

Volume XCIV, Number 21

Pasadena, California



Registration day blues-students arrange their finances on Tuesday in Dabney Hall Lounge.

Ahmed Zewail Wins Plyler Prize

by Caltech Public Relations

Ahmed H. Zewail received the 1993 Earle K. Plyler Prize from the American Physical Society on March 22 at a national A.P.S. meeting in Seattle, for his "pioneering and seminal contributions in the area of femtosecond spectroscopy.'

The Plyler Prize, established in 1976 and sponsored by the George E. Crouch Foundation, is given each year to recognize notable contributions by a North American scientist to molecular spectroscopy-the study of the spectra of molecules. Zewail, the first Caltech faculty member to receive the Plyler Prize, will give the award address at the national meeting.

"Ahmed Zewail's novel experiments in femtochemistry are widely respected in the scientific community for their originality,"

said Fred Anson, chair of the Division of Chemistry and Chemical Engineering. "He and his coworkers have devised new methods that allow them to examine the most basic aspects of chemical reactions. The division is delighted to see Professor Zewail's achievements recognized by the award of the Plyler Prize."

Zewail, the Linus Pauling Professor of Chemical Physics, has opened up the new field of femtochemistry-chemistry that occurs on the time scale of femtoseconds. (1 femtosecond is 1 ¥ 10-15 second, the time it takes light to travel one one-hundredth the thickness of a human hair.) Using lasers and molecular beams, he has developed a method for probing reactions between molecules as they happen, in "real time."

Zewail has designed a method

for taking "snapshots" of the molecules during the instant when they react. This technique has opened up a whole new field of study, and has revealed the behavior of molecules in motion. For example, when a molecule of common table salt breaks into single atoms, the atoms don't split immediately, but oscillate several times before going their separate ways.

Zewail, 46, was born and raised in Egypt, where he received his bachelor's degree, with honors, and his master's degree, both from Alexandria University. He earned his doctorate from the University of Pennsylvania in 1974, and after two years as an I.B.M. Fellow at the University of California, Berkeley, he joined the Caltech faculty in 1976. Now a U.S. citizen, Zewail is a member of the National Academy of Sciences. In 1989 he received the King Faisal International Prize in Science, last year received the Carl Zeiss International Award, and was the winner of the 1993 Wolf Prize in Chemistry.

Mummenschanz's "Parade" Delights **Caltech Audience**

by Rajesh Bilimoria

At 8 P.M. on March 13, Mummenschanz presented their latest production, entitled "Parade". This world-renowned Swiss mime troupe's performances are a unique blend of mime and mask. The company is in its twenty-second year.

Although Mummenschanz's initial performances in the early seventies included spoken words, they eventually eliminated that aspect of their productions to remove the language barrier. Even the program for the evening's show was nearly wordless, the only exceptions being the words "intermission" and "program subject to change". Rather than titles, each performance was labeled by a representative drawing.

The production had two distinct segments. The first portion of the program was the more abstract of the two. However, the abstract images often formed faces or other human elements. The magic of Mummenschanz was present, as it was sometimes impossible to determine where the mime was with respect to the objects he manipulated.

The program had a stated theme of recycling and regeneration, al-

though it was sometimes not apparent in the performance. Several works had obvious significance, for example, when the two clayfaced performers continuously altered their faces.

The performances illustrated the understanding of human nature that the creators of the performance possess. Many of the sketches in the first half of the performance evoked the notion a playful child. The audience especially enjoyed the sketch that involved a spherical green creature's conquest of a large orange morsel of "food". The creature thinks it wants the object-until it tastes it, at which point it spits it out. Similarly, one might desire an something without fully understanding it; upon obtaining the object, one sometimes realizes it was not quite what one expected.

