

## Artist Proposal Receives Money; Plans Reviewed

By CHRISTINE CHANG

Sensing a need in the Caltech community for an enrichment in the arts, Professor Pietro Perona, the head of the Art Committee, has proposed a new Artist-in-Residence program, which would use the money obtained from the Moore Fund to bring an artist onto campus to work with students and faculty.

"We feel the students at Caltech have a lot of creative abilities, but the outlets for them are not obvious," said Perona.

In bringing a permanent artist-in-residence onto campus, Perona hopes to create a natural place for students who are interested in art to meet with each other and exchange ideas. "I hope it will be a magnet for people who wish to create art," Perona said.

For the artist-in-residence program, Perona wishes to hire an artist to stay on campus and work with students and maybe even faculty to

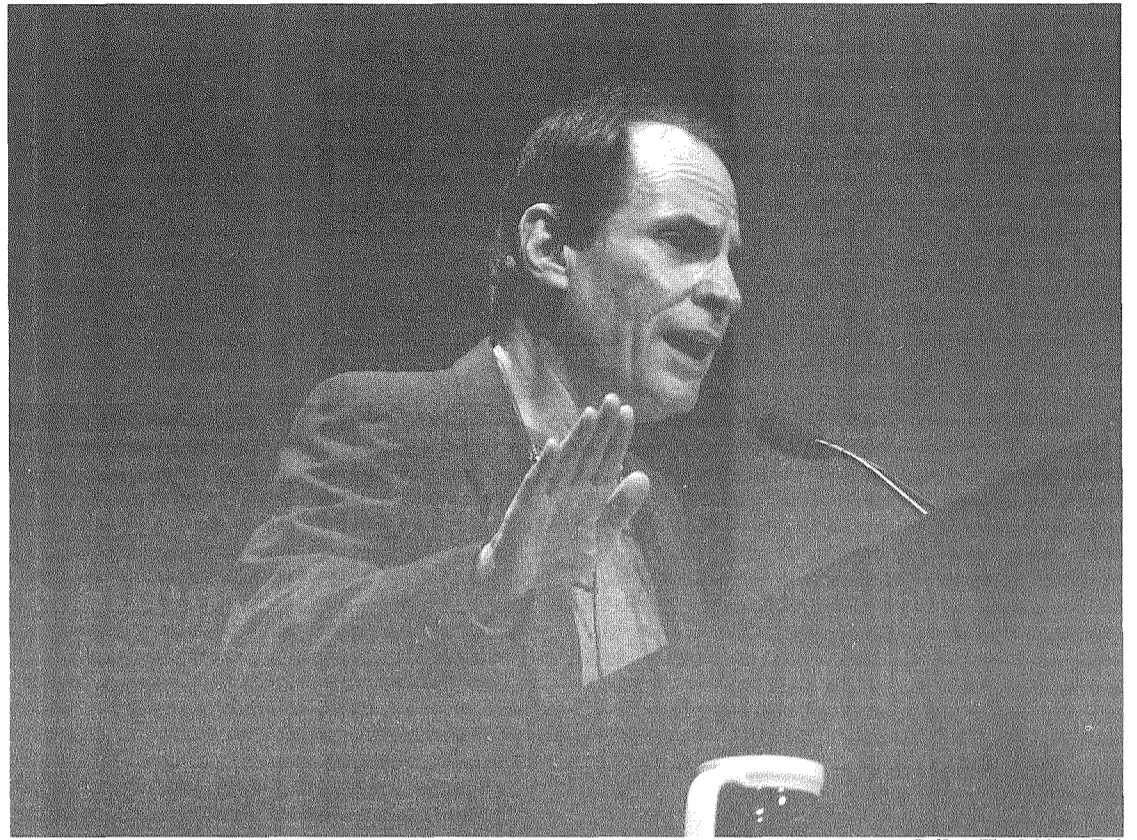
create a joint exhibition. By coming to Caltech, he wants the artist to find inspiration in the science and research.

"We want the program to increase the community's awareness of contemporary art and their own scientific work through the art," said Professor Tapio Schneider, another member of the Art Committee.

The artist-in-residence would also mentor interested students as they pursue their own art projects. Students would be able to observe the artist working from up-close and go to him or her for inspiration and advice.

Meanwhile, the students would act as guides to the artist, explaining what research is happening and the significance of it. "Students would act as a conveyor belt, as glue," Perona said.

Students for the program would be chosen according to whether they have a track record in the arts



D. Korta/The California Tech

Retired L.A. Times television critic Howard Rosenberg declared the importance of media ethics, and criticized 24 hour news cycle for losing sight of its morals.

## Failure to Uphold Media Ethics by TV News Source of Dismay for Journalist

By KEVIN BARTZ

Car chases. Crime beats. Live TV. Jerry Springer. Is it all too much to take? "You might call it a symbiotic relationship between TV and viewer," explained retired journalist Howard Rosenberg, "but this time, there's only one side in on the symbiosis; as a viewer, you don't even know you're being handled in the process."

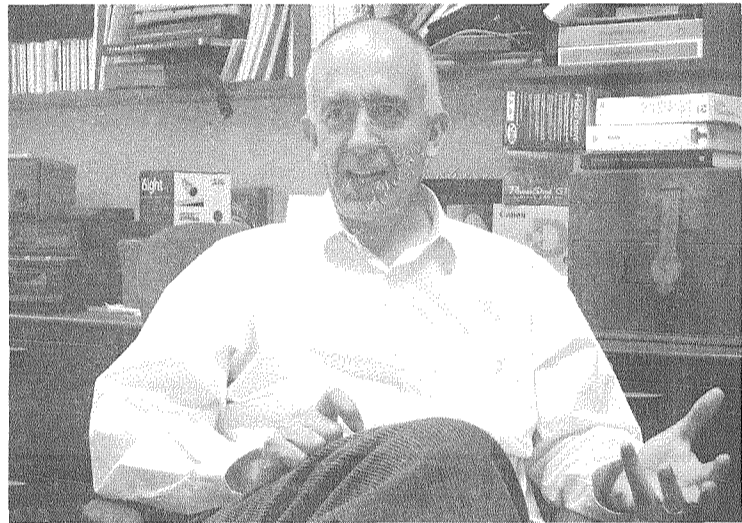
Back in his heyday, the Pulitzer Prize-winning 25-year L.A. Times entertainment writer once named the nation's best television critic saved his seasonal swipes for shows like "L.A. Law" and "Built to Last"

and a President whose post-Sept. 11 TV appearances he thought boyish.

But in retirement, Rosenberg's setting his sights on some of the larger problems facing television. Problems like ethics. Honesty. An audience hungry for fear. Esurient executives, eager to provide. "It's like a monster," he laughed. "You have to keep on feeding it. And after awhile, if you report on a rumor long enough, it takes on a life of its

own." Last Thursday night, the nationally published commentator doled out a battery of criticisms, from broader critiques of national network news down to specific syndromes of a ratings-driven culture in the local market, before first a small group of student writers in Steele House and later a Beckman audience of local residents, students

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L. Tran/The California Tech

As head of the Institute Arts Committee, Professor Pietro Perona has proposed an Artist in Residence using a portion of the MHF.

## Admissions Relocation Proposed For Friendlier, More Accessible Location

By K. SZWAYKOWSKA

As many have already heard, the Undergraduate Admissions Office is leaving its top-floor location in the Center for Student Services (hereafter referred to as CSS) and moving just down the street into what is now the MOSH (Master of Student Houses) residence, Steele House.

The move was proposed to give the Admissions office more room for the increased number of applications that it has been handling and to give greater visibility to the Office. Everyone involved with the move agrees that altogether, it's a good idea.

But in particular, what changes can we expect to see when the move is completed by winter term of this year? The answers to this question fall into three categories.

First of all, there is the category of least direct impact to current Caltech students: the accessibility of the Admissions Office to prospective undergraduates. According to Daniel Langdale, Interim Director of Admissions, who voted in favor of the move, the office's present location is "far off the beaten track".

As he explains, it is difficult to reach the office, because the elevators are slow and the outside stairs leading up to the third floor are dif-

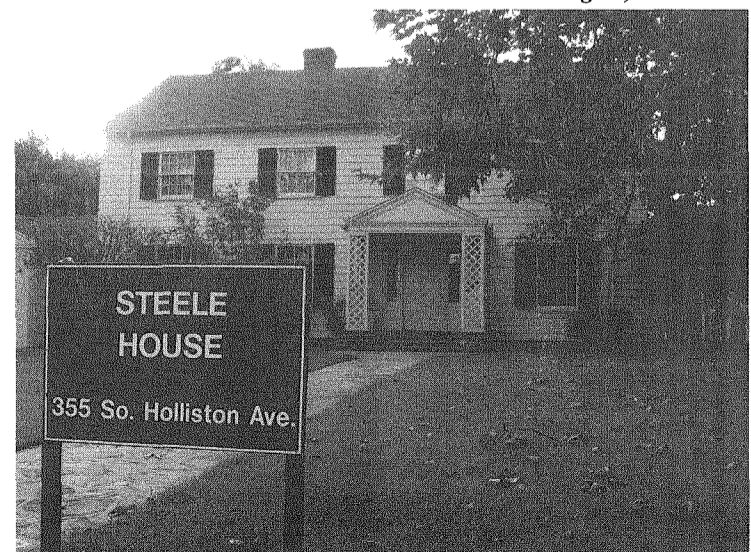
icult for visitors to find. In addition to these annoyances, there is no-one in the reception desk in the downstairs of the CSS to receive visitors and help them feel comfortable on their first arrival at Caltech.

