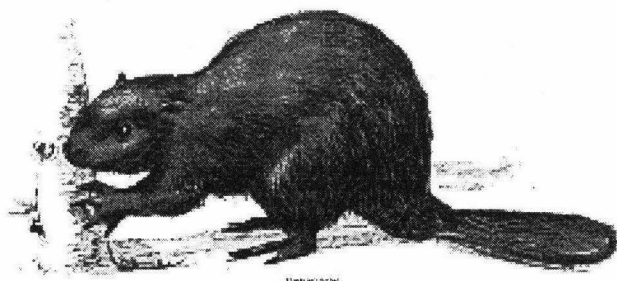


ASCIT

Long Awaited Minutes
RETURN!

see page 5



Add Day



The California Tech

VOLUME CI, NUMBER 4

PASADENA, CALIFORNIA

OCTOBER 15, 1999

MEHFIL-E-ISHRAT PRESENTS INDIAN CULTURE TO TECH

BY BASIT AHMED KHAN

One of the events held recently on campus was a show named Mehfil-E-Ishrat -- a cultural show, perhaps the first of its kind to be organized by OASIS (the Organization of Associated Students of the Indian Sub-Continent).

Since this show was the first of its kind, the audience didn't really know what to expect of OASIS' event. What ensued, however, was one of the most interesting performances the South Asian community at Caltech has had the privilege to enjoy in recent years. People in attendance started gathering at Baxter Lecture Hall (the evening's venue) much earlier than the scheduled starting time. The 150 tickets available at the reception were sold out within the first five minutes. Dinner was served to those guests who had purchased a ticket.

Though true appreciation of the performance was reserved for those familiar with the culture of the region, everyone had a chance to view this culture for themselves. The performance was based on students' perceptions of the Indian sub-continent culture. Everything, was crafted to relay a conception of the themes that pervade the region's values.

The show proceeded with Dandiya Dance - a folk dance which originates from North Western India. The performers moved in their steps quite admirably, showing off their considerable skill. The performance included both classical and modern Indian film songs. Students played the music that accompanied these lyrical songs, each demonstrating superb expertise. One item stole the bulk of the evening's applause - a short humorous sketch about an Indian man on his maiden journey from India to Caltech. The show included pieces of poetry as well, by two distinguished Urdu literary figures Iqbal and Faiz.

Last, but not least, a glamorous fashion show topped off the evening, introducing to the audience the dresses of the region.

It was an altogether enriching experience for everyone.

Zewail wins Nobel Prize

BY ERIK DILL

Tuesday, October 12, 6 AM. Dr. Ahmed Zewail got a long distance call that left him "frozen in time" as he described it. On the other end of the line was The Royal Swedish Academy of Sciences, paying him back for 20 years of frozen moments. The Academy awarded Zewail the Nobel Prize in Chemistry "For his studies of the transition states of chemical reactions using femtosecond spectroscopy." In the late 1980's, Zewail's research group performed experiments which pioneered the ultrafast examination of chemical reactions. Since the 1930's, chemical physicists have questioned how reactions occur on the molecular level, developing elaborate theories about transition states and activation energies to explain how reactants shuffle into products. However, never before had it been possible to verify these theories with direct measurements.

News of the award spread rapidly around campus. Public Relations staff members were awake by 6:30, busily preparing for an Athenaeum press conference, and congratulatory signs appeared in Noyes almost as early. At least one chemistry class was canceled for the 10:30

press conference, giving Zewail a leg up on Columbus, whose holiday had passed the previous day with scarcely a nod. Reserved, but clearly excited, Zewail was joined by President David Baltimore to field questions from the media. David Tirrell and Tom Tombrello, respective chairs of the chemistry and physics divisions, were also present, as was Vice President Steve Koonin. Reporters directed questions from a variety of angles; some tried to comprehend the basic elements of Zewail's work, while others went trolling for a miracle drug or medical silver bullet. His replies were cautious, giving simple examples and stressing that applications would come as the basic fundamentals of molecular chemistry are remastered. The only cure he mentioned was the prize itself: "I recommend the Nobel Prize to anyone with a cold," he said. Appar-

SEE NOBEL ON PAGE 3



Dr. Ahmed Zewail

ASCIT Coffeehouse scheduled to open

BY JUSTIN KAO

Mention the ASCIT Coffeehouse to freshmen and you'll get a few vague comments about that place in the SAC behind imposing double doors. Ask upperclassmen, and hear a long history of uncertain fortunes, toothpicks and a lengthy renovation.

While both freshmen and upperclassmen will soon see a new Coffeehouse, it will not be as soon as expected. Originally slated for this weekend, the opening of the ASCIT Coffeehouse has been postponed by one week in order to finish a few critical items. According to ASCIT President Baldeep Sadhal, the primary problems are installing the new pizza

oven and completing the courtyard lighting.

Although the coffeehouse will not be ready for customers for another week or so, ASCIT President Baldeep Sadhal estimated the current status as 80% complete and pointed out many of the major improvements. On entering, the most apparent change is the décor. The walls have been sponge-painted a sandy color, the toothpick-encrusted ceiling tiles have disappeared to make way for a more expansive exposed black ceiling, the counter is now wood-paneled, and the old Coke-logo menu has been replaced with a chalkboard look. Additional cosmetic changes include a opening in the wall to the TV room (which should be open

more often this year), stylish hanging halogen lights, and a repainted kitchen.

Patrick Gannon, Associate Director of Resident Dining and manager of the Coffeehouse, characterizes the new look as "trendy" and "designed to attract more students." Coffeehouse officials were quick to point out that this renovation

isn't just a middle-age facelift. In addition to the decor, Andre Mallie and Baldeep Sadhal have come up with numerous other improvements to make the coffeehouse a friendlier place for late night calories. A survey last year showed "overwhelming demand" for healthier food. Although the

PLEASE SEE COFFEEHOUSE ON PAGE 3

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Letter

LETTERS TO THE EDITOR

*Housing overflow
leaves problems
unresolved*

This is in response to the article regarding housing in last week's issue of the Tech. Evidently, the reporter neglected to interview the houses' members when the article was written. I am one of the people who live at 555 Catalina and I can assure you, it is nowhere near the "palace" described in the article.

From the information I have received so far, I get the impression that nothing was done to accomodate the students until the end of August. When I arrived at the house, several days into the term, the smell of paint was overpowering—I feel sorry for those who actu-

ally arrived before I did. Even now the smell is quite noticeable. The paint is starting to peel, on account of the workers using water-based paint over the old oil-based paint without doing any of the processes that is normally done when a new layer of paint is applied (such as, say, removing the old layer of paint). We have yet to get an Internet connection—the only way we can go online right now is to use the dial-up to ITS. Unfortunately, there's only one phone line for the 11 (soon to be 12, I hear) of us living there, making that quite unfeasible. The doors to the bathrooms don't lock properly, and to compound the problem, each bathroom upstairs has only two doors—one leading to a girl's room, the other leading to a guy's room. Up until last week we had workers coming in and out unannounced.