Another sketch involved a large flexible tube and a large balloon. The tube was a creature, of sorts, that was quite playful. Another tube appeared and soon they were competing for possession of the one ball. One of them was victorious, but soon another ball, with a bell, appeared, and it was his. The tube threw the ball out to the audience, and though it had no eyes or MUMMENSCHANZ, page 4

N.A.S. Honors Kanamori

by Caltech Public Relations

Caltech seismologist Hiroo Kanamori will receive the 1993 Arthur L. Day Prize and Lectureship from the National Academy of Sciences on Monday, April 26, at a ceremony in Washington, D.C. The prize consists of \$20,000 and an illuminated scroll, and allows Kanamori to give a series of four to six lectures at the institution of his choice.

useful addition in the field. Kanamori hasn't decided yet where he will give his lecture series, but the topic will be the development of seismology over the last twenty years, and the new directions the science is taking at leading institutions. Kanamori is the second Caltech faculty member to win the Day Prize. Professor Gerald Wasserburg received it in 1981.

Kanamori, the director of the Seismological Laboratory, is widely known among earthquake scientists for a variety of important contributions to seismology. In 1977 he devised a new method for KANAMORI, page 5

Right-To-Know Act

Office of the Vice President for Student Affairs

The Student Right-To-Know Act and Campus Security Act was signed into law on November 8, 1990. This act requires colleges and universities whose students receive federal student aid to disclose and report undergraduate graduation and persistence rates and to make available certain crime statistics and campus security policies. You have already received a report on campus security. In accordance with the Student Right-To-Know portion of the act, the following graduation and persistence rates are disclosed:

- Of the 194 freshmen enrolled during the 1986-87 academic year, 159 graduated by June, 1992, yielding a graduation rate for this cohort of 82%.
- Of the 224 entering freshmen enrolled during the 1991-92 academic year, 208 have re-enrolled during 1992-93, yielding a persistence rate of 93%.

Graduation and persistence rates will be reported in the Caltech Catalog under "Student Retention" in the Catalog's "General Information" section.

Nominations for the following ASCIT-appointed positions will close at midnight today:

• Tech Business Manager

• little t Editor

- little t Business Manager
- Big T Editor
- Big T Business Manager

Sign-up sheets are on the East side of Winnett. Interviews for these positions will be held on Tuesday at the next ASCIT BOD meeting.

The Day Prize, given every three years, is awarded to a distinguished scientist and renowned lecturer in the physics of the Earth whose lectures would make a timely and

California Tech In this issue. . . The Car Part Report..... 4





letters to the editor

Do Staff Respect the Honor System?

I was recently speaking to the head of Caltech Security regarding a parking ticket I received for parking in the Ruddock lot. He commented that the Ruddock and (presumably) the Sync lot were yellow zones because ten years ago the students asked for them to be that way. (Some were angry at having cars blocked, etc.) On asking the hypothetical "What if the students asked for them to be changed back?" the answer was that such a move would have to go through Gary Lorden. When I asked why this was so, the reply was,

"This is not a democracy. Would you like to know what the honor system is? The honor system is nil. Maybe it works among the students, but it won't ever work with anybody else."

In effect, in that one statement, the head of Caltech security was telling me that our entire ideal as members of this community not to unfairly disadvantage one another is only so much bafflegab. Right there it was: unfair disadvantage is okay as long as he can find a way to get it approved.

Anyway, what I'm trying to say is that the things we hold sacred as students of this institution are mocked by the support staff of this same institution. Something tells me this isn't the first time something of this nature has happened, and I'm willing to bet that it won't be the last. And I'm disgusted by it. I'll never wonder again about the reasons for friction between students and staff. We seem to have very different ideals.

> Sincerely Yours, D.A. Kornreich

Service or Servitude?

I would like to respond to the President's call for "national service" from American youth. In his letter to the Tech, Mr. Clinton implies that virtue is achieved through service to others-in this case, "the nation." This is not "the excitement and idealism that makes us Americans." There was a time when American leaders believed in "life, liberty, and the pursuit of happiness." This does not mean other's life, liberty, and happiness. This means your life, liberty, and happiness. "National service" is contrary to the values of individuality, freedom, and productive achievement that are distinctly American. The United States Government and the position of President were created to uphold and protect these values, not destroy them.

Mr. Clinton thought it important to refute those that "insist that you [America's youth] measure your success in the accumulation of material things" (in other words, we are concerned with making money). The creation of more wealth is *exactly* the kind of thing people should be concerned with. This is what "lifts our country up." This is what creates jobs, raises the standard of living, and makes it possible to enjoy life on earth *not* government control of our lives.

