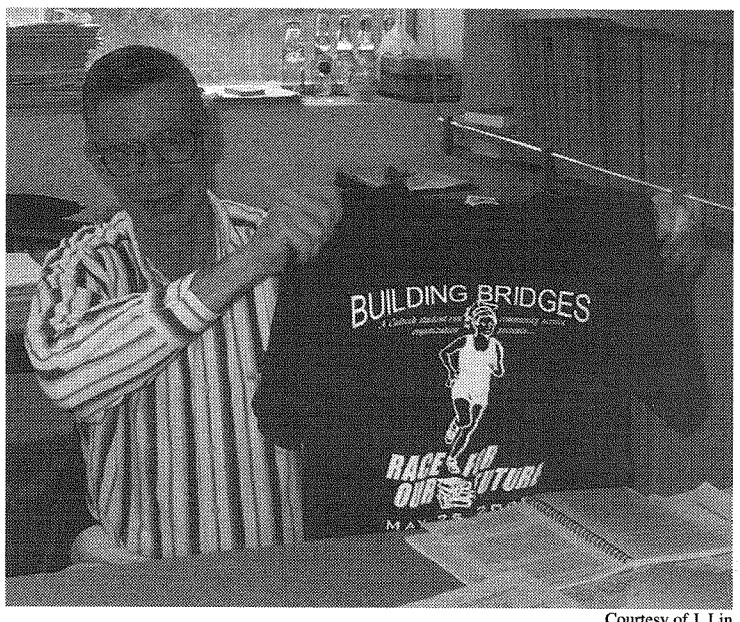
CINCO DE MAYO FEST



P. Dormiani/*The California Tech*

Cinco de Mayo coincided with Caltech Dining Service's Olive Walk Italian barbeque this past week. Students patient enough to wait in line were rewarded with Italian sausage, a Cinco de Mayo favorite.

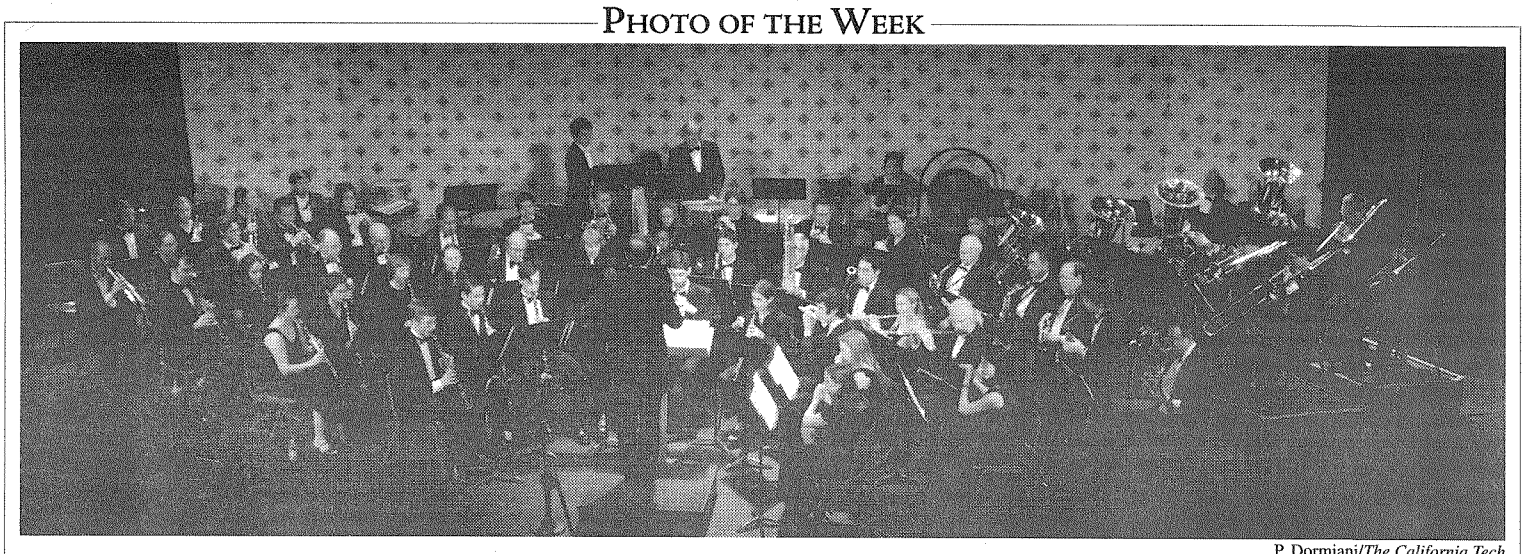
BUILDING BRIDGES



Courtesy of J. Lin

Physics Professor Steve Frautschi holds up a shirt he made for this Saturday's Building Bridges charity race.