All this is going to change when the office is moved to the more "accommodating and comfortable" location at Steele House. There, the first floor will house Daniel Langdale's office and a large, comfortable reception area for visitors, while the second floor will be used

as office space for admissions staff. Outside, the gate house will be used as a storage facility for files.

Visitors will be greeted in the downstairs area of the House by a receptionist and will be given a tour of the campus before returning to Steele for a movie about Caltech and talks with the faculty (under the current system, the tours begin at the Public Relations Office; afterwards, visitors are taken to the Admissions Office).

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D. Korta/The California Tech

Steele House, for years belonging to the MOSH, will now become the new home of the Undergraduate Admissions Office.

## Innovation to Speed Up Computers of the Future

By ROBERT LI

In 1944, the Harvard Mark I, the world's first electronic programmable computer, could perform 1 floating operation (flop) a second. 58 years later, the NEC Earth Simulator, the fastest computer in the world, can perform at a peak rate of 40 teraflops per second, an incredible 13 orders of magnitude faster.

Last Wednesday, Dr. Thomas Sterling, a leader in the field of supercomputing, talked about the history of high-performance computing and the future of supercomputers in his Watson lecture titled "From PCs to Petaflops: The Future of Really Big Computers."

A faculty associate at Caltech's Center for Advanced Computing Research (CACR) and a senior staff scientist at JPL, Dr. Sterling has been deeply involved with the development of supercomputers and is perhaps best known for his work on "Beowulf" clusters while he was at the Goddard Space Flight Center in the early 90s.

Beowulf clusters are built by connecting large numbers of commodity PCs together in such a way that the combined performance is at a supercomputer level while the price tag is remains very small. Since their introduction in the early 90s, Beowulfs have revolutionized the way supercomputers are built and become so popular that of the 5 fastest supercomputers in the world right now, numbers 2 to 5 are

Beowulf type clusters. In the first half of his lecture, Dr. Sterling gave an overview of the history of high-performance computing and discussed its current state. Over the last decade, there has been a dramatic change in not only the speed of supercomputers but how they are being built.

In 1993, supercomputers were primarily machines made up of custom designed, high performance processors with peak performances of around 70 gigaflops. Today, these custom-designed machines are being squeezed out on both the low-performance end and the high-performance end.

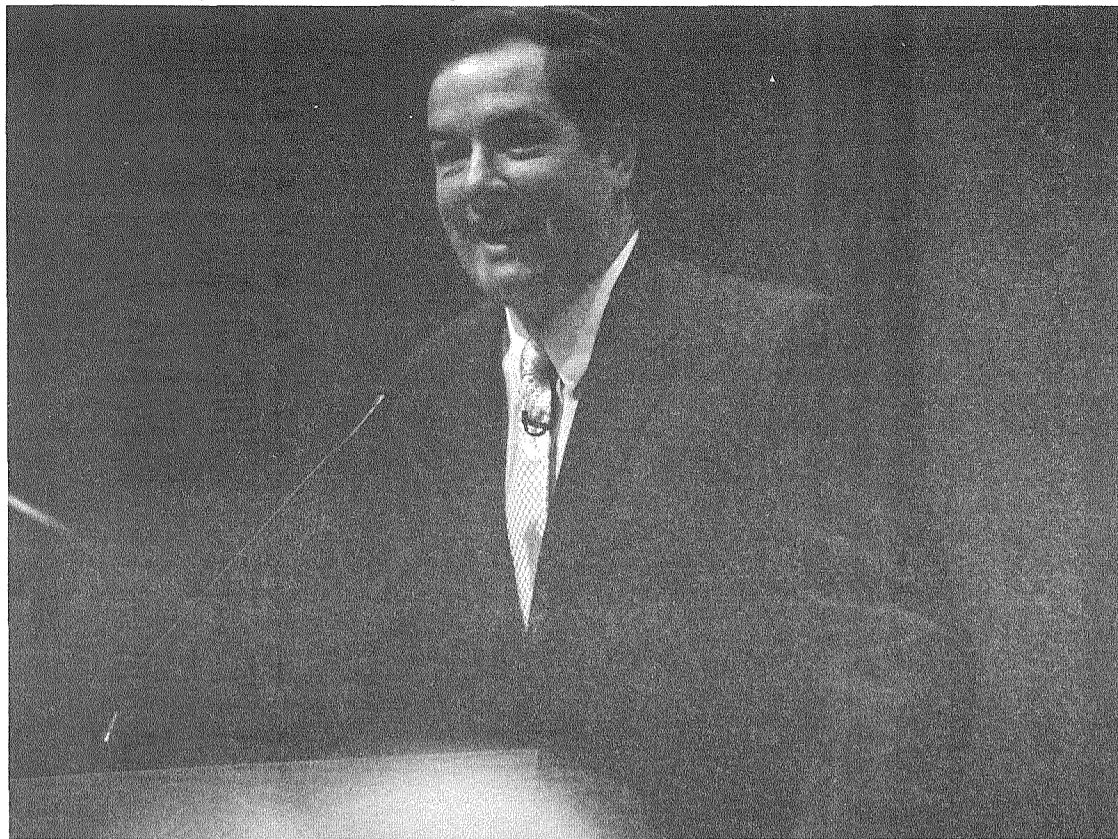
On the low end of the performance curve, the dramatic increase in the performance of commodity off-the-shelf components such as Intel processors and Ethernet networking equipment has enabled supercomputers built from hooking these commodity components together to achieve comparable performance at a much smaller cost.

On the high end, systems such as the NEC Earth Simulator have turned to specialized vector processors in order to achieve their multi-teraflop performance. The current fastest supercomputer, the NEC Earth Simulator, is able to achieve 40 teraflops peak performance and 35 teraflops average performance.

Although the performance of supercomputers has improved 3 orders of magnitude in the last decade, Dr. Sterling believes that this

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## Author Presents Research of Kennedy Family History; Examines Behaviors



Author of the critically acclaimed *Dr. Spock: An American Life* and reporter for *New York Newday* Thomas Maier presented his latest book in Beckman Institute Auditorium Tuesday. The *Kennedys: America's Emerald Kings* contains an analysis of the family's political and personal choices starting from Patrick Kennedy's 1848 arrival in Boston.

## Advances in Women's Opportunities Outlined by Former SWE President

By MEGAN GREENFIELD and IRAM PARVEEN BILAL

Past National President of SWE speaks to Caltech SWE student section By Megan Greenfield and Iram Parveen Bilal

On Thursday, November 6, 2003, Caltech's Society of Women Engineers (SWE) student section had its first general meeting for the fiscal year 2003-04. The main highlight of the meeting was the speaker, Roberta Gleiter. Ms. Gleiter is currently a Project Engineer/Technical Manager at The Aerospace Corporation in Los Angeles. She is responsible for spacecraft engineering projects on the SBIRS High satellite program. She received an Aerospace Group Achievement Award for her work on DoD/NASA hardware contracts.

Some highlights of her involvement are that she represented U.S. women engineers at an International Conference of Women Engineers and Scientists in Tokyo, Japan and testified before a Congressional Commission about women in engineering.

Ms. Gleiter has been invited by the White House as well as the National Academy of Engineering to discuss issues related to women in the workplace. She was FY 99-00 Vice Chair of the American Association of Engineering Societies and FY 00 National Engineering Exploring Steering Committee (Boy Scouts of America). In addition, she has served the National Science Foundation both on a Federal Advisory Committee and as a panelist evaluating engineering research grant proposals.

She was a participant in the Summit on Women in Engineering in Washington, D.C. and is frequently a keynote speaker for various conferences and organizations such as ASME.

As far as SWE is concerned, Ms. Gleiter has served on the Society of Women Engineers in many capacities from President of the local Los Angeles Section and Director of the Region B, Caltech's SWE region, up to national Awards & Recognition Chair, national Vice President of Student Services and

finally national President of the Society itself.

During her speech, Ms Gleiter not only emphasized the benefits of having a society where women feel the unity and encouragement of being in a profession that is highly dominated by men, but also spoke about the key characteristics required in becoming a leader as a student and its benefits in industry, academia or future careers in general.

She highlighted the importance of having a growing leadership spectrum in the section and hence, encouraged freshman and sophomores present at the meeting to take up responsibility within the society on a school, regional or even national level so that their time for leadership training is stretched up till the time they graduate.

She also related some interesting stories of how, over the years, she has seen tremendous improvement in the attitudes towards women in engineering and she claimed, that we are lucky to be in this current era especially when we compare to how it was, even just four decades back-when she was offered a librarian's job with her engineering degree, just because there was nothing known as a "woman engineer."

Agreeing with her on leadership issues, the Executive Committee of Caltech SWE pointed out how it was relatively easy to get a leadership role at a school like Caltech where the size of the student section was so small.

They pointed out that there were both advantages and disadvantages to having a small section. The advantages include having a greater probability of getting opportunities to lead and obtain awards because of the small numbers, whereas the leading disadvantage was the lack of momentum and numbers in the group.

At other schools, like Arizona State University and Cal-Poly San Luis Obispo in our region, the Sonora Region, the numbers of women involved are so great that there is always energy and excitement whereas at Caltech, even though the Ex-Comm does the same amount of basic work, the

numbers of members showing up can get discouraging at times.

Ann Leu, '05, a member of Caltech SWE, commented on the lack of enthusiasm and attendance, "I feel like we need more unity in Caltech's female community. Sometimes because there are so many boys at Caltech, they just naturally dominate. Girls should take advantage of organizations like SWE to network and come together and utilize the energy and encouragement generated by huge numbers of women who have the same aspirations and goals as everybody else in the group."