America's youth are not national resources. I am not an indentured servant because of my talents and abilities—this is my answer to the Presidents call to action.

Chris Echols



CURE YOUR FATIGUE, PAINS & STRESS

• Create an awareness of your own body • Develop correct posture and movement that can free yourself

Reasons to Limit Your Alcohol Intake

by the editors

This week has been a time of relative calm at Caltech. No Nobel prize winners, no student unrest. Nothing out of the ordinary. The comic pages of the nation, on the other hand, are in a period of transition and turmoil. "For Better or For Worse" is tackling issues of homosexuality, Charlie Brown won a baseball game, and "Marmaduke" was actually funny! All this comic action has prompted us to ruminate on the current state of the Tech's comic features. Before making any drastic changes in our comic selection, we'd like to get some input from the Caltech community. If you have any strong feelings about which comics we should or should not carry, drop a note in the box outside office 40a in

the SAC or email to editors@tech. Yes, we know that Techers don't fill out surveys, but just the same, we'd like to hear from you. So far, we have gotten two suggestions:

1) Drop Dilbert.

2) Since the LA Times does not print "The Family Circus" every day, subscribe to it.

We will stop taking suggestions late next week.

Well, third term is here, spring is in the air, and, quite naturally, a young student's thoughts turn to writing for The Tech. At least, we, as editors, need people to write for us. As a student publication, The Tech thrives on the diligence and creativity of the students who contribute to its creation. Anyway, we're the new editing crew, and we would like to offer you the chance to get in on the ground floor of our fresh new organization. Come to the Coffeehouse for free lunch and the Tech meeting at 12:15 today. Write for the Tech, because only you can prevent glaciation.

The California Tech	
Volume XCIV * Number 21	
April 2, 1993	
April 2, 1960	
EDITORS	
Michael "Q" Benedetti	
Chris "O" DuPuis	
 Michael "Q" Radford 	
······································	
EVENTS & NOTICES EDITOR	
Chris "Q" DuPuis	
CRIME BEAT EDITOR	
Gypsy "Q" Achong	١.
Gypsy & neuong	ľ
WORLD NEWS EDITOR	
Momo "Q" Jeng	
Michael & Joing	
PHOTOGRAPHER	
Anoop "Q" Sinha	ŀ
WRITERS	ŀ
Rajesh Bilimoria	
Andre "Q" Yew	
Khurram "Q" Dastgir-Khan	
Dirk "Q" Runge	
BUSINESS MANAGER	
Khurram "Q" Dastgir-Khan	
	Ŀ
ASSISTANT BUSINESS MANAGER	ŀ
Chris "Q" Echols	

CIRCULATION MANAGER Sean "O" Vellucci



The California Tech



by Gypsy Achong

BEAT

To all parents: Please check the area around Millikan pond for broken glass before allowing children to play there.

- 3-21 1:25 л.м. A student placed his clothes in a washer in the North UG laundry room. On returning to complete his laundry chores, he found his clothes on the floor and covered with bleach.
- 3-22 11:41 л.м. Three men drove up to a vehicle parked off campus on Wilson Ave near the Tournament Park entry. One of the men jumped out of the car and smashed the driver's side window of the parked vehicle. When he noticed that he was being watched, he ran back to his car and sped off.
- 2-1/3-25 Someone has been inserting crazy glue into door locks in Sloan, Karman, and Crellin, rendering the locks inoperative.
- 3-12 3:00-7:30 л.м. The cable TV box wires and TV cord in Braun House Lounge were cut and the cable box and remote control were stolen. \$300
- 3-12 8:00 л.м.-4:30 р.м. The rear sliding window of a vehicle parked in the Tournament Park Parking Lot, south of the tennis courts was removed, and a radio/CD player, along with a CB radio were stolen. Apparently the thief opened the bonnet of the vehicle and cut the alarm wires in order to silence the alarm system before the burglary. \$590.
- 3-15 6:45 л.м.-4:30 р.м. A radio/cassette player was removed from a vehicle parked in the Chester Parking Lot, even though the player was mounted behind the seat. Both door locks were tampered with. \$200.
- 3-16 7:20 A.M.-5:05 P.M. Someone jimmied the driver's side lock of a vehicle parked in the Tournament Park Parking Lot, south of the tennis courts and stole an AM/FM radio/cassette player and a CD player. Value of items unknown.
- 3-19 12-2:45 P.M. A CPU was removed from a room on the second floor of the Beckman Institute. The room was open when the unit was stolen. Value unknown at the time of the report.
- 3-20 11 P.M. An alum and an undergrad were walking toward the Caltech apartments at 150 S. Chester when they were approached by two men, one of whom appeared to be carrying a handgun. The man pointed the gun at the alum and demanded his money. On obtaining the alum's wallet, the two suspects fled, heading west towards Lake on Cordova. \$25.
- 3-16/19 The trunk of a vehicle parked in the South Lura Parking Lot was forced open, and an emergency earthquake kit was removed. \$30.