What they've accomplished is still rather debatable. One came merely to put numbers over each of the doorways leading to our rooms (though to his credit, he was flanked by someone else who I believe carried off a window). Another, for some reason, seems to have cut off the middle of some trees—but left the roots on the ground and the branches hanging off of the trestle—and it looks exactly as I've described, a tree with the middle cut out. The driveway is hard and uneven, though that's not exactly high on our list of concerns right now. I'm sure we're breaking quite a few safety codes at the moment. If a fire started on the wooden (and only) staircase leading to the bedrooms upstairs, we would be quite trapped without an avenue of escape. Oh, true, we could probably jump out the window, but with the backyard being nothing but dirt at the moment

we wouldn't have anything soft, say bushes, to land on. Hope there's no rain for a while. From what I know, the neighbors aren't too happy about us—they don't want a bunch of crazy college students playing loud music and having parties next door.

Considering the amount of time Housing has had to improve the house, I have to agree that they did an admirable job. But nonetheless, there is still much that needs to be repaired, and the house is nowhere near the provincial residences that were implied in the article. The crisis has not been averted, it is still there. Though places have been found to house the students, there is still much that needs to be done before the house becomes fully livable.

Chuck Hsiao

Please send submissions for **letters to the editor** to:

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or by **electronic mail** to:
editors@tech.caltech.edu.

Deadline for submissions is **Monday at 5 p.m.** on the week of publication.

The editors reserve the right to **edit** or **refuse** to print any letter for any reason.

CORRECTION

In last week's article "Housing finds room," Tom Mannion was incorrectly cited as the Director of Residence Life. Mannion is the Director of CABS (Campus Auxiliary and Business Services).

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News

NOBEL: Femto-scale chemistry wins Zewail highest honors

CONTINUED FROM PAGE 1

ently, the early-morning call had completely relieved his symptoms.

After the press conference, celebration spread to Noyes, where colleagues and students toasted Dr. Zewail's accomplishment with champagne. Several individuals hinted that they had anticipated the award for some time. One graduate student, working late in the lab, was rumored to have checked the net regularly until the announcement was released. Dr. Vincent McKoy, Professor of Theoretical Chemistry, noted that the Swedish Academy had solicited Zewail's nomination every year for the past five years. Zewail seemed less certain. "As a boy, I never, ever dreamed that I would get a call from Sweden," he said during the press conference.

Dr. Zewail was born in Egypt in 1946, where his early fascination with chemistry terrified his mother. "She thought I was going to burn down the house," he said. After graduating from the University of Alexandria, he came to the US and completed

a Ph.D. at the University of Pennsylvania. This was followed by post-doctoral work at UC Berkeley and a faculty position at Caltech in 1976. Appropriately, he has held the Linus Pauling Chair of Chemical Physics since its creation in 1990. One of Pauling's greatest contribution to chemistry was a unique perspective of the chemical bond. Zewail has continued in a similar vein, creating pictures which deepen that perspective.

Fundamental to ultrafast spectroscopy is the femtosecond, 10^{-15} seconds. Molecular vibrations occur on the order of 10^{-12} fs, so femtosecond spectroscopy can capture bonds as they stretch, break and reform. Beyond this point, faster measurements do not provide more data; information is lost in Heisenberg's quantum never-never land. The Swedish Academy's extended citation notes that "The contribution for which Zewail is to receive the Nobel Prize means that we have reached the end of the road: no chemical reactions take place

faster than this."

Down in the depths of "Femtoland", labs occupied by the Zewail group in the subbasement of Noyes, fast laser pulses achieve this diminutive resolution. A high energy "pump pulse" initiates a reaction by promoting molecules to higher energetic states and weaker probe pulses measure species behavior. Early experiments studied simple processes, such as the dissociation of iodocyanide (ICN) or sodium iodide (NaI). Zewail noted that, over the past 22 years, more than 100 people in his group have expanded and refined femtochemical techniques. He looks forward to studying the reaction dynamics of biological molecules, such as

proteins, and other complex systems, in the near future.

Zewail, the 28th Caltech-affiliated Laureate and the second chemistry Laureate this decade (the other being Rudolph Marcus, 1992), will be awarded his prize in Stockholm, Sweden, on December 10, the anniversary of Alfred Nobel's death.



Dr. Ahmed Zewail

The Outside World

ISLAMABAD, Pakistan - The chief of Pakistan's army declared a state of emergency, suspended the country's constitution and made himself the chief executive. Two days before the military had already toppled the elected Prime minister. The only thing that is left for him now is to legalize all his actions and he got closer to this goal by dismissing the regional parliaments. The army stands behind him, as they sealed off the parliaments house on Thursday to prevent a session of the lower house.

STOCKHOLM, Sweden - The 1999 Nobel Prize for Physics has been awarded to J.G. Veltman and Gerardus 't Hooft of the Netherlands for their work in particle physics. Veltman and his student 't Hooft worked on the renormalization of non-abelian gauge theories. Specifically they showed that theories with massive vector mesons to be renormalizable, which allowed the unification of QED with the weak interactions in what is known as the Weinberg-Salam model. 't Hooft and Veltman also predicted the as yet undiscovered Higgs particle which is responsible for spontaneous symmetry breaking in the Standard Model.

NEW YORK - Wednesday night the New York Yankees won the first game of the American League Championship Series in 11. Bernie Williams homered in the 11th to win the game for the Yankees. New York leads the series 1-0, game 2 is Thursday night in New York. In the National League, Atlanta leads their series with the New York Mets 2-0.

Coffeehouse

Baldeep says it's "almost ready"

CONTINUED FROM PAGE 1

menu wasn't finalized at print time, definite changes include an emphasis on pizza (a professional pizza oven was purchased), better espresso (the supplier has been changed), and some less popular items may be dropped from the menu.

According to Baldeep, the idea is to "do a few things well," and to this end the Coffeehouse has acquired a new barbecue-style burger grill and a new soda machine. "Well" won't mean "slow," however, as two high-tech touch-screen registers are being installed and portions of the kitchen reorganized for faster food preparation.

Coffeehouse entertainment has also been improved. New speakers grace the dining area, a big screen TV has replaced the old one, and plans are in progress for a computer-based MP3 jukebox. Furthermore,

mainstream magazines will be complementing the current collection of comics.