The Society of Women Engineers was formed in 1950. It has over 17,000 members and is continuing to grow. The three leading points on its mission statement are firstly, to stimulate women to achieve full potential in careers as engineers and leaders, secondly, to expand the image of the engineering profession as a positive force in improving the quality of life, and thirdly, to demonstrate the value of diversity.



Courtesy of [www.swe.saint-louis.mo.us](http://www.swe.saint-louis.mo.us)  
Roberta Gleiter, center, spoke at the first Caltech SWE meeting of the year.

### CALTECH CONVENTIONAL WISDOM WATCH



**Caltech Sports:** Caltech Men's Soccer posts exciting win against rival Whittier. Victory streak ends when they put their uniforms back on.



**Admissions Move:** The Office of Admission takes over Steele House. Class of '08 expected to be less ductile, more malleable than predecessors.



**Matrix Revolutions:** Final installment better than rat mix, but not much else. Brothers W mix art with tar; fans trim axes.

## Rosenberg Targets Lack Of Reporters' Discretion

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and faculty.

Throughout, Rosenberg's criticisms of television centered on what he called "three big lies": first, that violent crime is society's biggest problem; second, that "we should be especially fearful of people of color and Hispanics"; and lastly, ethnocentrism, the idea that "only the United States matters."

Along with a captive audience, said Rosenberg, the promulgation of these lies has led journalism to the "ethical crisis" it faces today. Illustrating his point with a montage of local news footage, he drew a contrast between newspapers, where scrutinizing editorial eyes filter out most day-to-day indecency and live, unadulterated television news—fertile ground for the three lies.

"Think of editors as like condoms," he explained. "Not totally safe, to be sure, but they do provide some protection. TV is the opposite; it gets out and impregnates and your mind."

Take Channel Two. Rosenberg showed footage of a car chase earlier this year, one in which a pursued truck ultimately burst into flames along an interstate highway. After finding his dog immolated, the man inside pulled out a shotgun, walked out onto the road and shot himself in the head—all on live TV.

Or Channel Four, which earlier this year broadcast a San Diego car chase that ended with the pursued man committing "suicide by cop"—that is, purposely pulling a gun on police after his car had run out of gas, all hope lost. After a close-up of the police firing at the man, the best the newscaster could do was to implore parents in the audience to "act responsibly."

"It's like *Animal Farm*," said Rosenberg. "The pigs have become the owners." The antidote? "Watch critically, watch skeptically. Tell them about it in letters and that's the best way to effect change." It was an idea that resonated with a Caltech community often dismayed with media coverage.

"I think his point about reading and watching news critically is a fundamental one," offered Humanities Professor Catherine Jurca. Unlike other schools, she explained, Caltech offers no courses dealing with media ethics, so Rosenberg's message commands particular attention among students.

Indeed, students posed a steady stream of "What can I do?" queries in the question-and-answer period after the talk. But besides the "what," Rosenberg zeroed in on the "why," laying the bulk of the blame on the business. The Nielsens and the Arbitrons of the world reward newscasters for entertainment without punishing them for indecency. As Rosenberg put it, "unless you grab them right away, they're off somewhere else."

Even beyond its response to market forces, however, Rosenberg also criticized the business for aggressive self-promotion. He showed a cut of a CBS morning show in

which CBS's Thursday-night television dominance passed for the major story of the day. He showed a Channel Two interview of a family whose son had been murdered; conveniently, the mother and father were wearing Channel Two T-shirts.

"These are news stories manufactured for cross-promotion," held Rosenberg. "That's just deceptive. And the potential for deception with journalists working for large corporations is enormous. The line between opinion and news is blurrier and blurrier."

In cable news in particular, he added, personalities have long dominated substance. "I don't congratulate my colleagues in my reviews," he mused. "Why do you hear 'Good work, Joe' all the time from TV anchors?" And finally, there's an ever more-emboldened pack of journalists with ever more technology at their disposal.

Rosenberg recounted an experience covering a murder in which he saw a cameraman moving his equipment over the victim's coffin for a better shot of the mother grieving. "One of my pet peeves is how we wound people," he said.

To this end, Rosenberg also pinned live television's thirst for constant news to a stream of accused innocents like Richard Jewell, the former Olympic Park bombing suspect who has since sued CNN for promoting the accusations.

The net result of all this TV madness? "We've become a more and more fearful society and a more and more conservative society," maintained Rosenberg. "It has broad ramifications in the laws we pass, in the way we live our lives."

It was a sentiment that resonated with students of all stripes, even those who disagreed with Rosenberg's interspersed left-of-center stands. "He was a great speaker for today's polarized political climate," praised Chris Tatum, a conservative PCC student. "I think it was great for his comments to come out and encourage criticism of the media."

After all, it shouldn't take any political stance, let alone 25 years of reporting or a Pulitzer Prize, to discern what's right and what's wrong. "Sure I can shove a camera in your face when you're grieving the death of a loved one," said Rosenberg. "Sure I can twist, manipulate, do whatever I please to what you see and hear—but is it right?"

### The California Tech

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## Continuing the Quest for Good Faculty Relations

By TOM FLETCHER

### Committee Reporting and Transparency (again)

By the time you read this (hopefully), the committee reporting mechanisms should be in full swing. I serve as the alternate on the library committee, and at last week's first meeting of the year of the committee, I took the minutes/summary of the meeting. After getting them approved by the chair (a back-and-forth process that took about four days), they were ready for public review. We are still working on getting the donut website set-up for those of you who are curious to see them.

To help committee representatives do their job, I've emailed out the summary from the meeting I went to so people start to get an idea of what I hope they will do. I'm very pleased to report that some reports have already started coming in from various committees, and the student body may actually have more information than it has ever had before!

Now, I just want to close by reminding you why this matters. Two years ago, a sit-in was held on the Olive Walk at lunch to protest administration decisions on health care that students did not appreciate. The students got the administration's attention and things were changed back. This was a success, but with a high price: relations across campus were strained and money was wasted switching contracts back and forth. The truth is, these decisions to change the health insurance policy were made in a student-faculty committee, but the student voice at the meeting was mostly quiet, delinquent, or unformed.

The idea behind this resolution is to nip these issues in the bud, before they blow up on campus. The students also gain more influence because we can come to the table like participating adults, and not resort to desperation tactics like a sit-in. I hope that everyone understands the importance of trying to make this cultural change and does their part to see it happen. I for one will appreciate it greatly.

### Whom I Met With This Week

My meeting with Margo Marshak was relatively uneventful, as it has been for a few weeks. Some may ask why I continue to go to them and report on them. Well, first, it is important to keep lines of communication open and used. Straight from PS 12: trust only occurs in

repeated games where payoffs farther down the line are increased by cooperation. If it still doesn't make sense, take the class next term (registration should begin soon). As for the second, keeping you informed of my actions allows you to influence them and check on what I am doing.

### Fireside Chat

I also met with Dan Langdale and impressed upon him the importance of lengthening Pre-Frosh Weekend back to four days. We discussed ways to do this for an hour, and he will do his best to pay for fewer fly-outs, find ways to skimp, or get funding from other parts of campus to make the full event possible. I am hopeful that the nightmare of a shortened Pre-Frosh Weekend won't happen again. Additionally, if you want to unofficially host "off-season" pre-frosh for a day or so, let me know.

Today is also November's Faculty Board meeting. If you have any concerns you want raised, please tell me pronto. The agenda for the meeting is posted at [oof.caltech.edu](http://oof.caltech.edu). Galen and my guest this month is Jeremy Pitts, owing to the fact that the Board will be discussing funding for rebuilding the houses. If you want to go to a future meeting as ASCIT's guest observer, please let me know.

### Revolutions

I hope you all enjoyed *The Matrix* this weekend. I would like to thank our new social director Abe Fetterman for doing an amazing job setting that up on short notice, and especially thank Housing and Campus Life for making the event possible.

On a revolutionary note, I spent the weekend at the regional Mellon Scholar Conference in Yakima, Washington. I'm sure that while there I learned a great many things to write about for next week. Expect to hear about it soon!

Lastly, I encourage you all to attend a screening of *Nat Turner: A Troublesome Property* hosted by Prof. Robert Rosenstone at 7:30 on Tuesday night in the Broad auditorium. To RSVP, email [bjones@its.caltech.edu](mailto:bjones@its.caltech.edu). This re-examination of one of American history's most notorious and debated figures should be interesting!

Peace out Caltech,  
Tom Fletcher

PS: Hope midterms went well! For seniors, don't forget Drop Day is coming up (I know I'd better not!).

## GALCIT Celebrates 75 Years With Talks, Tours

Dear GALCIT Alumni and Friends of GALCIT,

We are formally marking our 75th Anniversary this year, and we hope you will come join us for the celebration Friday, November 14 - Saturday, November 15, 2003!

We have planned two days of events—presentations, tours, panel discussions, social gatherings—capped with a Gala Celebration Dinner at the Athenaeum on Saturday evening featuring Paul Bevilaqua (Lockheed Martin Aeronautics Company, Advanced Development Projects) as the guest speaker. But don't miss Friday's festivities, including an informal dinner particularly for alumni to catch up with each other, and a special fluid mechanics seminar at 4 p.m. There will also be a companion's program on Saturday; there are a limited number of spaces left for the Getty Museum trip.