Photo of the Week



P. Dormiani/*The California Tech*

This past Saturday, Caltech's bands held a combined 'Bandorama' as their final farewell concert, closing their season with a crescendo.

What's Wrong With ASCIT? Doughnuts

By TED JOU

Last week, I argued that students are the source of Caltech's problems with student self-governance. This week, I will look at the centerpiece of our student government and ask, "What is wrong with ASCIT?"

My answer is simple: Doughnuts.

Of course, anyone who reads this newspaper knows this. 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 doughnuts.

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.

There are basically two major opinions regarding ASCIT. First, there are students who believe their $60 a year in ASCIT dues buy them various services; most prominently the doughnuts they pay for every Friday morning. On the other side are students who believe that ASCIT has no business buying doughnuts at all. They would like to see clubs charge their own membership fees, publications sell their own subscriptions, and ASCIT concentrate on representing student views rather than subsidizing special interest groups.

Most students fall somewhere in the middle of that spectrum (actually, most don't even think about these things at all), and opinions are often split across house lines. This ideological dispute has started to manifest itself over the past year in doughnut gravestones, ASCIT dropping parties, and water balloons at midnight doughnuts. Again, it is students against students undermining our ability to stand up to the administration.

It didn't used to be like this. Even just five years ago students were pretty unified in laughing at ASCIT for throwing bad parties and making fun of ASCIT officers for taking themselves too seriously. The two rival factions of today have appeared when Caltech student government has reached something of a turning point.

The ASCIT of the past was focused on student services. ASCIT once operated a coffeehouse in the SAC and managed the monthly phone bills for all students living on campus. When students needed summer research, the ASCIT Research Project was initiated. To help students pick the best courses, the ASCIT Educational Policies Committee began publishing Teaching Quality Feedback Reports.

Today, Dining Services operates the coffeehouse, Telecommunications manages our phones, the SFP office oversees the SURF program, and each department handles their own teaching evaluations. Even further in the past, ASCIT once managed much of varsity athletics, which is now in the hands of professional coaches and administrators.

This transition from ASCIT to Student Affairs has been going on for decades. After all, what better way for Student Affairs to identify valuable student services than to pick from students' own initiatives? Unfortunately, this model has broken down over the past two decades as Student Affairs has grown much faster than ASCIT.

Clubs can no longer rely on ASCIT to fund their activities without some Institute support. Administrators often create new programs to fit their own vision for Caltech. Students no longer look to ASCIT to provide them with new services, and when they do, instead of asking, "Why doesn't ASCIT help to implement an online registration system?" they ask, "Why doesn't ASCIT tell the administration to implement an online registration system?"

The reasons for this shift are simple. ASCIT dues have been constant since 1984 while Caltech tuition has doubled. Students are paying their money to Student Affairs rather than ASCIT, so that's where services have to come from. Money is power and we've been paying more and more of our power to the administration.

Raising ASCIT dues may seem like the obvious solution here, and doing that would certainly help the cause of Friday morning doughnuts. More money would put more flexibility in the ASCIT budget and allow students more influence to support the things they want to do. However, more money certainly isn't the only solution to this problem.

Rather than trying to reclaim ASCIT's role of primary student service provider, we could simply accede to Student Affairs. Instead of trying to compete with administrators we could work more closely with them to identify and respond to student needs. 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.

In either scheme, ASCIT doughnuts don't make a whole lot of sense. The traditional Friday morning doughnuts were first delivered by MOSH's in the 1980's and ASCIT took over the responsibility in the 1990's. They are a cost passed from the administration to the student government, a student tradition created by an administrator, and now they are a polarizing issue. I genuinely hope that someday soon the student body will get over doughnuts so ASCIT can regain a meaningful role in providing student services.

But what then? Should we raise dues or focus more on representation? How about both?