The coffeehouse is expected to be mostly complete by the time it opens, but several major improvements are planned for the near future. "I would like to see a lot more happen in the courtyard," says Baldeep. Among the courtyard changes in store are new lighting and outdoor speakers. Indoors, the bright red booth seats will be changed to a softer color. Overall, the coffeehouse will be undergoing a trial period in the next few weeks, seeing what works and changing what doesn't. On whether he was happy with the way things turned out in the coffeehouse, Baldeep said, "Yeah, I like it!" Hopefully, the rest of Caltech's students will agree when they see it next week.

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Blended

Caltech starts web mentor program

Career opportunities, networking abound for Techers

BY KIM GOODFRIEND

Caltech has recently instituted an exciting new program called Connect@Caltech that is designed to help members of the Caltech community "connect" with each other via mentoring and networking relationships. Many alumnae have already volunteered to provide information about graduate education, careers, and workplaces in science and technology to assist others in finding their place in the "real world." They have done so by filling out a fairly extensive data sheet available on line. Anyone with an account on the ITS UNIX cluster, JPL staff, and post-docs can access the Connect@Caltech web site, fill out the data sheet, or search this database many different ways to connect with Caltechers. Our hope is that you will find resources on this

web site that can help provide general important information, answer your specific questions, and potentially begin to develop a relationship as a mentor if you so desire.

The web site also has valuable information on the art of mentoring and the use of networking. No doubt you will learn a great deal by reading through the text. You will also find articles on networking and mentoring, interviews with prominent Caltechers who excel in this process, and links to other sites that, as members of Caltech, are available to you.

Networking and mentoring can be an important part of a person's undergraduate, graduate or postdoctoral experience. Although faculty plays this part in many instances, alumni are available to give information and advice in different areas of the job search or graduate school process. For ex-

ample, an alum may be able to set up a "shadowing" session at their place of employment so that you can see the day to day experience at a real company.

During the next several weeks, you will find interviews with faculty, staff and students who have been identified as skilled networkers and mentors. If you have any doubt about the place of mentoring in your life, see what others have to say on the subject.

Staff, faculty, graduate students and post-docs are invited to fill out the data sheet as well. The more information available to the campus community, the more effective Connect@Caltech will be for everyone involved.

Connect@Caltech has been organized by the Career Center, the Alumni Association, the Ombuds office, the Women's Center and the International Students Program.

Background Noise

By Ron Dollete

Okay, I know it's been a long time, but the music scene has been kind of subdued until recently. I don't have to mention that if Adam Sandler releases another album, it better not be the same one trick pony. We all loved the goat and the cow sound effects and the Hanukkah song, but it isn't that funny anymore. Did anyone even notice that *What's My Name* wasn't as funny as *What the Hell Happened To Me?* How could we expect Judy's kid to top such a comedy classic?

Let's see what else I don't have to mention... Nine Inch Nails and Tori Amos both released double CDs. I would say there's only one from each pair worth keeping, though hard core fans will undoubtedly end up liking the entire double CD set. What else... Santana's CD is so awesome, he even made the guy from Matchbox 20 sound above average. Well done, Carlos.

My real pick of the week though is the new Bloodhound Gang. Don't go to

Tower to find it, though. *Hooray for Boobies* heralds the return of Philly white boy rap, whose themes range from getting drunk to getting laid. As a true sign of the times, the lead single "Bad Touch" is getting a couple of techno remixes from KMFDM and God Lives Underwater. I think the one of the best is "Vagina," which is probably too tasteless to mention here, but trust me that it's the funniest politically incorrect song since "Hold Your Head Up High And Blow Your Brains Out." Other great songs include "Mope" (which is just another sign that you can never really get rid of the cheesy 80's) and "Bad Touch," which makes me want to do it like they do on the Discovery channel.

A.S.C.I.T. Minutes

OCTOBER 11, 1999

Present: BoD minus Danny "never goes to ASCIT meetings" Abrams

ternational Student programs to discuss international students and the house system.

Meeting called to order at 22:04.

ARC news - "The CS department sucks a great deal" - Melvin Leok. He is looking into bringing classes with more than one-third of a graduating class in it (i.e. at least 80 students), namely CS1, under the review of the Core Curriculum Steering Committee for micromanagement. Many complaints have been made about CS1 and changes are being made to improve it.

Dealing with Guests

Keshav Dani representing OASIS came to the ASCIT gathering last week (no quorum) and requested \$250 for the OASIS festival held on Sunday, October 10 at 5pm in Baxter Hall with various cultural performances and presentations as well as dinner.

Project Reports

ASCIT/GSC/Y Party - Garrett reported last week that this party held on Saturday October 2, 1999 was a success. Lots of people came out and had a good time.

Upcoming Election - An election will be held for the Upperclassman Director-at-Large this Thursday, October 14. Sign-ups come down tomorrow, October 12.

Coffeehouse - Baldeep says it will be opening on Sunday but the Grand Opening will be on Monday. Go figure.

Drag Show - Garrett reports that Francis McDonald has set November 5, 1999 as the day for the annual Caltech Drag Show. Garrett also warns all that they better beware, he is going all out for this event including shaving his armpits and legs. Geez.

ASCIT copier - Derek will look into making it good for general use since no one seems to have a clue how to get it to make copies at this point.

Meeting closed at 22:25
The BoD approves \$250 for the Oasis Festival.

Rotation Survey - These will be coming in the mail sometime this week so look out for them.

Meeting adjourned at 22:27.

Open IHC meeting - This will be held sometime in the future specifically to rotation.

Respectfully submitted,

ISO - The IHC will meet with Parandeh Kia, Director of In-

Hanna Kim
ASCIT Secretary

If you have questions, comments or concerns for the ASCIT BoD or its subsidiaries,
email ascit@its.caltech.edu.



Did you know that the first *Tech* was designed to be a perfect newspaper? It was a disaster. No one would accept the workload. Entire pages were lost. Some believe that we lack the necessary page layout skill to describe your perfect *Tech*, but I believe that, as Caltech undergrads, you take pleasure in apathy and procrastination.

Which is why the *Tech* was redesigned to this - the peak of your school's newspaper. And I say "your" newspaper, because when we started writing the articles ourselves, it really became "our" newspaper, which of course is what this is all about.

Writing for the *Tech*, Techers. Writing for the *Tech*.

Like the Ma 1a student. You've had your time.
The *Tech* is our world.
The *Tech* is... our time.

i must get out of here... i must get free
and in this *tech* is the key... my key

Write for the Tech

Entertainment

Eye on Animation

By Katy Isaacs

Perfect Blue, Manga Entertainment's first Japanese animation title to hit the US art house circle since Ghost in the Shell, opened last week at the Laemmle Colorado Theatre. It was too bad that the picture quality of the film seemed unusually poor; perhaps it was the film itself or Laemmle's projector.

Perfect Blue is the story of young Kirigoe Mima, one third of the idol singing group Cham. She is pushed from her idol career into the more lucrative acting direction by her arguing agents. However, while idol singers are supposed to be cute and pristine, the acting world is looking for someone a little bit more 'ma-

ture.' Mima, not very mature herself, is not quite ready for this kind of change.