Scheduled speakers on Saturday's program include:

Brian Cantwell (PhD '76)  
Petros Koumoutsakos (PhD '92)  
Stelios Kyriakides (PhD '80)  
Hans Mark  
Raul Radovitzky (PhD '98)  
On Saturday afternoon, there will

be a panel discussion with Arthur Bryson (PhD '51), Sebastien Candel (PhD '72), Yuan-Cheng (Bert) Fung\* (PhD '48), Paul MacCready\* (PhD '52), Roddam Narasimha\* (PhD '61), Tom Tyson (PhD '67), and Max Williams\* (PhD '50).

There will also be a special satellite symposium on Friday the 14th dedicated to Contemporary Research in Solid and Structural Mechanics, hosted by Professor G. Ravichandran, and featuring L. Catherine Brinson (PhD '90), Weinong Chen (PhD '95), Xiaomin Deng (PhD '90), Pradeep Guduru (PhD '01), Gilbert Hegemier (PhD '64), Sridhar Krishnaswamy (PhD '89), Adrian Lew (PhD '03), Ken Liechti (PhD '80), Hongbing Lu (PhD '97), Jean-Francois Molinari (PhD '01), Ramarathnam Narasimhan (PhD '87), K. Ravi-Chandar (PhD '82), and Tony Waas (PhD '88).

Register for the event on-line at <http://www.galcit.caltech.edu/galcit75/index.html> to let us know if you will be attending. Looking forward to seeing you in November!

## Letter: TACIT

Dear editors,

On behalf of the cast and crew of the TACIT production of *Sweeney Todd*, I would like to thank you for the enthusiastic review of our current production. Everyone was very excited to see that we had made the front page!

I was particularly intrigued by the assertion that "Truth is, *Sweeney Todd*, as penned by C.G. Bond, is not exactly a melodrama." I came to the conclusion that the play was a melodrama based not solely upon analysis of the text, but by reading Bond's own writings about the play, which clearly indicated that he conceived it as a melodrama. And, of course, there's the cover and title page of the script itself, both of which read (albeit in only twelve-point type) "A melodrama by C.G. Bond." If your analysis that the play has a form contrary to the author's own conception, it would have been very interesting to hear how you arrived at that conclusion.

We're glad you enjoyed the show!

Regards,  
Robert Parker  
TACIT guest director for *Sweeney Todd*

## President Bush Awards Caltech's Carver Mead the National Medal of Technology

By ROBERT TINDOL

Carver Mead, a renowned inventor and longtime faculty member of the California Institute of Technology, has been named by President George W. Bush as a recipient of the National Medal of Technology. The announcement was made by the White House today.

Mead, who is the Gordon and Betty Moore Professor of Engineering and Applied Science, Emeritus, at Caltech, is known by the high-tech community for many contributions in microelectronics and information technology. His major innovations include pioneering work on the very large-scale integration (VLSI) design for complex circuitry at the microscopic level; and an amplifying device known as the high electron mobility transistor (HEMT), used in microwave communications that is also an integral component of the Internet. He has also been a pioneer in computer animation, microchip design, neuromorphic electronic systems, and other computer interfaces.

His laboratory led an effort to create silicon models of specific areas of the nervous system. Early experiments have shown that the elementary operations of the nervous system can be emulated by analog circuits for the creation of novel devices.

In short, his work is aimed at tech-

nologies that will eventually result in human-machine interfaces. The devices his group has experimented on in the past include a cochlear chip, which is modeled after human hearing, as well as devices modeled after vision and learning.

A graduate of Caltech, Mead has been a member of the faculty for 45 years. He holds more than 50 U.S. patents, and has written more than 100 scientific publications.

Mead was presented the award "for pioneering contributions to the microelectronics field, that include spearheading the development of tools and techniques for modern integrated-circuit design, laying the foundation for fabless semiconductor companies, catalyzing the electronic-design automation field, training generations of engineers that have made the United States the world leader in microelectronics technology, and founding more than 20 companies including Actel Corporation, Silicon Compilers, Synaptics, and Sonic Innovations," according to the White House statement.

In announcing the award, the White House also cited the National Medal of Technology for its recognition of individuals and organizations that "embody the spirit of American innovation and have advanced the nation's global competitiveness. Their groundbreaking contributions

commercialize technologies, create jobs, improve productivity and stimulate the nation's growth and development."

The award was established by Congress in 1980, and complements the older National Medal of Science. The National Medal of Technology is administered by the Department of Commerce. To date, there have been 146 recipients of the honor, 12 medals having gone to Caltech faculty, alumni, and trustees.



courtesy of [www.cs.caltech.edu](http://www.cs.caltech.edu)

Professor Mead was awarded the National Medal of Technology for his contributions in microelectronics and information technology.

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# Fletcher: A Poor Model for Student Leadership

By JASON SCHADEWALD

Tossing around useless criticisms seems to be gaining popularity in *The Tech* lately. I'll admit right off that I am no stranger to venting scathing, unproductive criticism verbally or in spam-email form to the entire BoD, especially when the criticism is directed at Tom Fletcher. In this article, however, I will refrain from that language in order to present a more informative case. I would like to stress that I am speaking here as a member of the Caltech community and not as the Rud-dock House President or a member of the IHC. Herein lies my personal opinion and is not to be taken as representative of any organization of which I am a part.

First, I would like to indicate the irony of the response by Nick Rupprecht '05 et al to Joe Wasem's letter

to the editors two weeks ago. Perhaps this is what the authors were attempting to achieve, but it seems that phrases such as "[Wasem] is an arrogant, self-absorbed human being that has little to no real ability for commentary" is precisely the language at which the authors took offense. While they may have been paraphrasing Wasem's prior letter, this is no excuse for using the same language in the same malicious manner purported to be "neither inspired nor informed."

One line in particular, referring to Wasem's wish to "waste space in the Tech," is a point of interest to me. Regardless of what anyone may think of Wasem's letter, he does have an explicit right to voice his opinion. Personally, I found his letter to be quite entertaining and one of the most worthwhile things I've seen in *The Tech* next to Robert Kern's article on leadership at the end of last year and the Crippling Depression comic strip.

Further, the simple fact that Wasem's article generated a response is indicative that it was indeed worthwhile, although perhaps misdirected depending upon your personal opinion. What scares me about his letter is that it may signal a much worse state of our student government. It could be a signal of hopelessness on the part of some of the students with respect

to their opinions being heard. If the expected gain from writing an educated and elaborate letter were considerably low (as I am currently postulating), then Wasem's best choice is to publicly vent frustration in an attempt to gain attention.

An interesting question is how many of you asked Joe Wasem why he wrote his letter?

My theory, that he feels hopeless about the current ASCIT BoD, is largely based upon the fact that Joe is my friend, and we think alike.

*"Personally, I found his [Wasem's] letter to be quite entertaining and one of the most worthwhile things I've seen in The Tech next to...the Crippling Depression comic strip."*

In my professional dealings with the BoD, I have been shot down time and again.

One time, Fletcher made specific reference to the fact that I represent roughly one-seventh of the student population in order to disregard my opinion. Even if you believe that to be an acceptable act for

an ASCIT President, you cannot ignore the fact that three other house presidents' opinions were either disregarded or subject to token appeasing gestures rather than substantial change. Tom Fletcher does not listen. He hears, and then he brushes aside those with whom he disagrees. It is quite an irony that the very person advocating for student opinions to be heard by the administration is instead representing his own opinions above the rest.

I don't know how many times I have heard Margo Marshak attribute to Fletcher a student opinion that was completely out of line with anything I have heard to date. I am enraged that a person in his position could so easily belittle student opinions. I am disgusted that the only way he has ever demonstrated involvement is by taking control. I am shocked that he could skip out on an event at which the ASCIT President was to be a key speaker, and I am not at all surprised that, during a presentation he was giving to the Alumni Board, one board member asked, "Is he really that full of himself?"

If I could change Fletcher, I would make him show some respect and deflate his ego.

Comments or questions? Email: [jrs@its.caltech.edu](mailto:jrs@its.caltech.edu)



D. Korta/The California Tech  
Tom Fletcher, pictured here near the beginning of his term as ASCIT President, has recently come under a lot of fire for his leadership policies and for his weekly Fireside Chats in *The Tech*.

# Youth Voting: Fun With Numbers

By DYLAN NIEMAN

This past Tuesday was election day and here in Pasadena that meant very little. This was an off year election, and after last month's Arnold debacle it was probably best that we had no outlet for our political muscle flexing. High from the endorphin rush of hoisting an action hero-cum-political action figure into the governor's mansion, or maybe just woozy from breathing wildfire smoke a little too long, Californians enjoyed a much needed rest this Tuesday. Nobody went to the polls except perhaps for the handful of confused senior citizens who saw election day on their calendars and dutifully marched off in hopes of scrutinizing a punch card, or staring blankly at a touch screen.

That's okay, in a year we'll all have the chance to vote. Well, not all of us. Only citizens of the United States eighteen years or older who haven't been convicted of a felony will have that privilege. So, if you're thinking of doing anything exceptionally bad in the next year, and risking potential arrest and imprisonment, watch out, you might lose the opportunity to submit your ballot. But that's okay, you probably don't vote anyway. In the last presidential election only 29% of those age 18-24 actually voted.

Wait, that must be wrong. Twenty-nine percent? That was the number that CNN kept putting across the bottom of the screen while political pundits discussed Howard Dean's appeal to youth voters versus Gephardt and Kerry's more traditional labor strategies. Twenty-nine percent. Can that be right?