Watson, Crick and the Honor Code

How 50 Years of Biology Relates to Today's Caltech Students

By JEAN-PAUL REVEL

One of the successful innovations in the Caltech curriculum is the expanding opportunities for study abroad, energetically pursued by the director of the Fellowship Advising and Study Abroad Office, Loren Stolper, Professor Harvey Newman and a cast of many. The first destination open to undergraduates in the program was Cambridge University and quite a few of our students have by now had the chance to spend a term on the banks of the river Cam. Perhaps some of the "Cambridge Scholars" even have had lunch at the Eagle Pub, where on Feb. 28, 1953, Francis Crick and Jim Watson excitedly announced that they had "found the secret of life."

A more formal announcement of the discovery was made as a letter to *Nature* published in its April 25, 1953 issue, along with other papers on the topic by other researchers in the field. The paper is a model of brevity and clarity. Read it online at *http://www.nature.com/genomics/human/ watson-crick/*. I hope also that you had the chance to listen to the conversation between President Baltimore and Jim Watson, which took place on May 5 in the Beckman Auditorium. Even if you did not have enough biology to recognize the names that were bandied around or know about the experiments that were referred to in the discussion, it was a very special occasion.

But back to '53. I don't know what effect Crick's announcement had on the crowd sipping their pint of Bass and attacking their steak and kidney pies. However, in the 4/11/03 issue of *Science* Magazine, reporter Elizabeth Pennisi quotes a contemporary as saying "there was much more excitement about the Slinky wire frame spring walking down the stairs."

In any case, the claim to knowing the secret was uncharacteristically brash, for Crick, the Englishman who is supposed to have made the comment. It turns out that even today, 50 years later, we do not know the secret of life, although, just in time for the anniversary, comes the news that the sequencing of the Human Genome has been completed, a major step toward that goal.

Even knowing the whole DNA sequence of an organism at high accuracy is not enough for us to know "the secret." That's because a lot of DNA in the genome is non-coding, i.e. does not carry information used by the protein making machinery of the cell (and so is presumed not to play a managerial role in the life of the cell). In humans maybe as little as 5% of the DNA encodes proteins.

The most efficient creature known seems to be the puffer fish, yes the very one of mouth tingling fugu fame. The puffer fish genome is one eighth the size of the human genome, even though it has about the same number of genes—30,000 to 40,000—so it must have much less of the "junk" DNA. But imagine the outcry if the puffer fish had been the first vertebrate to be sequenced! To have some claim to have penetrated "the secret" one needs at the very least to know where the genes, the portions of the DNA encoding for protein, are. It is unfortunately hard to distinguish coding from non-coding DNA, solely on the basis of the DNA sequence. The secret itself cannot be considered as "revealed" until one knows what each of the genes does.

"It turns out that even today, 50 years later, we do not know the secret of life."

One of the things that people remember well about the elucidation of the general structure of DNA is the controversy over whether Cantabrigians Watson and Crick's use of another researcher's data without her knowledge was or was not legitimate. Naomi Franklin worked with Maurice Wilkins at King's College in London, applying X-ray diffraction techniques to elucidate DNA structure. There were many disagreements between the two, particularly about who was in charge of what part of the project. Unbeknownst to Franklin, her pictures were shown by Wilkins to Watson, who grasped right away that they indicated a helical structure for DNA.

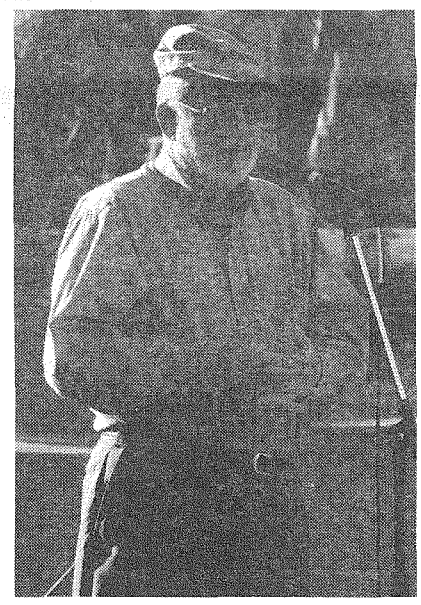
This and the realization that there was a mechanism for the specific pairing between the bases adenine and thymine on the one hand and cytidine and guanine on the other, enabled him and Crick to put together the model which sealed their fame and was published in that *Nature* of 1953. In the same issue there was also a paper by Franklin and another collaborator, stating that the X-ray patterns they had obtained were consistent with the model presented by Watson and Crick. She never learned that their model was based in part on her data.