Adding to her apprehension are a series of threats and murders that seem to plague the psycho-thriller series for which she now works. Mima finds her new and unsure self at odds with the happy idol singer she used to be. The movie delightfully plays with reality, showing warped views from the eyes of Mima and others.

Of course, the film takes the easy way out in tricking the audience. The television series, Double Bind, is so much like the reality in Perfect Blue, as both focus on the psychology of a deranged killer. It seems a

little too convenient at times. Adding to the confusion is a mis-dub of one of the names at a key point towards the end of the film.

The dubbing of the film suffered from the usual problem, that the voice actors are straining to match the mouth movements of animation characters speaking in a radically different language. Hence, the voice acting is often a lot better when you cannot see the character's lips moving.

The voice casting seems 'okay' at best. Mima's voice just cannot match the range that she was supposed to have. The 'cutesy' Mima-the-idol voice does not quite match the tone of the original. The other female voices, like those of Yokiko and Rei, the other members of Cham, sound ready to lead into a rendition of "Bulbasaur! I choose you!"

Me-Mania, the creepy fan, sounded very good, as his voice came out just as strange and annoying as in the original. Also, the voices of the three normal fans, who's pithy commentary on media and fandom are ever so entertaining, are done very well.

The translations of the Cham songs were done surprisingly well, as often it is the songs that are translated

the most horribly. Of course, Manga Entertainment had the advantage that Cham is just an idol group and their songs are basically fluff. Plus, most of the time when Cham sings, the music drowns out the singing, which was not the case in the Japanese version.

Manga also chose not to subtitle too many of the written words on the screen, meaning that a lot of the important webpages or signs are left to the non-Japanese enhanced viewer's guess. When they do choose to subtitle, the words are horribly mistimed. For a couple seconds there was just an image of Mima with the word "Traitor" under her, until the shot changed to the fax machine which was printing out the actual message.

While Perfect Blue does have fair dubbing for an anime title, an interesting plot, and of course a share of violence, gore, and nudity, Mononoke Hime, which will be coming out from Miramax shortly, has the obvious lead in attracting more people to Japanese animation. Perfect Blue is quite incredible considering it was Kon Satoshi's directorial debut (though having a stellar Studio Madhouse affiliated staff probably helped.) Perfect Blue won the public prize for the Best Asian Film at Fant-Asia '97.

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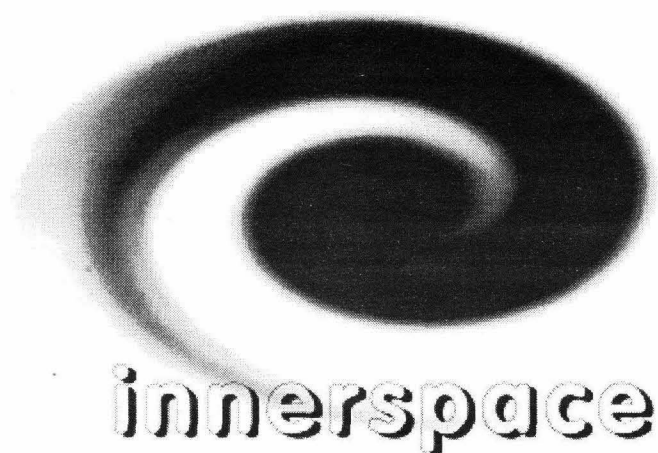
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Rotation Rules

BY JASON MELTZER

Rotation is over and now the real pain beings. But I wish to write more about Rotation, specifically the Rules, their intent, and why they should be abolished.

First off, one of the basic principles of science, and thus Caltech, is the sharing of information. I don't think anyone at Caltech would disagree (in almost all cases) with the statement: "More information is better." The more you know, the more informed a decision you can make. A more informed decision is usu-

ally a better one. Certainly, however, the information you get must be accurate in order to make a correct decision. When we apply this to Rotation, the idea of the Rules naturally comes about as a solution to the problem of misinformation.

In this case, however, I would argue that the cure is more fatal than the disease. Rather than misinformation being contained thanks to Rules, little or no information about the Houses is actually spread! The information that is spread is usu-

ally in the form of innuendo, jokes, and sometimes blatant violations of the rules that blemish Houses. Most frosh, in my estimation, don't really know much at all about the Houses when they enter or exit the Rotation process. Why is this? For one, the Rules prevent upperclassmen and other frosh from discussing what they know or think about various Houses. Not only that, people are unsure of what they *can* say, and hence they say nothing at all of substance. This leaves the frosh with a blank impression of the Houses and the idea that they're being lied to. In actuality, they *are* being lied to. Rotation is like a commercial for a used car lot. You've got an annoying spokesperson, who is obviously lying through his teeth, shouting, "we've got *loads* of cars, trucks, and SUVs at *low, low* prices!" while displaying a sea of nearly new looking cars. Then you get

there and find an old, broken down Pinto with 200,000 miles on it going for \$8000. Only difference is that in Rotation frosh don't know what they're getting until they buy!

Let's look at some of the other Rules, too. First off, the driving rule. I don't really see why this is necessary. How does this "unfairly bias" anyone? I mean, cars are not *that* uncommon at Caltech that they should be considered a controlled substance. I would assume that the distribution of cars throughout the Houses is relatively flat (meaning no one House has a higher percentage of drivers than any other), so there is no advantage among the Houses at all. If an individual wants to give a frosh a ride, I don't see any problem with that, either. Will this confuse the frosh? Are they not intelligent enough to realize that just because someone from a particular House decides to give

them a ride that not everyone from that House will do the same? Or maybe it's so that the frosh don't get the wrong impression of a House (as in, they do a lot of going places during Rotation but not after). As if none of the Houses try to give a false impression during Rotation already. I have particular contempt for this rule, as I have a number of friends who were Frosh SURFers. I've known these people for almost 4 months and become close with some, yet before and during Rotation if I want to go somewhere beyond the "allowable radius" I can't take them with me? Bull.

Next, the alcohol rule. It was my understanding that the Alcohol policy took care of this. Isn't it redundant to have a Rotation Rule that simply makes the Drug and Alcohol policy more specific? It's like we're saying that we really don't care much about Institute Policy, unless it's di-



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Space

rected toward a frosh during Rotation. Why not just make Rotation like any other official party? Require that all parties serving alcohol on-campus have bartenders. I read a clarification that talked about how frats at MIT got a bit out of hand and students died in drinking/hazing events. I don't see why this would be so much more of a problem during Rotation or why we care about it more during this particular time than any other. Sure, it would be a bad thing if a frosh died because of alcohol or other drugs, but wouldn't it be equally bad if it were any other student? Hell, if anything, we need less frosh so we can have more space on campus! And how hypocritical can we be? After Rotation is over the frosh will be chugging down the alcohol with the rest of the upperclassmen, sometimes more in certain Houses! But during this special week (and before

it, too), it's *very important* that they don't get any alcohol. Gimme a break!