Well, it depends whose numbers you look at. According to US census numbers (downloadable from [www.census.gov](http://www.census.gov)), that number was more like 32%. That's a little bit more respectable. Thirty-two percent of 18-24 year olds voted. But wait, that includes all of those felons and foreigners. Let's not have them bringing down our youth's civic pride score. There were roughly 26.7 million 18-24 year olds in this country in the year 2000, about 2.7 million of which were non-citizens. If you remove them from the voting population, then the number jumps up to 36%.

What about the felons? Well, felons are in kind of a funny situation. Prison inmates may not vote in 48 states, and most states bar non-incarcerated felons (i.e. parolees) from voting. This disenfranchisement is unique to the United States. In Britain, for instance, once a person is released from prison they are eligible to vote, and in Ireland, you can vote while in jail—gotta love

the Irish. In fairness to Maine and Vermont, prisoners in those states are also allowed to vote.

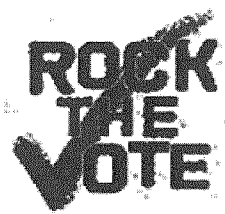
Back to the question at hand: how many of those 18-24 year olds were actually eligible to vote?

It seems that roughly 4.7 million Americans were disenfranchised due to felony convictions. Let's presume all of those felons were age 18-24. Of course they weren't, but

we're trying to bolster our numbers here. If that were the case, the percentage of eligible voters, age 18-24 who showed up for the polls in the last presidential election: 45%.

Hey, that's not too bad, except when you consider that out of the total population, roughly 61% of those eligible voted. And when you take into account the fact that not all felons are under the age of 25, that 45% number drops quickly. If fully half of the disenfranchised felons are under 25, the 18-24 voter turnout is more like 40%. Slightly more depressing, if we ignore the felons for a moment and just look at smaller age ranges, only 29% of 18 year olds voter, 30.6% of 18-19 year olds, 31.3% of 18-20 year olds, and 32.5% of those 21 and younger exercised their voting rights.

So what does this mean, on a national scale? Well, let's say that young people voted with about the same frequency as the general population: about 61%. For the 23.9 million potential young voters, this comes out to about 14.6 million votes. Now, 8.6 million young people actually did vote, so we're talking about a swing of about 6 million votes, or about 5.4% of the total national vote. For reference, there were 15 states and 161 electoral votes for which the margin of victory was less than that 5%. Now, of course those 6 million votes would have been distributed among



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## Youth Vote COALITION

courtesy of <http://www.youthvote.org>

Coalitions such as Rock the Vote, Working for Change and the Youth Vote Coalition are working to educate youth about the importance of voting and

the various candidates—who knows, maybe they all would have voted for Nader or Buchanan—but it is nonetheless disconcerting to think that the margin of victory in the last presidential election was less than the differential apathy of college age Americans.

Why are young Americans less likely to vote than their elders? Is it that political campaigns don't do enough to target young voters? Maybe, but most programs and candidates that have gone after the youth demographic in the past have failed to increase voter turnout. The notable exception to this was Bill Clinton's 1992 campaign which drew almost 43% of eligible 18-24 year olds to the polls, the highest turnout youth since 1972 when 18 year olds could first vote in a nation election.

[For general information on youth voting, take a look at the Youth Vote Coalition's Youth Vote Fact Sheet (<http://www.youthvote.org/info/factsheet.htm>). The census numbers are available from the U.S. Census web site (<http://www.census.gov/population/www/socdemo/voting.html>). And for more on non-incarcerated felon voting and how it would have effected past elections, see Uggen and Manza's December 2002 article in the American Sociological Review (<http://www.asanet.org/pubs/uggen.pdf>).]

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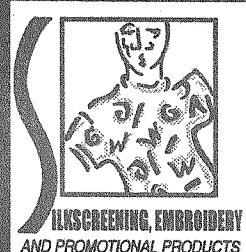
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# Oetzi the Iceman Causes Uproar Then And Now

## Dean Revel Examines the Wonders of Technology in Unlocking the Past

By JEAN-PAUL REVEL

I recently came across a piece of news from very very long ago, which is so astounding that I thought I would share it with you, just in case you had not heard the story. It seems that, pursuant to a lawsuit they filed, Erika and Helmut Simon were officially declared the discoverers of Oetzi the iceman.

Oetzi is the fellow who was found in 1971 sticking out of the ice at about 10,000 feet up in the Tyrolean Alps. There followed an official investigation (was he a murder victim or a lost climber?) but after a few days and finding a copper headed ax next to him it became clear that he was an archaeological find. His mummified corpse was flown down the mountain and placed in the cold room at the medical school in Innsbruck (Austria). There followed a tug of war over who "owned" the body, the Austrians or the Italians. The Italians won by not quite one hundred meters and so the body is now stored in a small museum in Bolzano (Italy). As his finders, the Simons are apparently entitled to a reward equaling 25% of his

value...Value? Monetary value? I guess you have to pay an entrance fee to the Museum, and I understand the Simons want a plaque commemorating their discovery. Tacky, I say.

Carbon dating tells us Oetzi lived some 5200 years ago. He was tattooed, measures 5 ft 3 from head to toe, and by examining the structure of his bones (bones get remodeled in a characteristic pattern during life) it was found to have died when he was somewhere between 40 and 50 years old. Actually a ripe old age for people of that era. He had shoes with a stuffing of straw to keep the feet warm, underwear and leggings, a cape of vegetal fibers and a cap of bear fur. He had a long stick, a copper ax, a flint dagger and a sheath for it and a quiver with several arrows, some of which were broken. He also had a birch bark container which seems to have served to carry embers, and a small bag attached to his belt with fire making materials and other implements. Some of these objects had been carefully placed on a small ledge near where the body was found.

At first Oetzi was thought to be a

herder who was caught in bad weather while chasing an errant sheep, or may be he was going over the mountains to visit family living on the other side, when an early fall storm did him in. Actually pollen grains recovered from his digestive tract are clearly from trees blooming in late spring-early summer. Pollen gets ingested by drinking water from open air springs or streams, so that says Oetzi was going up the mountain in the spring, not the fall. The pollen also indicates that he came from Northern Italy, not Southern Austria, assuming today's distribution of the plants from which the pollen originated, has remained the same since Neolithic times.

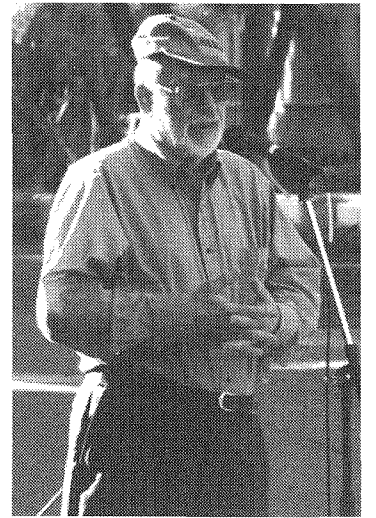
By comparing the Strontium and Lead isotopes in Oetzi's dental enamel (formed when his teeth developed in infancy), to the composition of the rocks in the general area, a group of scientists from Australia, Switzerland and the US arrived at the conclusion that there is a close match between the Pb/Sr ratios of his enamel and that found in the rocks near the present day village of Feldthurns. A Menhir of copper age near by suggests that people were in the area at the time. Bones, I have said, are remodeled all the time. As a result the mineral content of Oetzi's bones reflects the mineral composition of the environment where he spent his latter years. Of course that only works if the food he ate was grown locally, as likely in the absence of supermarkets and an Interstate system.

To pinpoint a unique location the geology needs to be highly varied as it is in that part of the Alps. Comparing the ratio of Strontium and Lead in his bones to that of the different types of rock in the same general region on the one hand and noting the O18 to O16 ratio (the heavier isotope drops out first as rain travels from the Atlantic towards the Alps and also with altitude; while rain from the south, the

Mediterranean has a shorter distance to go, and so is richer in O18) suggests the adult Oetzi lived not where he grew up, but some 60 miles east, in the Etsch valley. Tiny pieces of mica were found associated with the food he had consumed (presumably derived from local stones used to grind up cereals) also support a "home" in the Etsch Valley. A DNA analysis of the scant stomach and intestinal contents reveal that his last meal was composed of Red Deer meat and possibly cereals. Before that he had had a meal of Ibex, a mountain goat, and different species of leafy plants (the idea of having salad with each meal seems to be an old one) and cereals as well.

The body was examined multiple times with more and more sophisticated techniques, and it became clear that Oetzi suffered from a lot of illnesses. He had worms, there were signs of osteoarthritis, as well as indication of arteriosclerosis. The local radiologists thought they saw some freshly broken ribs. Further studies showed that was a mistake, but revealed a dark shadow in the left shoulder of the body, which turns out to be an arrowhead which had been missed. In fact there was a small hole in the skin (and also on the cape) where the arrow had penetrated. Oetzi had been shot in the back!

And then other things were discovered. One of the alpine guides who came to the scene after the body had been discovered remembered that when he first saw Oetzi there was an object in his right hand. A movie shot at the time actually shows one of the "rescue" workers reaching for and throwing something away, which when zoomed on turned out to be a flint dagger with a wooden handle. The dagger was brought down the mountain with Oetzi and his other possessions. A recent investigation of the palm of the right-hand (which had held the dagger) revealed a deep gash. The shepherd sure seems



to have been in a fight.