Total for spring break: \$1145

If anyone has suggestions for possible improvements on this section, please let me know. My email address is gachong@cco.



Bosnia-

Herzegovina General Morillon, head of the U.N. forces in Bosnia, gave in to Serbian demands that he deliver aid without military protection. Croatian and Mus-

lim leaders signed a peace agreement, but the Serbian leader Radovan Karadzic refused to sign.

Cambodia

U.N. troops were attacked by Maoist Khmer Rouge guerillas. A Bangladeshi soldier was killed, becoming the first U.N. soldier killed by fighting in Cambodia.

China

Premier Li Peng was elected to a second five-year term by Parliament.

Costa Rica

Jose Urbina Lara released the members of the Nicaraguan embassy which he held hostage almost two weeks ago.

Egypt

Government raids on suspected Muslim extremists continue. Police killed one and arrested 42 suspects.

Egyptian police arrested Mahmud Abouhalima, who is suspected of participating in the planning of the bombing of the the World Trade Center. He was turned over the the U.S.

El Salvador

Oresses - Shirts Hours: Mon Special r 3519 E Colorado

Following a U.N. report on various human rights violations by the El Salvador government, the right-wing Arena party in El Salvador granted amnesty to all Salvadorans who committed political crimes and murders be-



fore 1992. President Cristiani said that the countries troubles could only be solved if people would "forgive and forget." Critics say that Arena is merely protecting itself. Earlier in March, the U.S. suspended military aid after El Salvadorviolated other U.N. peace accords.

Arena picked Armando Calderson Sol to run for president in the elections next year.

France

The Socialist party did very badly in elections Monday. Conservative forces took 484 of the 577 seats in the National Assembly. Socialist president Mitterand said that he will not resign, but will stay for his full term, which ends in 1995. He picked conservative Edouard Balladur of the Giscard d' Estaing party as Prime Minister.

Israel

Ezer Weizman was elected president. Although the job is largely ceremonial, he hopes to use it to push for peace. He advocates the creation of a Palestinian state.

Benjamin Netanyahu became head of the opposition party Likud. He attacked the current government for giving too many concessions to the Arab countries.

Russia

President Yeltsin declared that he would temporarily rule by decree, and ordered a new constitution drafted and new Parliament elected. Ruslan L. Khasbutalov, Yeltsin's main political opponent, called for his impeachment. Yeltsin dropped his plan to rule by decree. While

617 voted for his impeachment, and only 268 against, the impeachment failed, because twothirds of the 1,033-member Congress is needed for an impeachment. The Congress later voted for to strip Yeltsin of some of his powers, and to hold a referendum on Yeltsin.

South Africa

President de Klerk said that in the late 1970's South Africa had built six nuclear bombs, but that in 1990 they destroyed all of them along with their blueprints. He said that he plans to abide by the Nuclear Non-Proliferation Treaty and to give international inspectors access to investigate.

Sudan

A cease-fire in the civil war was declared. The government explained that the cease-fire was intended to provide a good atmosphere for the upcoming peace talks.

United Kingdom

A bomb went off in Warrington, England, killing 1 and injuring 40. Police blamed the Irish Republican Army.

United States

Federal negotiations with David Koresh continue.





It's a harsh world out there, and it isn't getting any better. You can help. You can WRITE FOR THE TECH.

We need writers, photographers, reviewers, artists, and dancers. No matter what your talent, we can use you. For more information, come to our weekly meeting in the Coffeehouse at 12:15 P.M. on Friday.