Another Rule I think is silly is the distribution of information about the actual picks procedure. I don't think this should be secret at all. As I said from the start, more information is better. People should be able to make up their own minds given all the facts. If they don't have the facts, they can't make a fully informed decision. Why should the frosh be insulated from the picking procedures? Will they provide such insight into Rotation that people can "play the system" to get into a particular House? If they would, maybe the system should really be changed! And if a frosh thinks that he can by doing so, let him! Who will be hurt except the frosh? We shouldn't prevent people from their own stupidity. This summer an unknown individual distributed a copy of the

picks procedure to all the Frosh SURFers. How accurate it was, I have no idea, and I have no idea who did it (I don't think it was necessarily a good idea in practice, but I support it in principle), but the IHC wasn't too happy about it. This shouldn't be a problem! As in the past, the picks process should be published in the Little T and available to everyone in the spirit of informed decision-making.

That's pretty much all the rules I disagree with, and those are the most important, anyway. Requiring frosh to attend all their lunches and dinners is a good and necessary rule. Any rules the Houses want to keep themselves in line are probably a good idea. For example, the excessive gifts rule: I think it would be out of line for a House to buy a frosh a sports car! Now, the big question is, without the rules, how do we protect frosh from "unfair bias?" I

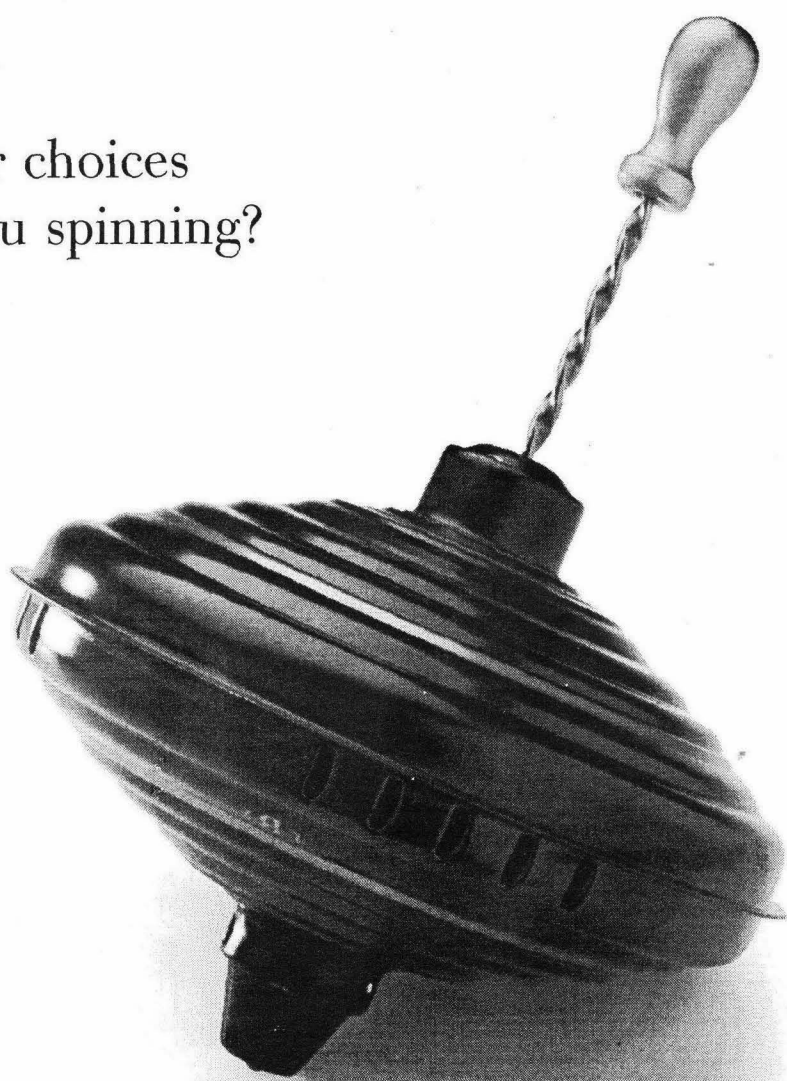
think it's pretty simple: there should be a "Guidebook to Rotation" given to all frosh (and upperclassmen, maybe) that explains various facts about Caltech, the Houses, the students, and Rotation itself. The only reason I can see for the rules, as I stated earlier, is to protect the frosh from their ignorance. They don't know anything of the social dynamic at Caltech and wouldn't know what to believe. A guidebook could eliminate many malicious rumors, make the frosh more knowledgeable about the Houses and their members, and give them the information they need to make an informed decision. An example: the Guide can explain that most members of one particular House don't really know much about the other Houses (as they primarily spend time interacting within their own House), so any opinions they offer may or may not

be based in reality. If an upperclassman does claim to know about other Houses, then the frosh will just have to make up his own mind about that person's opinion. In essence, the Guide should explain the spirit and motivation behind the current system of Rules. This would be a far superior method of "protecting" the frosh: rather than shield them behind rules that limit their knowledge, arm them with knowledge of their own! Everyone would feel better: the frosh would know what is really going on, the upperclassmen could talk and act like normal people (well, as normal as they usually are), and Rotation might actually be useful!

And if I click my heels together three times I'll end up in Kansas!

Jason Meltzer is an oft contributor to the *Tech*. His opinions are not the opinions of the *Tech*.

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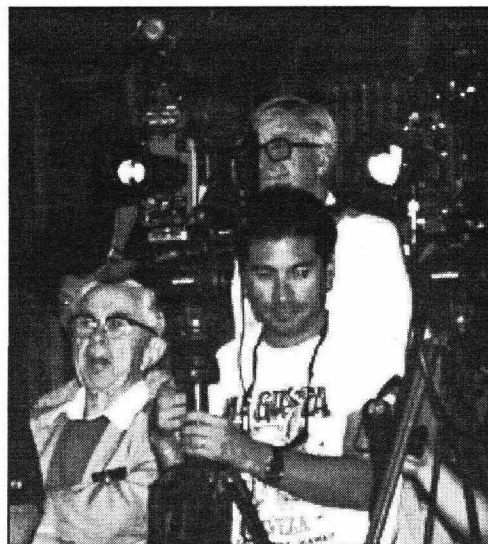
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Nobel Celebration



Linus Pauling, left, with Ahmed Zewail in 1986.