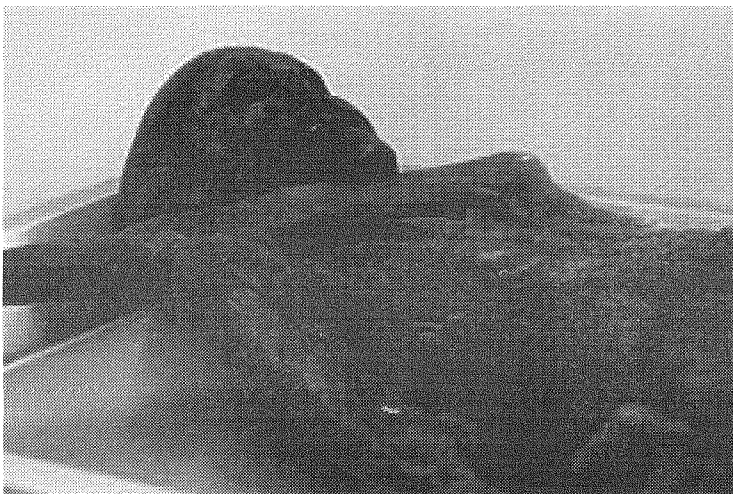
A filmmaker working on a documentary suggested one should look for blood traces on the iceman's body, tools and clothing. DNA analysis revealed DNA (from blood?) from at least 4 different people. Blood from someone other than Oetzi was on the knife blade, blood from two other people was found on one arrow, and one more person bled on Oetzi's cape. The blood found on the arrow can be interpreted to mean that Oetzi, after he killed one assailant retrieved the arrow and used it on someone else. And maybe he carried the body of a wounded (slain?) companion (aggressor?, but that does not make too much sense) all presumably before being ambushed himself and eventually dying, perhaps from loss of blood, in that rock hollow where he stayed waiting for the Simons to show up.

What we have learned in fits and starts about what happened on that spring day 3000 B.C. is indeed amazing. Don't you think so?

A bientot.

Refs:

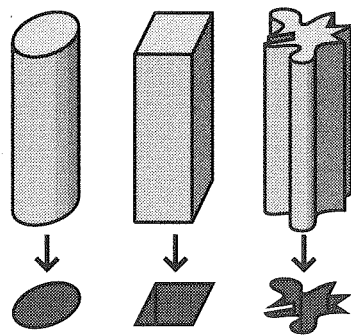
Oetzi's story is well summarized in a Science magazine "News of the Week" item (v 302, p759, 2003) and an article by Muller et al. (p 862). More is found in a Smithsonian article of Feb '03 by Bob Mc Cullen. Links to other articles on the topics can be found in "Sciscoop" ([www.sciscoop.com/story/2003/8/12/7419/29586](http://www.sciscoop.com/story/2003/8/12/7419/29586))



courtesy of [www.bris.ac.uk/Depts/Archaeology/events/iceman.html](http://www.bris.ac.uk/Depts/Archaeology/events/iceman.html)

Oetzi was found in 1971 in the Tyrolean Alps. Research since has shown that he was a shepherd murdered in the spring of 3000 B.C.

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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, please send a resume and cover letter stating your GPA and standardized test scores, broken down by section where applicable, to [oncampus@deshaw.com](mailto:oncampus@deshaw.com).

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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The **Caltech-Occidental Band** will be presenting a **free concert** directed by William Bing Friday November 14 at 8 pm in the Beckman Auditorium. It will feature one of the world's first electronic instruments—the THEREMIN featured in the movies "The Birds," "The Day the Earth Stood Still" and in music by Led Zeppelin. There will also be music by Strauss, Jaeger, Leroy Anderson, and many others... Guest conductors: Don Gross and Paul Asimow, with Roger Ballenger on the theremin and Andrew Mollner on the trumpet. Call (626) 395-4652 for more information.

**Caltech Ballroom Dance club** invites you to join us to learn the popular, flashy, sexy **American Tango!** The series of four classes taught by professional instructor, Andre Fortin, begins on Nov 6 and runs on Thursdays (except Thanksgiving) until Dec 4. Time: 7:30 - 9:00 pm, Place: Winnett Lounge, Cost: Students- \$20 for series or \$6 / class and Nonstudents- \$28 for series or \$8 / class Refreshments will be served. No experience or partner necessary!

Try **Caltech Ballroom Dance** team classes in **International Style Quickstep!** These classes will focus on form and style, in addition to learning exciting new moves. While we welcome beginners in this competitive-style class, practice outside the class is strongly recommended. This series of four classes taught by professional instructor Andre Fortin begins on Nov 6 and runs on Thursdays (except Thanksgiving) until Dec 4. Time: 9:30 - 10:30 pm, Place: Winnett Lounge, Cost: \$3-\$6 / class depending on attendance. No experience or partner necessary!

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](mailto: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 profes-

sionally-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](mailto:Kathy.Kelly@caltech.edu)). To be added to our mailing list, please e-mail [troupe@caltech.edu](mailto: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](mailto: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](mailto: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 **American Heart Association 2004 Undergraduate Student Research Program** enables promising students to explore careers in heart or stroke research. Students are assigned to cardiovascular research laboratories in California, Nevada or Utah for 10 weeks during the summer to work under the supervision of experienced scientists. Students must be enrolled full time, attend an institution in California, Nevada, or Utah or be a resident of one of those states and be a junior or senior in fall of 2004. The student must have completed a combined total of at least four semesters or six quarters of biological science, physics, or chemistry, and at least one quarter of calculus, statistics, computational methods, or computer science. Participation by women and minority candidates is encouraged. Award: \$4000

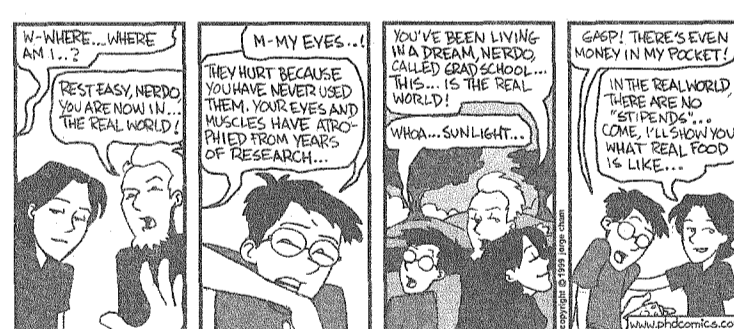
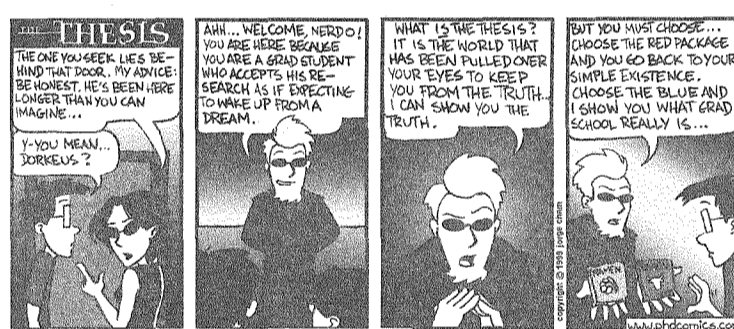
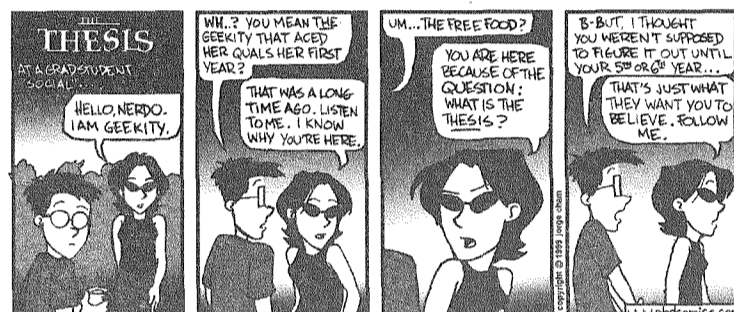
stipend for each student Term: 10 weeks to be completed between June 1 and August 21, 2004 Applications are available at [www.americanheart.org](http://www.americanheart.org). All materials must be received by February 2, 2004. For more information, email: [research@heart.org](mailto:research@heart.org)

The **San Fernando Valley Chapter of Americans United for Separation of Church and State** announces their fourth **Essay Contest** for students enrolled in Community Colleges, Colleges, and Universities in the counties of Santa Barbara, Ventura, Los Angeles, Orange, San Bernardino, and Riverside. Essays should be no more than 2500 words in length, and tell, in your own words, why it is important to you to maintain a separation of church and state. 1st Prize \$1,000 2nd Prize \$500 3rd Prize \$250. Essays must be mailed and postmarked no later than December 31, 2003. To: Church-State Essay Contest P O Box 8061 Northridge, CA 91327-8061 For more information please visit: [www.ausfv.org/essaywebpage2.htm](http://www.ausfv.org/essaywebpage2.htm).

The **Society of Exploration Geophysicists (SEG) Foundation** Scholarships are available to high school seniors planning to enter college in the next term, with above average grades, undergraduate students with above average grades, or graduate students whose studies are directed toward a career in exploration geophysics in operations, teaching or research. Applications and supporting documents must be received by March 1, 2004. Applications are available in the Financial Aid Office. For more information, see the SEG website: [www.seg.org/foundation/](http://www.seg.org/foundation/)

The **American Society of Naval Engineers** offers a scholarship program to encourage students to enter the field of naval engineering and to provide support to naval engineers seeking advanced education in the field. Scholarships of \$2,500 for undergraduate students, and \$3,500 for graduate students will be available for the 2004-2005 school year. Applications are available on the website: [www.navalengineers.org](http://www.navalengineers.org), under "Scholarships." The deadline for receipt of scholarship applications is February 15, 2004.