Watson and Crick did acknowledge in their paper that they had "been stimulated by a knowledge of the general nature of the unpublished experimental results and ideas of Dr. M.F.H. Wilkins, Dr. R.E. Franklin and their coworkers..." Looking at this through glasses tinted by the Caltech Honor Code, it is hard to see Wilkins' action and Watson and Crick's use of the information as anything else but taking advantage of Naomi Franklin, whatever the personal interactions between the protagonists.

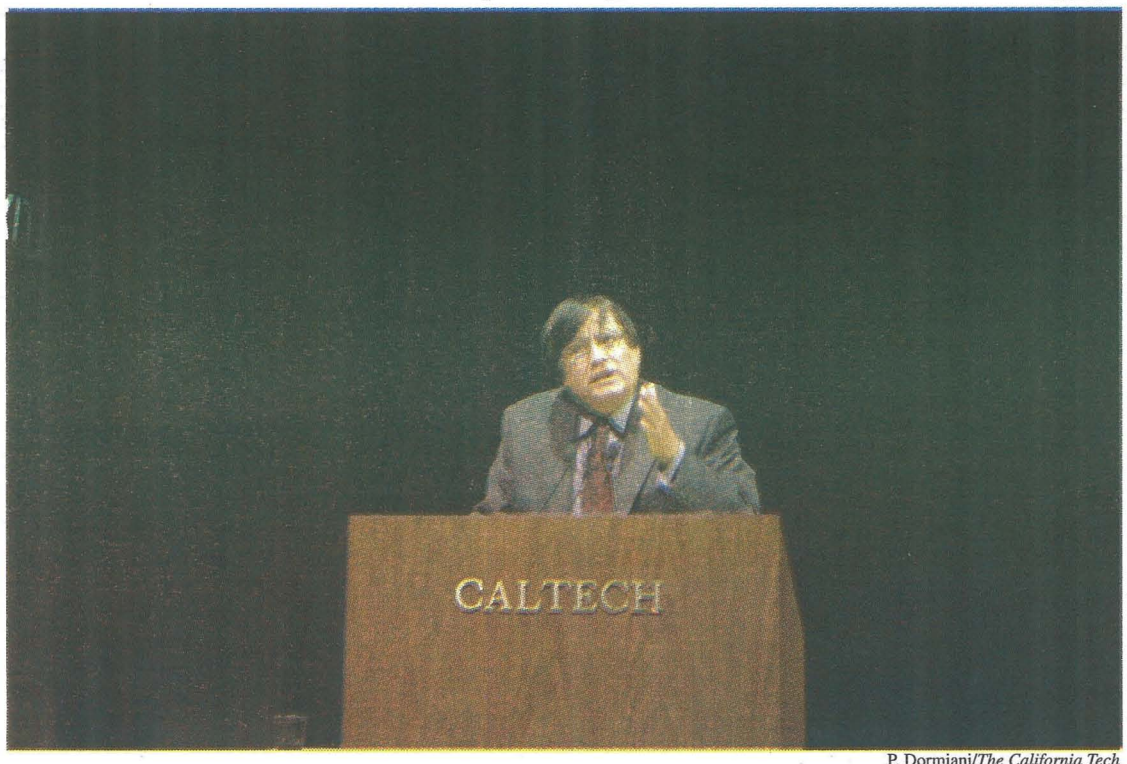
But, while Franklin's data clearly hinted at a helical structure, there were many other pieces of data and original insights by Watson and Crick that led to the successful construction of their model. Only they had all the goods needed to do so. Franklin died of ovarian cancer in 1958 at age 37, before the Nobel Committee handed out laurels for the elucidation of the general structure of DNA (1962). Nobels are not given posthumously and Franklin was not included in the award. One can only speculate and hope that the Nobel Committee would have done right by her had she been alive.

"We dance round in a ring and suppose, But the Secret sits in the middle and knows." —Robert Frost

A bientot



Diversity Expert Tapia Outlines Causes, Symptoms Of Low Minority Representation, Suggests Remedies



P. Dormiani/*The California Tech*

Dr. Richard Tapia of Rice University shares his efforts to increase diversity at Rice and across the engineering, science and math boards. His talk, which took place last Thursday in Ramo Auditorium was well attended by Caltech administrators and faculty.