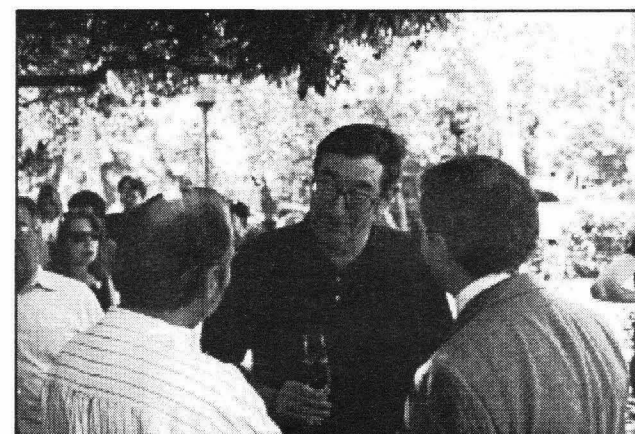
Ed Lewis, left, watches the press meeting from behind a forest of cameras



Zewail accepts congratulations outside of Noyes with his wife Dema, right.



Members of the Zewail group look pleased with their mentor's achievement.



Harry Gray celebrates the prize announcement with Dennis Dougherty, left, and David Tirrell, right.

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Thomas Morgan	medicine	1933
Carl Anderson	physics	1936
Edwin McMillan	chemistry	1951
Linus Pauling	chemistry	1954
	peace	1962
William Shockley	physics	1956
George Beadle	medicine	1958
Donald Glaser	physics	1960
Rudolf Moessbauer	physics	1961
Charles Townes	physics	1964
Richard Feynman	physics	1965
Murray Gell-Mann	physics	1969
Max Delbrück	medicine	1969
David Baltimore	medicine	1975
Renato Dulbecco	medicine	1975
Leo Rainwater	physics	1975
Howard Temin	medicine	1975
William Lipscomb	chemistry	1976
Robert Wilson	physics	1978
Roger Sperry	medicine	1981
Kenneth Wilson	physics	1982
William Fowler	physics	1983
Rudolph Marcus	chemistry	1992
Edward Lewis	medicine	1995
Douglas Osheroff	physics	1996
Robert Merton	economics	1997
Ahmed Zewail	chemistry	1999

¹ Based on \$250 billion in assets under management. ² Standard & Poor's Insurance Rating Analysis, 1999; and Lipper Analytical Services, Inc., Lipper Directors' Analytical Data 1999 (quarterly). ³ Morningstar Variable Annuities/Life, 6/30/1999. Of the 6,332 variable annuities tracked by Morningstar, the average fund had total fees combining annual expenses of 0.84% plus an insurance expense of 1.26%. TIAA-CREF expenses are subject to change and are not guaranteed for the future. Past performance is no guarantee of future results. TIAA-CREF Individual and Institutional Services distributes CREF certificates and interests in the TIAA Real Estate Account. For more complete information, including charges and expenses, call 1 800 842-2776, extension 5509, for prospectuses. Read them carefully before you invest or send money.

Sportainment

Reduced Shakespeare Co. gives reduced quality, humor

Performance in Beckmann Auditorium punctuated with bad jokes, super soakers, and horrible puns

BY ELAINE OU

From the notorious (or rather obscure) artists of such travesties as some piece involving Shakespeare and a series of pieces not, comes the Reduced Shakespeare Company's newest creation entitled *The Complete Millennium Musical* (abridged), a musical attempt at a comedy summing up some sequence of seemingly random events from the past one thousand years. This presentation thankfully performed for two nights only, Friday and Saturday, October 8 and 9, in the Beckman Auditorium. This event was hosted by Caltech's Office of Public events to bring performing arts to the

Caltech community.

And bring the arts it did! The Friday night performance was followed by a small reception in the Avery courtyard, and was quite superb. The wealth of refreshments featured a fruit filling cake with an assortment of pies and other fine desserts. The cheesecake was especially dazzling, finely complemented with inexpensive wines and coffee, although the variety of exotic fruits available was not to be matched either. Decent quality cheeses and the raspberry tea made this reception an opportunity which comes only several times in a lifetime! To top it off, the actors were present at the reception so that attendees could

meet them and tell them how much they sucked! Ah, it was most certainly the soirée which drew such an abundance of starving college students to the performance itself. The brilliant virtuoso and sheer ingenuity behind this function made it a remarkable tour de force winner!

The performance itself, however, sucked. The Reduced Shakespeare Company consists of three mildly talented individuals, Reed Martin, John David Pohlhammer, and Taylor Young, gifted with a flair for obnoxious songs and offensive humor. Who knows what they were thinking when they wrote the script; perhaps it may have been something along the lines

of "Let's try to offend as many people as possible in two hours." So, with a cut-rate get-up and nothing up their sleeves but their armies and supersoakers, the comedy troupe set forth with the most vulgar, tasteless, and simply stupid jokes imaginable. I suppose the act could have been amusing for those who enjoy this type of low-brow filth, but those who come to the Beckman Auditorium (myself, at least), a historic landmark representing the tradition and culture of Caltech and the rest of Pasadena, have a tendency to expect something a little more tasteful.

Instead, we found our finest attire damaged by water sprayed

from hydraulic weaponry intentionally aimed from the performers on stage towards the sitting (and not to mention defenseless) audience in the most dishonorable form of attack. The irreplaceable furnishings within the Beckman Auditorium were also permanently damaged by the large amounts of water, I'm sure, but this is simply incomparable to the ugly blemish which will long remain in the remembrances of the once untainted spirit of the monument. And, to think that anyone had to shell out \$5.00 and two irreplaceable hours of their life to watch this just makes me want to say: "Show me the Monet!"

LAST WEEK IN CALTECH ATHLETICS

Date	Sport	Opponent
10-5	Women's Volleyball	Life Bible (L, 0-3)
10-6	Water Polo	California Baptist (L, 11-21)
10-7	Men's Soccer	Whittier (W, 2-1 [2ot])
10-8	Women's Volleyball	Southwestern (L, 2-3)
10-9	Men's Soccer	Cal Lutheran (L, 0-6)
	Women's Volleyball	American Indian (W, 3-0)

THIS WEEK IN CALTECH ATHLETICS

Date	Sport	Opponent
10-12	Women's Volleyball	Pomona-Pitzer (7:30p)
10-13	Men's Soccer	La Verne (N Fields) (4:00p)
10-15	Men's Soccer	CMS (7:00p)
	Women's Volleyball	Redlands (7:30p)
10-16	M&W Cross Country	La Mirada (9:00a)
	Men's Soccer	Chapman (7:00p)