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.



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# Center for Excellence in Education To Sponsor Summer Research Program

By JILL PERRY

PASADENA, Calif. - Virginia-based Center for Excellence in Education (CEE) and the California Institute of Technology today announced the inauguration of the Research Science Institute (RSI), a six-week summer program for academically talented high school science students.

RSI at Caltech will encourage excellence and leadership in science and technology and further international understanding among future leaders. From June 27 to August 7, 2004, the RSI program at Caltech will bring together 35 high-achieving students—25 from the U.S. and 10 from other nations.

The program at Caltech complements the Research Science Institute at MIT, which has been collaboratively sponsored by CEE and MIT for the past 11 years. RSI, offered free of cost to students, combines classroom training and research mentorships. Considered

one of the most prestigious and competitive science programs for high school students in the nation, RSI has more than 1,400 alumni including student scholars from 46 nations.

High school students are selected based on grades, SAT scores, teacher recommendations, participation in science competitions and community service. Students' SAT scores generally range in the high 1,500s to 1,600.

RSI alumni go on to participate and win top prizes in science competitions. In 2003, alumni garnered the top prize of \$100,000 scholarship awards in both the Intel Science Talent Search and the Siemens Westinghouse Competition.

According to Joann DiGennaro, president of the Center for Excellence in Education, "A program like RSI is more essential today than ever before in the history of our nation. U.S. competitiveness in science and technology depends on strong math and science skills and

on opportunities that go beyond what is offered in a typical high school."

Commenting on the establishment of RSI-Caltech, Gayle Wilson, former first lady of California, Caltech trustee and CEE trustee says, "I am delighted at the establishment of the new Research Science Institute at Caltech. It is a testament to the success of the Center for Excellence in Education's existing programs. Now that RSI has found another home at Caltech, the Center will be able to offer its programs to more students who, though highly qualified, could not previously be accepted into the program because of space limitations."

Caltech president David Baltimore is also enthusiastic about the new program. "Caltech is proud to co-sponsor the Research Science Institute. RSI is a natural fit for us since Caltech is an institution that strongly supports and values student research. We look forward to our new partnership with the Center for Excellence in Education and the ability to serve many more young scholars."

Students can apply for RSI on line at <http://www.cee.org/rsi>. Application forms will be available starting November 15 at that site.

The Center for Excellence in Education coordinates programs for academically talented high school and college students including the RSI and the USA Biology Olympiad. It was co-founded in 1983 by the late Admiral H.G. Rickover and Joann DiGennaro, President of the Center for Excellence in Education. Luminaries such as President Jimmy Carter, Senators Joseph Lieberman and Bill Frist and former Secretary of Defense Frank Carlucci serve on the center's board.

# Trustee Launches This Year's Diversity Series

PASADENA, Calif.—Shirley M. Malcom, head of the Directorate for Education and Human Resources Programs of the American Association for the Advancement of Science (AAAS) and a leading authority on education and science literacy, will speak at the California Institute of Technology at 4 p.m. Tuesday, November 11, in the Beckman Institute auditorium.

The lecture is free and open to the public. The subject of Malcom's lecture will be "Let Nurture Take Its Course: Diversifying the Talent Pool for Science and Engineering." Her appearance at Caltech is sponsored by the Office of the President, the Office of Minority Student Education, the Women's Center and the Officers of the Faculty.

The lecture is part of the President's Lecture Series on Achieving Diversity in Science, Math and Engineering. In her position at the AAAS, Malcom oversees programs in education, activities for underrepresented groups and programs for increasing public understanding of science and technology.

She has served on the National Science Board and the President's Committee of Advisors on Science and Technology and is currently co-chair of the Gender Advisory Board of the United Nations Commission on Science and Technology for Development. She has been a Caltech trustee since 1999.

Malcom received her bachelor's degree with distinction in zoology from the University of Washington, her master's in zoology from UCLA and her doctorate

in ecology from Pennsylvania State University.

During her career she has chaired numerous national committees addressing education reform and access to scientific and technical education, careers and literacy.

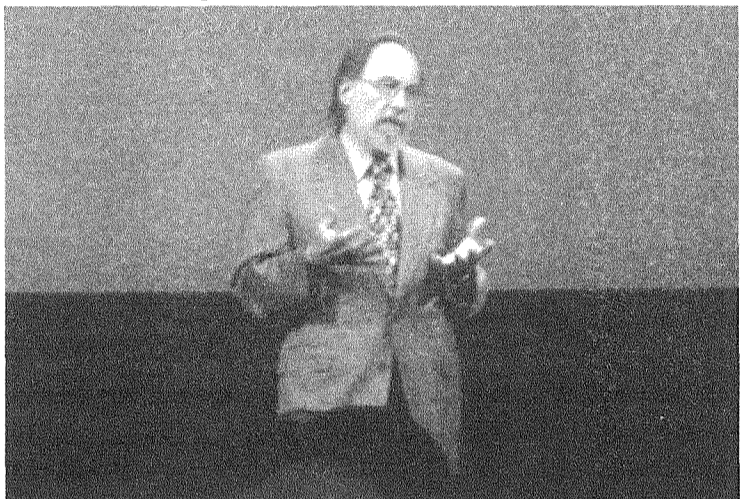
She currently sits on several boards, including the Howard Heinz Endowment; the H. John Heinz III Center for Science, Economics and the Environment; and the National Park System Advisory Board.

She is also an honorary trustee of the American Museum of Natural History, a regent of Morgan State University, a fellow of the American Academy of Arts and Sciences and the 2003 recipient of the National Academy of Sciences Public Welfare Medal.



Courtesy of [www.aaas.org](http://www.aaas.org)

**Caltech Trustee Shirley Malcom will be the year's first speaker in the President's Lecture Series on Achieving Diversity.**



L. Tran/The California Tech

**President David Baltimore announced a partnership between Caltech and the Center for Excellence in Education that will bring high school students here to do research every summer.**

# Men's Soccer Ends Losing Streak

By MIKE RUPP

## Athlete of the Week

Chris Habliston - Men's Soccer The Junior from Eugene, Oregon scored the game-winning goal against Whittier with 1:44 left in the 2nd overtime, snapping a 68 match losing streak that had stretched over four seasons. Later in the week Habliston would collect an assist on Sophomore Stuart Ward's goal against Colorado College. For the season, Habliston leads the team with 3 goals and 7 points.

going midway through the first half as he blew by the Whittier defense for his second goal on the season. Sophomore Midfielder Alexander Sutherland would later give Caltech a 2-0. After Whittier sent the match into overtime with two 2nd half goals, Habliston's game-winner off an assist by Senior Midfielder Jonathan Simon finally sealed the victory. The losing streak had dated back to a 3-2 victory over La Verne on Sept 21, 2000, and the victory was the first for second year Head Coach Rolando Uribe. The team finished the season on Wednesday.

## Cross Country

The Cross-Country teams competed this past weekend in the 2003 SCIAC Conference Championships. Lead by Sophomore Gustavo Olm, the Men's team finished in 6th place among the 8 teams participating. The Women finished 7th, and were lead by the performance of Senior Tamara Becher. The teams run next at the NCAA Regionals on November 15th.

## Men's Water Polo (8-11)

### Men's Water Polo

Caltech (8-11) .....	3
LA VERNE .....	14
CALTECH .....	10
Pomona-Pitzer .....	16

The Men's Water Polo team saw its conference record fall to 0-5 this past week, with losses to La Verne and Pomona-Pitzer. Top goal-scorer for the week was Senior Jim Rebesco with 5. The team plays its next match this Wednesday at home against Occidental.

## Fencing

The Fencing team had an excellent start to their season at the UC Irvine Invitational. Freshman Katherine Harvard went undefeated in winning the Women's Epee bracket, and Vanessa Heckman was equally impressive in coming in 3rd place in both the Women's Foil and Women's Sabre. The team plays next November 15th at UC San Diego.

## Women's Volleyball

Caltech (9-23) .....	0
POMONA-PITZER .....	3
Caltech .....	0
CHAPMAN .....	3
CALTECH .....	0
Whittier .....	3

## Week in Review

The Women's Volleyball team's season is winding down. Junior Setter Colleen Moody lead the team this week with 20 kills in 9 games for a 2.22 kill/game average and a .130 kill percentage. Moody also lead the team with 20 digs. The team had its final home match on Tuesday against Redlands.

## Men's Soccer

CALTECH (1-18) .....	3 (OT)
Whittier .....	2
CALTECH .....	0
Pomona-Pitzer .....	7
CALTECH .....	1
Colorado Colleged .....	10

## Men's Soccer (1-18)

With 1:44 left in the 2nd overtime period, Junior Defender Chris Habliston broke Caltech's 68 match losing streak with a 3-2 victory over Whittier College. Sophomore Forward Stuart Ward got the Caltech offense

# Be A Hometown Hero



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## MOSH to Move to Stylish House On California; New Look for Admissions

Continued from Page 1, Column 3

To make the office more accessible, a ramp will be built up to the Steele House porch to accommodate visitors with disabilities.

The changes are significant, as Caltech sees several thousand visitors each year (about 3100 during the time between June 2002 and June 2003), 95% of them prospective students and parents. For them, the new location will help give a better impression of Caltech.

While some of the Admissions staff were "a little surprised" when the move was proposed, most agree with Daniel Langdale that it will benefit the Admissions Office in many ways.