OOTOM INICON				+ · · · ·
FOR MEN & WOMEN		Style Cut \$1200		\$2 off
ALTERATIONS - PROMPT SERVICE	· .		•	<i>φ</i> ∠ 011
CUSTOM MADE: - Shirts - Suits - Slacks - Shorts - Specialty Items		Permanent Wave \$4000		\$5 off
s: Mon Fri 8:30-5:30, Sat 2_4 or by appt REWEAVING		9 a.m6 p.m., Monday-Saturday		(818) 795–5443
Special rates for Caltech/JPL community		14 N. Mentor Avenue, Pasadena		No Appointment Needed
Colorado Blvd, Pasadena (818) 793-2582	ļ			

HOLY WEEK April 4 - 11, 1993 CALENDAR OF PRINCIPAL CELEBRATIONS [in Winnett Student Center]

lm Sunday	MASS & BLESSING OF PALMS	10:00 A.M.
ly Thursday	MASS OF THE LORD'S SUPPER	5:15 P.M.
od Friday	LITURGY OF THE PASSION	5:15 P.M.
ly Saturday	EASTER VIGIL & MASS	11:00 P.M.
ster Sunday	MASS OF THE RESURRECTION	10.00 A.M.
	od Friday bly Saturday	bly Thursday MASS OF THE LORD'S SUPPER bod Friday LITURGY OF THE PASSION

For MORE INFO call 790-9706 or pick up a program at the Caltech Y.

The Newman Center Catholic Students at Caltech

The California Tech



Last Year We Achieved Sales of \$60 Billion, **Increased Our Commercial Services** Business By 40%, and Spent \$9 Billion on Developing The Next Generation of Information Products.

Imagine What We Could Do In A Good Year.

Take a good look at IBM. A look at the facts instead of the furor. And what you'll see is one of the most solid, dynamic companies the world has ever known.

Last year alone our growth in commercial services was four times the industry average. Our patent portfolio has grown to 30,000

Dilbert[®] by Scott Adams I NOTICED THAT MY ARMS ARE FLATTER THAN MY PARENTS' ARMS. IN A MILLION YEARS THIS NATURAL ADVANTAGE WILL THERE GOES THE HAPPIEST TOO EVOLUTION TAKES MILLIONS OF YEARS, RATBERT. YOU'LL BE LONG GONE BEFORE RATS DEVELOP FLYING SKILLS THAT'S WHAT THEY SAID TO THE WRIGHT BROTHERS continued from page 1

Mummenschanz

face, it gave a look of confusion when one member of the audience threw the balloon back to the stage.

The magic of Mummenschanz lies not only in their excellence as performers and dancers; it lies in their creative sense, their ability to poke fun at humanity. The sketches are amusing because even though there are sometimes few visible human forms, the human element is always present.

If and when Mummenschanz returns to Caltech, you should take the opportunity to experience their performance.



patents worldwide—by far the industry's largest. And our \$6.5 billion research and development budget is a full three times the size of our nearest U.S. competitor.

All of which means that few computer companies anywhere can offer you the excitement or the possibilities of IBM. And that the world's biggest computer company is still home to some of the world's biggest opportunities.

All the second second second	and the second design of the s	000000000000000000000000000000000000000	ALCONTRACTOR IS	A
STATE A LOCAL DATA OF COMPLEX STATE	CONTRACTOR CONTRACTOR	COLORADO DE LA COLORA	Discussion in page 1	(HO)
CONCEPTION NO.	Children in the second second second second second	Property and a second second	Providence and a second second	9
COLUMN 1	CONTRACTOR OF CO	Accuración ten vez	Constanting	
ECCC20103	- Exclusion parameter	COMPANYING NOACH WE	CONTRACTOR OF	
10.000-000	second and a later to represent the second	Contraction of Contra	(váva Kastyránijí návyší)	
Succession of the local division of the loca	Contraction of the local distance	STATUS CONTRACT		
2220000000	TO SHOW WAS ADDRESSED.	ECOLUMN CONTRACT	and southers a	
ACCOUNTED IN	- Chicago Carristonia	10002002 E00000	007 EXCLUSION 700	
00000000	1000000 0000000000000000000000000000000	8007030 W2005	10 Hittohan	
COMPACT STREET, STREET	Construction of the second s	Shinese State	7 Enteringentes	
Contraction of the local distance of the loc	Pitelen and a second second second	Sheel warman best	67040(5/96/6)(6/9	
Providence of the second second	Contraction of the second s	100000000000000000000000000000000000000	AD DE KOM SOMSO	