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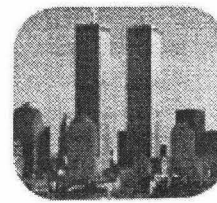
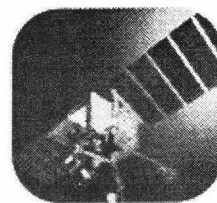
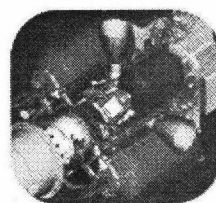
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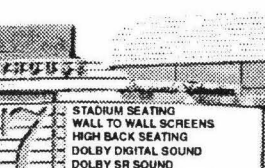
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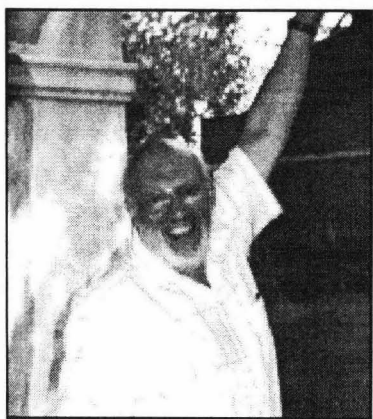
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Dean



Dean's Corner

Euros and Kudos

by Jean-Paul Revel

Most of you students are at Caltech to become Scientists or Engineers and are eager to reach that goal. The gaggle of scholars pictured by Hogarth (1697-1764) in his etching "Daur Vaccum" however, looks less interested. They yawn, scowl, chat among themselves, even sleep, dressed in their fancy robes and gowns, displaying an assortment of mortarboards, velvet berets and other head gear (but no tassels). You can see a copy of the engraving by looking up the Science article I will refer to in the next paragraphs, or better yet, by pointing your browser to (www.haleysteele.com/hogarth/plates/lecture.html).

All right, let's turn the clock forward for some 300 years. Today, popular caricatures commonly show scientists as evil Frankensteins or as out of touch, bumbling elders in dire need of a haircut, clones of Einstein, including his heavy foreign accent. And tomorrow, Saturday 10/16/99, you can see for yourself the scientists of the future giving, for the most part, their very first scientific presentation. It is SURF seminar day, where students will present the work they did last summer. (The talks start at 10am. Information and programs available from 9-5:30pm on San Pasqual Mall).

Now scientists are just people, with the whole gamut of personalities and attitudes encountered elsewhere in humankind. Some are fat, some are bald, some are sensitive and others callous, some are dandies and others could not care less what they wear. So then, what is it that distinguishes Caltech profs and as-

piring scientists like the Surfers, from hoi polloi, the lay public? Some would say a desire to serve humanity. In the best of worlds, that may be necessary, but is it sufficient? There are so many ways to serve that this cannot be the whole story. Besides there have been scientists who have lent their talents to pretty unethical tasks. Could it be a desire to understand the Universe? That is certainly a goal of science, but there are many people besides scientists, who are striving for the same goal. The difference between these endeavors is the logical method that scientistys use in their search. Well then, perhaps scientists dream of making it rich by their discoveries. Actually it turns out that, as my father warned me, entering a science career for the money is a long shot. Creativity is not to be bought. Many artists are driven to paint, and persevere though they are not recognized in their lifetimes, and are as poor as church mice.

The question of why some people want to do science probably has as many answers as there are men and women in laboratory coats. In a recent essay Prof. Georg Franck of the Vienna University of Technology, presents a startling, actually shocking, perspective on what drives scientists (Frank, G., 1999, Science 286, 53-55). You will easily find the paper in the library; it may not yet be shelved. It is a cold, brutal appraisal which strives to explain all on the basis of a single personality trait. Pleasant or not, we have to look at ideas in a dispassionate way. Franck argues that the impetus to do science is the attention that is paid to a scientist's work, the no-

toriety that derives from it. Scientists gain their epaulettes by peer recognition. Does that mean that Ahmed Zewail, Caltech's latest Nobel winner, had the prize in mind when he started out?

Franck explains that a researcher's career depends heavily on the Science Citation Index. (This is a tally of how often individual papers are quoted by other scientists, thus providing a measure of the "importance" of the work. Not everyone, including Franck, agrees that this is a good measure of scientific importance, but it represents a stab at quantification). The best scores (the more attention a piece of work elicits) lead to the greatest rewards. The competition that this perspective generates is thought to shed light on (all?) aspects of the science endeavor. Franck even explains the honesty of scientists by this principle. Although there is a temptation to grab attention by unjustified claims, it is counterproductive to waste time on nonsensical, even though highly touted, claims. Such a behavior, all would agree, leads to the abyss. Remember Cold Fusion, where extraordinary claims were made, grabbing an enormous amount of attention, until the work was discredited, along with

the scientists who presented it.

Eventually, as he proceeds with his argument Franck is led to proclaim "Attention is the resource whose efficient use is called intelligence." Wow! While I can wholeheartedly support some aspects of what the good professor says, methinks the man goes a bit far.

Reading the Franck article made me question my own motives in becoming a scientist. Did I choose a career in science because of a need for recognition? Did the SURFers work to receive the praise we will shower on them tomorrow? (Programs are available on the San Pasqual Mall so you'll be able to find the students you would encourage). For my part I remember, when I was very young, having read to me, and then reading on my own, the science-based spins of Jules Verne. Later, I read books like Paul de Kruif's "Microbe Hunters" and a biography of Louis Pasteur.

I quickly made an emotional connection to Pasteur who started his academic career in my home town. I often passed by the house where he had carefully sorted crystals of tartaric acid by shape. He had ended up with two piles, one of which turned out to be levo rotatory and the other dextro rotatory. And the first person saved from rabies using his vaccine was Joseph Meister, a youngster from a nearby village.

Although reading these accounts made a deep impression, I cannot truly say that reading bi-

ographies of scientists led me to take up science. Maybe it was the other way around; that is, being interested in science, even without being aware of it, I just enjoyed these particular stories over others?

Having doubts about the importance of notoriety as the motivating force behind my own scientific career, I find it hard to imagine that it would nevertheless play a determining role for other people. There is no question that being recognized by one's colleagues is a powerful positive reinforcement. And yes it was important that my work attract attention because otherwise I would not have been able to compete for the funds to continue. But that does not mean that I decided to do research because it would bring me approval and notoriety. How could I have known about that before hand?

So neither kudos nor Euros (well, Dollars) propelled me. Much more important, I believe, was the pleasure and excitement I derived from the process of discovery. Even as a child I wanted to know how things worked, how they were put together. It seems to me that gaining notoriety is just one of the many things which go into the mix.

I wish you all, especially the SURFers on this Seminar Day, pleasure in discovery. As to notoriety, come what may!

A bientot!

Jean Paul Revel
Dean of Students

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Mints

ANNOUNCEMENTS

The **Gay/Lesbian/Bisexual Discussion Group** extends invitations to the Gay/Lesbian/Bisexual Discussion group, which meets on the first and third Tuesdays of each month from 8:15 p.m. until 10:15 p.m. in the Health Center lounge. This is a confidential meeting and does not imply anything about a person's sexual orientation. The group usually discusses a particularly relevant topic and then moves on to the general discussion. Refreshments are served. For more information, call x8331.