"I think it's a really good move," says Erica O'Neal, Associate Vice President for Student Affairs, adding that the move will give the Admissions Office the visibility it merits as the metaphorical "portal to the Institute". She says that the current location for the office was chosen so that it would be together with all other Student Affairs offices, to facilitate communication.

On the other hand, the location is not very user-friendly and Steele, she says, is a "lovely, welcoming space". Langdale jokingly adds that he looks forward to being the only Director of Admissions in the States to invite people to wear their bathing suits when they come to visit the admissions office; Steele house also has a backyard and a pool.

Of more immediate concern to Caltech students is the issue of where the MOSH will be moving when Admissions takes over Steele. For about thirty years now, Steele House has been the MOSH house, even at times when it was additionally used as office space by different departments.

Such an arrangement, however, would not be suitable now, as the job that the MOSH performs has evolved to match the large, comfortable house setting. The MOSH serves as a "liaison" between students and faculty, helping to mediate communication between the two

groups by input in different committees and social events hosted at the MOSH house.

It was an important concern during the decision process to move the Admissions Office, to determine where the MOSH residence should be moved so that the same events could continue. So, Catherine Jurca, the current Master of Student Houses, will be moving to a new house on California Blvd.-a location she says is "very warm and very charming".

The house was previously used as temporary housing for new Caltech faculty, but is currently empty. It is built in a "Craftsman" style, which according to Ms. Jurca, is one of the nicest styles indigenous to Southern California, making it a good house for public exhibition as the MOSH home is expected to be.

The living arrangements she will have there will be comparable to those at Steele House, with a private apartment on the second floor and a ground floor furnished for

public events, where she will continue to organize the popular social events like the biweekly movie showings and dinners that have been going on.

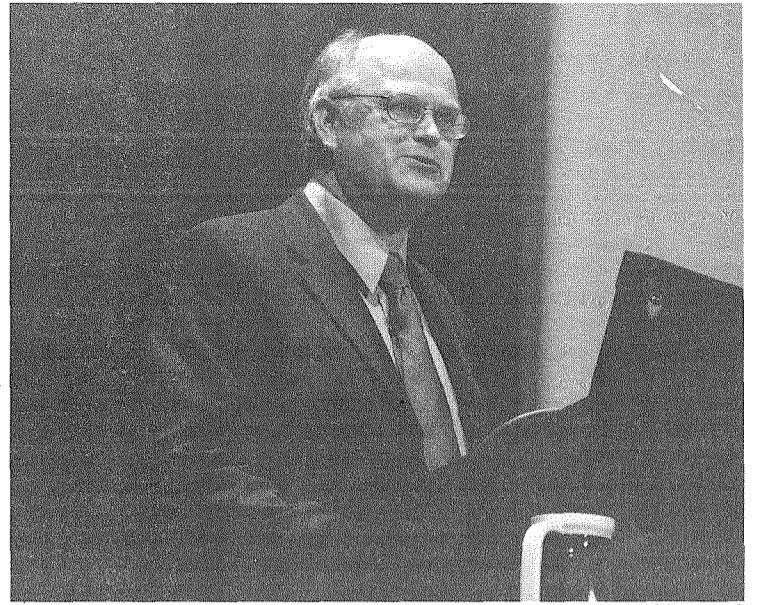
Also, the bottom floor of Steele house (except the current library, soon to be office of Dan Langdale) will be kept open for student use, as will the backyard and swimming pool-so long as students keep it, in the words of Erica O'Neal, "the warm and inviting place that we want it to be".

The third aspect of changes associated with the Admission Office's new location will be many associated moves between different offices-for example, the ITS office will move to the third-floor space which Admissions will vacate. These changes are still being worked out in detail. Overall, then, the move of the Admissions office has been a popular one with the staff and hopefully will also be welcomed by prospective as well as current students.



L. Tran/The California Tech

Interim Director of Admissions Dan Langdale looks forward to telling prospective students to bring their bathing suits when they visit.



D. Korta/The California Tech

Dr. Thomas Sterling gave a Watson Lecture on Wednesday outlining how a method for increasing computer speed.

## Sterling's DARPA Group Wants Petaflops by 2010

Continued from Page 1, Column 5

trend cannot continue without radical changes in the way we design computers. Even though Moore's Law still seems to be holding, we are running into other barriers that will prevent ever larger increases in performance using only current technology.

One major problem is known as the memory wall. Arising from the divergence in the rate of increase of CPU speed vs. memory speed, the memory wall is the problem where rate at which data is processed becomes bottlenecked by the speed with which it can be accessed from memory.

A second major concern is the decrease in efficiency of modern chips. Despite having more and more transistors, modern CPUs devote that extra capacity not to data processing logic but to on-chip memory and control logic dedicated to bringing data into the CPU faster. On an Itanium processor, for example, less than 30% of the chip die is used for actual data processing.

To achieve the same gains in performance that we've seen in the

past, Dr. Sterling believes that a radical change is needed in the way supercomputers are designed. He likened the current situation to engineers in 1903 designing the next generation of transportation.

On one hand, they could have chosen to improve the tried-and-true technology of the locomotive. On the other hand, they could have gambled on the potential of risky, unproven technology such as the automobile or the Wright Brothers' Flyer that flew in December of that year.

As history has shown, both the automobile and the airplane have far surpassed the locomotive as a means of transportation. Today, we are facing an analogous choice in designing the next generation of supercomputers.

Dr. Sterling and his colleagues have chosen to bet on the potential of revolutionary technology and have started the DARPA sponsored Hybrid Technology MultiThreaded (HTMT) project to use that technology to build the first petaflop supercomputer.

Instead of the traditional model of CPUs bottlenecked by the speed with which they can access memory, HTMT embeds processing and control logic within the memory chips themselves thus giving a huge boost in memory access speed.

The remaining logic will be dedicated purely to data processing and instead of using silicon semiconductors, the processing units will be made of superconducting niobium and be designed to process 128 different streams at a time to give a performance of 400 gigaflops per chip.

Data will be passed within the computer not electronically but using a "Data Vortex" optical system capable of transmitting trillions of bits per second. Finally, permanent storage will be handled using a high-density holographic system developed by Professor Demetri Psaltis here at Caltech. Using these components, Dr. Sterling believes that by 2010, we will see the first generation of revolutionary petaflop supercomputers.

## Committee Enthusiastic To Have Resident Artist

Continued from Page 1, Column 2

and whether they seem interested enough to stay with the program for a long amount of time. The number of participating students would depend on how many the artist can tolerate with his or her time constraints.

At this moment, however, the program is still in its infant stages. Plans for the program still need to be refined, especially in scheduling meetings between the artists and students and other time issues.

The Art Committee also still needs to select an artist, which they hope to accomplish through an interview process. Even with all the details left to clarify, Perona hopes to start the program as soon as possible, maybe by spring of 2004, even though Fall of 2004 is a safer guess, he says.

Perona admitted that he was not completely sure if the program would fit into campus life, but he said, "I feel it is the right time to try."

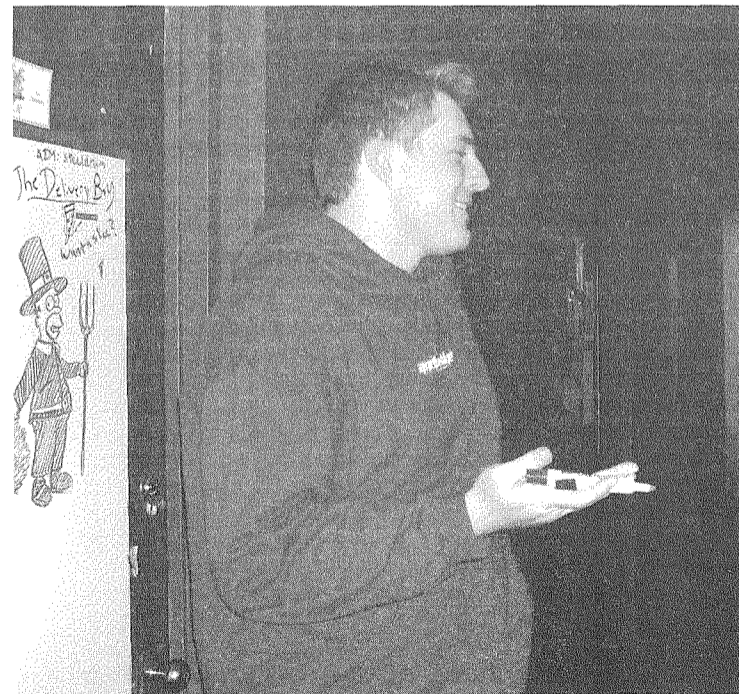
Interest in setting up a program like this first arose around two years ago, but the program was blocked by the lack of funding. Now, the Art Committee has been allocated money from the Moore-Hufstедler Fund for Enhanced Quality of Student Life to bring an artist-in-residence onto campus.

This fund, jointly created from funding by Gordon and Betty Moore and the John D. and

Catherine T. MacArthur, was donated for the purpose of providing money for initiatives which would positively affect the lives of students on campus.

ASCIT president Tom Fletcher expressed concern as to how the artist-in-residence program would improve student life, since it would be making use of this Moore-Hufstедler Fund. Perona said that a mechanism would be put in place for students to give ideas and express concerns as to how to structure the program.

A website would be created for that purpose and students are free to contact John Bender or Jacki Wilbur, both who are members of the Art Committee. Topics under debate included whether the units and grades should be associated with the program.



L. Tran/The California Tech

ASCIT President Tom Fletcher questions how well the Artist in Residence program will improve student life.

# Question of the Week

Would you meet with the Artist in Residence?

The California Tech

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