Continued from Page 1, Column 4

science and engineering fields.

President David Baltimore gave the introduction, citing the two University of Michigan cases concerning graduate and undergraduate admissions brought before the Supreme Court. The plaintiffs in both cases challenge the need for affirmative action.

Dr. Baltimore added, however, that Caltech supports the University of Michigan, because we must have criteria to have a diverse student body. The court ruling could affect the climate of which Caltech and other universities operate and so Dr. Tapia was invited to share his views on diversity and how to achieve it on our campus.

Dr. Tapia began his speech by first clarifying that all the views he was going to express were his own-and the audience could agree or disagree with his perspective.

He then briefly went over his background. A native of Los Angeles, Dr. Tapia's parents emigrated from Mexico to the U.S. in search of education. However, because they had to support themselves when they arrived, they were unable to fulfill their dream. Their mother's motto was "You can do it; it can be done," so he and his four brothers and sisters took advantage of the rich environment they enjoyed.

Dr. Tapia was a product of the L.A. public schools and did not get a great high school education nor great grades. After graduation, he went to work and then attended community college before transferring to University of California, Los Angeles, and receiving his BA, MA and Ph.D. degrees in mathematics there. He then went on to join the faculty at UCLA and University of Wisconsin.

Despite his amazing record of awards and successes, he claims that he built his strongest self-esteem while in community college and expressed the sentiment that community college should be given more emphasis in the U.S.

Dr. Tapia attributes much of his success to following his culture and value system. What really sets him apart from others, though, is his "uniqueness from having a multifaceted personality. How many people can match me in so many aspects?"

Dr. Tapia then defined under-representation as when the percentage of people of an ethnicity or sex in a group is less than the percentage of that people in the general population. For example, Hispanics and African Americans constitute 25% of the U.S. population, but only 4% of the doctorate degrees in math and physical sciences.

He further claimed that for the health of the nation, under-representation cannot be maintained. "The underrepresented represent a permanent underclass," he explained, which leads to crime and poverty.

According to Dr. Tapia, there are several factors contributing to the disproportionate number of minorities in higher education. The first is the unlevel playing field in K-to-12 education. Oftentimes, even within the same school district, there are stark disparities in the quality of education offered. The preparation is so unequal that by the time the students get to universities they can often be at a huge disadvantage if they had gone to one of the less prestigious high schools.

Another factor is contemporary youth culture. 90% of youth that belong to underrepresented ethnic groups live in the city. Education is not a value-not so much as a supply problem, but as a demand problem. Youth prefer entertainment and sports, rather than engineering, science and math.

Also, we have faulty evaluation systems. We don't know how to evaluate what is really needed in graduate school to succeed, such as creativity and not just test scores. Oftentimes, we exclude some very good individuals, who could be quite successful if only given a chance.

Further, there is an overall misuse of standardized testing, the underrepresented minority's worst enemy. Too often, the distinctions we make between superiority and inferiority is based on this one-dimensional evaluator.

Dr. Tapia then talked about what he called "excess baggage"—the direct negative effects that come with being raised in this country as an underrepresented minority. Excess baggage can be described as the feeling that you don't belong and aren't good enough to fit in with the other people.

Said Dr. Tapia, "In their [the underrepresented minorities'] minds, they seem to tell themselves, 'I failed. They were right. I don't belong.'" The "Great Imposter Syndrome" is also quite common among minorities who feel, "I'm not good enough. I don't belong at a place like Caltech.

Dr. Tapia gave the example of an African-American woman friend of his who went to the University of Texas and was the valedictorian of the segregated high school she attended. She had been so conditioned to believe that whites were better than blacks that when she was one of the brightest in one of her classes an U. of T. she was baffled: "I did better on test than all those white people. But they're better than me! I don't understand..."

There are several components of a person that could make him a valuable asset to science and math: passion, talent, quality and preparation and confidence that they can succeed. The excess baggage dilemma, however, steers minorities away from these intellectual topics and therefore takes away any passion they might have previously held, cannot offer them the quality of education and preparation needed for them to succeed and simply cuts away their confidence, leaving only talent—and they cannot survive on talent alone.

There is no easy fix for this problem.

Affirmative action, which Dr. Tapia defined as putting race and ethnicity into the formula to try to make up for years of denied access, is "a good idea that failed from poor implementation." Remarked Dr. Tapia, "It is my belief that affirmative action as we know it is dying and will die." There are no simple formulas that can solve this problem.