The **California College Republicans** are currently expanding across campuses in Los Angeles County. It is a volunteer organization that works to get Republican candidates elected, while focusing on issues and putting on events that are of interest to college students. If you would like to start a chapter at Caltech in time for the 2000 election, email Amanda Gregory, Southern Vice Chair California College Republicans, at agregory@usc.edu, or call her at (562) 425-8509.

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The Vice President for Student Affairs Office is looking for **readers to assist a graduate student** starting immediately. Computer Science or Engineering majors are preferred. A basic understanding of the subject matter, flexibility, and good communication skills are necessary. Hourly rate paid. Please call or email Jerri Greene, x6321 jerri@caltech.edu

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EVENTS

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Fri., Oct. 15, 7:30 p.m. - Women's Volleyball at Redlands (Redlands, Calif.)

Sat., Oct. 16, 9 a.m. - M&W Cross Country at SCIAC Multi-Duals (La Mirada, Calif.)

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Sat., Oct. 16, 7 p.m. - Men's Soccer at Chapman (Orange, Calif.)

Mon., Oct. 18, 7:30 p.m. - Women's Volleyball v. Life Bible (Braun Center)

Wed., Oct. 20, 4 p.m. - Men's Soccer v. Claremont-Mudd-Scripps (North Athletic Fields)

Wed., Oct. 20, 4 p.m. - Water Polo at La Verne (La Verne, Calif.)

Twenty-first annual **SURF seminar day**: Sat., Oct. 16, 1999, San Pasqual Mall, Student Presentations will be held from 10:00 a.m. to 11:40 a.m. and from 1:00 p.m. to 4:00 p.m., followed by a Poster Session and Reception. Admission is free, lunch will be available between Noon and 1 p.m. for \$10. Register by calling 395-2885 or email sfp@cco.caltech.edu.

WIR KOENNEN AUCH ANDERS ("We Also Know How to do it Differently") (1993) will show on Wed., Oct. 27, 1999 in BAXTER LECTURE HALL at 7:30 p.m. This film features English subtitles. For more information, call x3610.

Beckman Auditorium, 9 p.m. A mixed company presents its production of Eugene O'Neill's **"The Emperor Jones"**. Admission: \$22, \$18, \$14; student and senior rush tickets for \$10 (subject to availability). Call 1-888-2CALTECH or 626-395-4652.

Dabney Lounge, 3:30 p.m., **Ms. Melodee Fernández** is accompanied by pianist Tania Fleischer in a program of Spanish and American opera, zarzuela, art song, and bolero. Admission is free, call 1-888-2CALTECH or 626-395-4652.

Beckman Auditorium, 8 p.m., **"Stem Cells That Help Regenerate Diseased and Damaged Tissue,"** David J. Anderson, prof. of biology, Caltech, Admission is free, Call 395-4652 or 1-888-2CALTECH.

ACM programming competition: Sat., Oct. 23rd, Caltech will be having a mini-contest to determine the three teams to send to the competition. It will be held in UGCS, and take up most of the day. If interested, mail wnoise@ugcs.caltech.edu.

Auditions for Shakespeare's "Merchant of Venice" in Dabney Lounge Fri., Oct. 22, 7:30-10:00 p.m.; Sat., Oct. 23, 1:00-3:30 p.m.; and Sun., Oct. 24, 1:00-5:00 p.m. If you cannot make one of these times, leave a message at the TACIT office, x6259 for Shirley Marneus.

SCHOLARSHIP

The **Hispanic Scholarship Fund** (formerly the National Hispanic Scholarship Fund) is accepting applications for scholarship awards ranging from \$500 to \$2,000. Applicants must be U.S. Citizens or permanent residents of Hispanic heritage, full-time undergraduate or graduate students, and already completed at least 45 units of undergraduate work with a minimum 2.5 GPA. For further information about HSF, informative links, and tips for applying, visit their website at www.HSF.net. Applications are available in the Financial Aid Office. Entries must be submitted by October 15, 1999.

The **Jewish Free Loan Association** is offering interest-free student loans to qualified individuals for tuition, books and supplies, and living expenses. Applicants must have completed a minimum of one year of undergraduate study and have a 2.5 GPA or above. For further information, please contact the Jewish Free Loan Association at (213) 761-8830 or (818) 464-3331.

The **John Gyles Education Fund** is offering scholarship awards up to \$3,000 for the 1999-2000 academic year. Applicants must be Canadian or U.S. Citizens, have a 2.7 GPA or above, and demonstrate financial need. Criteria other than strictly academic ability and financial need are considered in the selection process. To obtain an application, send a self-addressed, stamped envelope to: The John Gyles Education Fund, Attention: The Secretary, P.O. Box 4808, 712 Riverside Drive, Fredericton, New Brunswick, Canada E3B 5G4. Filing dates for mailing documents in 1999 are April 1, June 1, and November 15.

The **Measurement Science Conference (MSC)** has established fund to grant scholarships

to students in an Engineering or Science or Quality Assurance degree program. The scholarship program places emphasis on papers or projects that discuss the advancement of measurement science technology. Applicants must be U.S. Citizens, have an overall grade point average of 3.2 or higher, completed at least 24 units of upper division courses in Engineering or Science degree or five courses in a Masters Degree Program in Quality Assurance. Current members of the MCS Committee are ineligible for this scholarship award. Also, applicants must be able to attend the Measurement Science Conference luncheon held on January 20, 1999, at the Disneyland Convention Center in Anaheim, California. Applications are available in the Financial Aid Office. For further information you may contact: Rick Careyette, MSC scholarships Chairperson, Teledyne Electronics Technologies, Marina del Rey Facility, 12964 Panama Street, Los Angeles, CA 90066-6534. Entries must be submitted by November 26, 1999.

Students and faculty are invited to submit proposals to the **National Collegiate Inventors and Innovators Alliance (NCIIA)** by December 15 to fund student projects and faculty courses and programs that enable students to pursue the development and steps leading to commercialization of their innovations. Two types of NCIIA grants are offered: Advanced grants of up to \$20,000 to student innovators provide support for the development of new products and technologies with commercial potential and Course and program development grants of up to \$50,000 to faculty to provide support for the creation and operation of classes and programs. Please contact the NCIIA to obtain additional information at www.nciia.org or by phoning Phil Weilerstein, NCIIA Director, at 413-587-2172.

To submit an event for the Mints, contact mints@tech.caltech.edu or mail your announcement to Caltech 40-58 Attn: Mints. Submissions should be brief and concise. The editors reserve the right to edit and abridge all material. Deadline is noon Wednesday. Unless specified, all mints will run for two weeks.

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