An Equal Opportunity Employer

Vasary Conducts L.A.C.O. in Bartók, Kodaly

by Andre Yew

The California Tech

Why should anyone plod through rain and go over to the Ambassador Auditorium? If it was last Thursday, March 27; you had three good reasons: Mendelssohn's G minor piano concerto, Bartók's Rumanian Folk Dances, and Kodaly's Dances from Galanta. On that day, the Los Angeles Chamber Orchestra (L.A.C.O.) played the first of two concerts with conductor-pianist Tamas Vasary at the Auditorium.

The Mendelssohn piano concerto lived up to its expectations as a showy, crowd-pleasing opening piece. Everyone in L.A.C.O. seemed to be having fun accompanying Vasary as he tore through the piece. Vasary himself seemed to enjoy himself-he seemed to maintain a playful dialogue that the audience could feel. I found myself smiling all the way. Technically, both soloist and ensemble were tack on-the impressive ending taken at presto was very clear and very fast. It didn't hurt the novelty factor either with Vasary conducting from the piano bench. It's too bad that Vasary has never recorded Mendelssohn.

Tamas Vasary changed roles to only conductor when he conducted the Bartók Rumanian Dances. Again, the ensemble played the set of seven dances with great skill and aplomb. They maintained a strong rhythm throughout and seemed like they were having fun. The Dances are derived from Hungarian folk tunes Bartók recorded and transcribed, and it seemed to me that L.A.C.O. understood as well as anyone else the spirit of these pieces.

Kodaly's Dances of Galanta are similar to the the Rumanian Dances in that Kodaly followed Bartók around and transcribed folk melodies as well. As with the Rumanian Dances, Galanta speeds up from majestic in the beginning to frenetic in the end. There are plenty of folk tunes in Galanta, and they're usually introduced and carried by solo instruments. Of course, the L.A.C.O. soloists were more than up to it and played with great enthusiasm. And like before, L.A.C.O. played the set of Hungarian dances as idiomatically as

they could.

Then, surprisingly, it seemed someone kidnapped the wonderful ensemble we had and replaced them during the intermission. The last piece of the concert, Mendelssohn's Scottish Symphony was played by a tired looking group that didn't seem to have much energy. Mistakes were much more common as well. Even worse for them, the Scottish is relatively more sedate than the previous three pieces, and so the flat playing seemed more painful. It was an unfortunate way to end an otherwise great concert.

All in all, it was definitely worth suffering the rain to see LACO perform. It's gratifying to have a source of high-quality music so close to Caltech.

continued from page 1 Kanamori

determining the magnitudes of very large earthquakes, based upon the energy they release. This "energy magnitude" includes the effect of seismic waves with very long periods-up to one hour-that earlier methods didn't account for. Using the improved technique, scientists found that the sizes of past large events, such as the 1960 Chilean earthquake, and the 1964 Alaskan earthquake, were in error by factors of up to 30 in energy, or more than one full order of magnitude.

More recently, Kanamori and a colleague, Masayuki Kikuchi, published evidence supporting a theory Kanamori proposed more than twenty years ago about the cause of some tsunamis, or seismic sea waves. Based on records of tsunamis and earthquakes, Kanamori found that not all big earthquakes that create large tsunamis are strongly felt. "Tsunami earthquakes," as he calls them, are difficult for people to feel because they release most of their energy in very long period seismic waves, but they can create tremendous ocean waves. The resulting tsunamis often catch people unaware and cause great destruction. Kanamori believes seismic monitors sensitive to long period earthquakes could alert coastal populations and prevent many deaths.





Conductor-pianist Tamas Vasary conducts the Los Angeles Chamber Orchestra.