At Rice, he explained, they decided not to fight the fall of affirmative action and instead of simply looking at someone's ethnicity as a factor in admissions, one of their admission essay questions is "Write how you would contribute to diversity at Rice?" Last year, six people with perfect SAT scores were not accepted into the freshman class.

Dr. Tapia ended by posing several challenges to Caltech, which if fulfilled would make major steps in increasing diversity. The first was to not accept minorities if we cannot retain them. If we accept them and they come, but we fail to retain them, we do more harm than not accepting them. If we cannot retain, then we are losing leaders with a huge potential for success had they gone to any other school. Failure to retain harms the self-esteem of those that cannot keep up and discourages other underrepresented minorities from entering the math and sciences.

Second, when we hire faculty, of course we make an effort for gender equity. However, we should also look at what the faculty that we hire can do to increase diversity on campus in terms of the support they will provide and the environment they design for underrepresented groups. It is the faculty that produce Ph.D.'s and not the administration, so it is of the utmost importance that the faculty bring in minorities from other good schools.

The third was to emphasize postdoctoral scholars. It is necessary that we nurture them and make them productive by putting them with good people. The faculty must buy in to the idea and do their best to offer recognition when good work is done and show the postdocs what an asset to the community they are.

And with that, Dr. Richard Tapia's talk ended with a brief question-and-answer session followed by a reception.

Because of Dr. Tapia's efforts, Rice has received national recognition for its educational outreach programs and the Rice computational and applied mathematics department has become a national leader in producing women and underrepresented-minority Ph.D. recipients in the mathematical sciences. Dr. Tapia has directed or co-directed 37 Ph.D. students, including 16 women and 13 underrepresented minorities.

He also impacts hundreds of teachers through two summer programs that are run by his Center for Excellence and Equity in Education: the Mathematical and Computational Sciences Awareness workshop and GirlTECH, aimed at getting girls interested in computer science.

Dr. Tapia has received various awards, including the Presidential Award for Excellence in Science, Mathematics and Engineering Mentoring (1996) and the Distinguished Scientist Award from the Society of Advancement of Chicanos and Native Americans in Science (2000). He was also the first native-born Hispanic to be elected to the National Academy of Engineering.

LANGE WINS PRESTIGIOUS STATE AWARD

PICKED AS 'SCIENTIST OF YEAR'

Physics Professor Honored For Research

By JILL PERRY

The California Science Center has announced the joint selection of Andrew Lange and Saul Perlmutter as 2003 California Scientist of the Year.

Lange is Marvin L. Goldberger Professor of Physics at the California Institute of Technology in Pasadena and Perlmutter is senior scientist and group leader at the Lawrence Berkeley National Laboratory in Berkeley. Using two very different techniques, Lange and Perlmutter's experimental efforts have confirmed a remarkable theory of how the universe expanded and evolved after the "big bang."

Lange and Perlmutter will be recognized during the annual presentation of the California Scientist of the Year and the Amgen Award for Science Teaching Excellence, a special event to honor excellence in scientific achievement and education, on May 8 at the California Science Center in Exposition Park, Los Angeles.

Lange is the 14th Caltech faculty member to be named Scientist of the Year.

The California Science Center established the California Scientist of the Year Award in recognition of the prominent role California plays in the areas of scientific and technological development. A blue-ribbon panel selects a nominee whose work is current and advances the boundaries of any field of science.

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D. Korta/*The California Tech*

This year's Semana Latina marked the 10th consecutive year Caltech has celebrated Latino culture, hosting a week of Latino bands, lunches and a Saturday night salsa party. Featured bands included the funk musicians the B-Side Players and Odara, an Afro-Salsa group.

Club Latino Celebrates Semana Latina Week

By JENNY IOFINOVA AND ARTHI SRINIVASAN

During the week of May 5, Caltech's Club Latino had their 10th annual Semana Latina.

Semana Latina featured live music and lunch every afternoon in front of Winnett Center, as well as a night time movie on Friday and a salsa party on Saturday night.

According to the Club Latino Web site, the event was organized by Caltech's Club Latino and CLASES, the graduate and undergraduate Latino student organizations, respectively. Compared to other Southern California schools, Caltech has a very small Latino student population and the members of both organizations strive all the more ardently every year to expose the Caltech community to the Latino culture and heritage.

Not all Caltech students were particularly anxious to be exposed to the culture, however. Raman Shah, '06, described his reaction to the event: "Unfortunately, there is not a large Hispanic community at Tech. So the rest of us are like, 'hmm... salsa music. Sounds good. Let me go to class now.'" It has been the historical complaint of event organizers that they must compete with Caltech's absurdly large workload for student attention.

Some of the events and bands featured during Semana Latina include: Johnny Polanco y su Conjuto Amistad, Mariachi Los Pasajeros, B-Side Players, Conjunto Tenocelomeh, Clarita and the Arte Flamenco Dance Theater ñ Flamenco, "El Hijo de la Novia," and a salsa party with Odara.

For $4, lunch was served as well, catered by Ernie's. "People really enjoyed each event and each one brought something different," said Anna Salazar, a graduate student and one of the main organizers of Semana Latina.

Added Salazar, "we've been planning [Semana Latina] for a few months now."

Semana Latina has become an annual tradition at Caltech, an object of anticipation among students. To keep every year different, according to Salazar, "[the organizers] always try to get different bands every year." Salazar also commented on this year's smaller budget for the event, adding, "due to budget constraints this year, we weren't able to have evening events, except for the Saturday night party."

Two of the most interesting musical groups that performed during Semana Latina were The B-Side Players, a modern Latin funk group, which was very well received, as well as Odara, a very popular Afro-Salsa band.

According to Salazar, although the weather was cloudy and cool, the turnout was still very good. Every afternoon, passersby could see a small crowd of people on the Winnett Lawn for lunch and later listening to the band of the day.

To counter student apathy, the advertising for Semana Latina has traditionally drawn a swath of attendees and interest. This year, there were several large posters which featured Beckman Institute in the background, with a statue of Quetzlcoatl, an ancient Mayan God, in the foreground.

Though intriguing, however, the posters were hardly abundant. The elaborate posters have been a longstanding tradition and have impressed visitors to the dean's office, where framed past posters grace the wall.

Semana Latina was first started 10 years ago by a graduate student who wanted to celebrate his Latino heritage, as well as the culture and traditions of other Latin-American students. It has evolved into an intricate weeklong festival, this year run mostly by Caltech's Club Latino. This year, Semana Latina was the brainchild of Carlos Romero, the club president, and Salazar, the treasurer. Both are graduate students and Salazar will be graduating this year.

Despite Salazar's upcoming graduation, she promises, "there will most like be another [Semana Latina] next year." If this year's is any indication, next year's should be just as exciting.

Prof. Lange 'Scientist Of Year' For Cosmic Study

Continued from Page 7, Column 5

Of those selected for California Scientist of the Year honors, 11 later became Nobel laureates. The panel concluded that Lange and Perlmutter's discoveries complement each other so well in revealing the nature of the universe that both scientists should be recognized this year.

According to the most widely held theory of cosmic evolution, the universe went though an inflationary phase during which its size rapidly increased and the universe's geometrical structure took on a very specific form: parallel lines never meet and the sum of the angles inside an astronomically sized triangle add up to 180 degrees. Scientists refer to this particular form of geometry as being mathematically "flat." According to the general theory of relativity, a mathematically flat universe places constraints on the amount of mass and energy in the universe. Unfortunately, astronomers could not account for the requisite mass and energy. Therefore, either the standard cosmological—"big bang"—theory was incorrect and the universe's geometrical structure was not that of Euclid or the astronomers were missing something important.

Lange studies fluctuations in the cosmic microwave background (CMB) radiation, a relic of the primeval "fireball" that filled the early universe. These signals, which are visible today at microwave frequencies, provide a clear "snapshot" of the embryonic universe at an epoch long before the first stars or galaxies had formed. In general, this radiation reaches the earth uniformly from all directions in the sky. However, at the level of 0.003 percent there is an intricate pattern of fluctuations in the CMB. Using novel detectors developed at JPL and flown on a balloon-borne telescope high above Antarctica, Lange's group was able to make the first resolved images of these very faint patterns. The images demonstrate that the radiation fluctuates on an angular scale of one degree, which is exactly what scientists expected from a mathematically flat universe. Since the 1930s, scientists have known that galaxies are moving away from one another and there has been a concerted effort to study the rate of this expansion. Prior to Perlmutter's efforts, almost all astronomers expected that the expansion of the universe was slowing, due to the gravitational attraction of galaxies and other matter. However, Perlmutter's group found that the universe is actually expanding at an accelerating rate, as if a "negative pressure" were pushing everything apart. Perlmutter's estimates of the cosmological constant's magnitude are consistent with Lange's observations of a flat universe.