Guarneri String Quartet with Peter Serkin

by Khurram Dastgir-Khan

By the time Mozart's A-major Ouartet-the first work of the evening-was over, my nose had stopped bleeding. So I was hale when I heard the Guarneri Quartet and Peter Serkin give a stirring world premiere of Hans Werner Henze's Quintet for Piano, two Violins, Viola and Violoncello. The name is appropriate, because the piece sounded as for five separate instruments.

Through the three movements, the piano played the part of an agent provocateur. This was especially the case in the first movement, aptly titled "Wild," which contained several solo passages for the piano. I best appreciated the Adagio, which contained a passage

for solo piano, first joined by the viola and then, in turn, by the cello and the two violins. The synergy was euphonious as the music moved to an allegretto moderato passage and then returned to the adagio tempo. The third movement started soft-described by the composer as "almost like whispering"-and then progressed into deliberate dissonance.

The final work on the program was Dvorak's A-major Quintet, a radiant, lively piece that cheered me up no end. The quartet and Mr. Serkin were excellent. It was difficult to judge their performance in Henze's Quintet, but they played both the Mozart and the Dvorak pieces with exemplary grace, energy and skill.



April 2, 1993



April 2, 1993

Minutes of the ASCIT BOD Meeting: March 30, 1993

by Karen Shih

Present: BOD minus Asif (half an hour late), Dave Derkits (Elections Committee), Michael Kantner (Caltech Bicycle Club), Gavin Claypool, Jennifer Trittschuh.

The Bicycle Club is asking for \$400 to help them through the rest of the season, ending sometime in May. Activities include two weekly bicycle rides, general bicycle repairs, and representing Caltech in several collegiate cycling races. The money is basically to cover part of the travel expenses, i.e., hotel accommodations and mileage reimbursements, and subsidy for each race entry as well as purchase of team jerseys. In the future the Club is also looking to install bike racks for the ASCIT van which could also be used for skis... etc. The Graduate student to Undergrad ratio on the club is approximately five to two and there are also three faculty members involved from time to time. The GSC has already approved to give

the Club \$300 and the Dean's Office, \$400. General consensus of the BOD is that it would be OK, but since the Budget Meeting is only a few weeks away, we suggested that it maybe possible to give the Club funding for the next fiscal year, which would include the rest of this season, at the budget meeting, instead of doing it twice.

Social Director—sign-ups for the ASCIT formal are up in each House. In light of the depressed state of our present economy, the price for each couple this year is only \$40, which is \$10 less than last year. It will be held on Saturday, May 7th at the Athenæum. Anandi also wants to send flyers to Off-Campus Techers about the Formal. The BOD thinks it's O.K. Also, Pre-frosh party is scheduled for Friday night at 9:00 P.M. of prefrosh weekend.

Budget Meeting—will be held in the Salvatori Room (365 South Mudd), from noon until ? on Sunday, April 25th. Proposal forms for club funding may be obtained from Angie in Page 109.

C-House—Kim is coming over next week to discuss the role of C-House in future undergraduate life-style.

Executive Committee Chair— Moeen nominates Jennifer Trittschuh for the position of Executive Committee Chair. The Executive Committee this year figured more prominently than ever in the interpretation of bylaws and election procedures; approval of this position should require more discussion. Discussion is tabled until later in the meeting.

Moeen obtained a list of past ASCIT office holders (President, Vice-President and IHC Chair apparently any other job on the BOD is just chicken scratch) from the Dean's Office. He wants someone to keep a record of the names. Mike says he'll do it.

Moeen's extension is up and running—x6757. Also, to keep at least one of his campaign promises, Moeen will be having Office Hours for his constituency to come and nag him about anything they want. More on the exact time and day to follow.

The bench for former Dean of Students, Dr. Chris Brennen, needs a place to sit. Ben Smith suggested a spot across the Olive Walk from the Fleming Cannon. The BOD figures there's no better place.

Treasurer—Ewald started to roll the change in the office. Come by if you want to buy some quarters. He would appreciate any help in this matter.