Lange's work demonstrates that the universe is mathematically flat and that the standard cosmological theory is correct, while Perlmutter's work indicates that the source of astronomical energy giving rise to a flat universe comes from a type of negative gravitational pressure or dark energy permeating the universe. The nature of this dark energy remains a mystery.

Ma Wins First Chess Blitz Tourney

By MATTHEW WALKER

There was an air of intensity in the Page House Dining Room on Friday night as the Caltech Chess Club hosted its first Blitz Chess Championship.

Games, which have a limit of five minutes per player, were often ended with a fury of moves as each player tried to win as the time wound down. The tournament was six rounds long, with two games per round. It was run using the Swiss system, in which nobody gets eliminated and the winner is the player that has accumulated the most points at the end of the tournament.

Postdoctoral Scholar Wei Ji Ma and Eugene Yanayt '06 were this year's champions, scoring 10 out of a possible 12. Coming in third was Patrick Hummel, with a score of nine points. The winners of the novice division were Josh Gutman and Joel Austin.

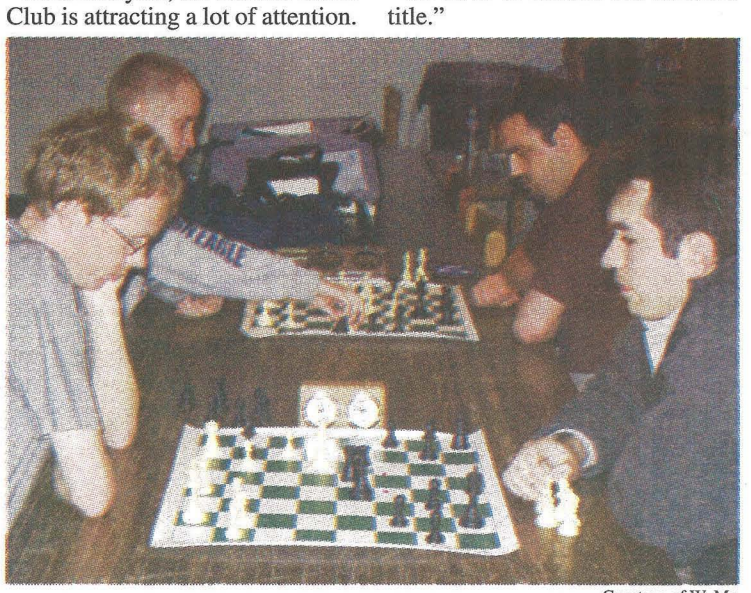
The field of nineteen players included undergraduates, graduate students, postdoctoral scholars and faculty members. Club President Hummel commented "It's nice to see people who aren't regulars come out." The club, which meets at eight p.m. every Friday evening in the Page Dining Hall, was happy with the turnout.

One entrant, Kevin Trotter '06, enjoyed himself, saying "I want to come more often."

Chess Club founding member Wei Ji Ma emphasized that the club was trying to increase the popularity of chess and encourage more people to join. Ma welcomed players of all levels, joking, "You don't need to beat MIT your first time."

In its first year, the Caltech Chess Club is attracting a lot of attention. Earlier this spring, Caltech won an online match with MIT 5-3. The team also won the Amateur Team Championship, beating out UT Dallas for the national title.

The club has "plans for more matches" including an annual online match against MIT, said Ma. And, of course, in apparent reference to the club's recent success, "We have to defend our national title."



Courtesy of W. Ma

The Caltech Chess Tournament hosts its first-ever blitz chess tournament, with each player given only five minutes per game.

Caltech Conventional Wisdom Watch

Mapping the GALEXy: Is a breakthrough in the stars? Chris Martin dispatches a telescope to farm news on forming stars. Un*hubbled* by the weight of larger scopes, GALEX aims to reveal the expanse of the universe.

The *Ma*ster: Sanguine off his national success, Wei Ji is again flush with victory after blitzing his Caltech opponents. If he weren't so modest, he'd be a chess nut boasting in an open foyer.

Gray Davis Recall: Things are looking Gray for those who would turn back the clock. All this time and money for something tried and failed in every governorship over the last 50 years?

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