Election Procedures—Two systems were brought up at the last BOD meeting for which proposals are to be drawn up over spring break. More concise definitions and procedures of "tie," "error," and validation of election results as well as destruction of ballots are also presented:

I. At most three elections will be held for each office. Each voter has one vote. Candidates who qualify for the first runoff election will be determined according to the present procedure; there will



II. Only one election will be held for each office. Each voter may rank the candidates in order of descending preference. The logistics of this system was adequately discussed in the previous meeting. The debate here is how to retain one's right to use NO as a viable vote. One system favors using NO as only a number one choice and allowing subsequent ranking under NO. Another argues for either ranking the candidates or voting NO. In either case, NO has a chance of winning only if it receives a simple majority of the most preferred (number one) choice, which is theoretically in accordance with the present system. The basic difference is that in the first system, by voting NO, the voter could still have a say in subsequent "runoff elections", whereas in the second system, if NO does not have a majority in the first round, then that ballot will carry no more weight after that; effectively, that ballot will be treated as an abstention thereafter.

An informal straw vote reveals that the BOD is split down the middle over this issue. Vote will be taken at the next BOD meeting.

Mike presents a mathematician's interpretation of error: ... shall be defined as one plus the difference between the number of correctly cast ballots and the number of signatures received in that election (registered names).

majority:

... shall be defined as one plus the error plus half the number of correctly cast votes.





Every year, a lot of people make a huge mistake on their taxes. They don't take advantage of tax deferral and wind up sending Uncle Sam money they could be saving for retirement.

Fortunately, that's a mistake you can easily avoid with TIAA-CREF SRAs. SRAs not only ease your current taxbite, they offer a remarkably easy way to build retirement income—especially for the "extras" that your regular pension and Social Security benefits may not cover. Because your contributions are made in before-tax dollars, you pay less taxes now. And since all earnings on your SRA are tax-deferred as well, the money you don't send to Washington works even harder for you. Down the road, that can make a dramatic difference in your quality of life.

What else makes SRAs so special? A range of allocation choices—from the guaranteed security of TIAA to the diversified investment accounts of CREF's variable annuity—all backed by the nation's number one retirement system.

Why write off the chance for a more rewarding retirement? Call today and learn more about how TIAA-CREF SRAs can help you enjoy many happy returns.

Benefit now from tax deferral. Call our SRA botline 1 800-842-2733, ext. 8016.



© 1993 Teachers Insurance and Annuity Association/College Retirement Equities Fund.

75 years of ensuring the future for those who shape it."



CREF certificates are distributed by TIAA-CREF Individual and Institutional Services. For more complete information, including charges and expenses, call 1 800-842-2733, ext. 8016 for a prospectus. Read the prospectus carefully before you invest or send money. time there will be a big proposal

presented to the student body for

nomination for the position of

election chair is left to the present

office holder and the ASCIT Sec-

retary, nominations are to be open

to the public as any other ASCIT

appointed offices. On that note,

Gavin expresses his wish to con-

duct interviews for Tech Business

Election Chair position-the

approval.

There are still rough edges to be smoothed out over what is meant by "public release" and destruction of ballots in a more concise time frame.

Discussion on Executive Committee Chair (conducted in the absence of Jen) questions are raised over how Moeen arrived at the nomination, whether he should have consulted more BOD members. Similar to a presidential nomination for the Supreme Court however, this is one of the perks of the Presidential office, and the BOD's job is to say yea or nay to the nomination. Motion to accept the nomination passed 6-1-1.

Mike-yet another bylaw change; present requirements for the positions of BOC Chair and Secretary fails to include previous experience on the BOC. Mike feels that the duties of the positions are unique enough such that a change in the bylaw to add the requirement may be warranted. The change sounds reasonable. The BOD decides to wait until after election procedures have been finalized to deal with this. At that

FOR SALE-

(213) 933-9351.



Manager next week. It is decided then that nomination for *little* t Editors, little t Business manager, and Tech Business Manager will close at midnight on Friday, and interviews for those positions will be held at the next BOD meeting. Furthermore, nominations for all other ASCIT appointed offices are to be open ASAP.

The next meeting will be at 10:00 Р.м., Tuesday.



April 2, 1993



(206) 632-1146 ext. J5955

\$200-\$500 WEEKLY

Assemble products at home. Easy! No selling. You're paid direct. Fully guaranteed. FREE information - 24-hour hotline. (801) 379-2900. # CA133550

ROOMMATE WANTED-

ARCADIA TOWNHOUSE. 5 minutes to mar ket Prefer nonsmoker and neat, 2 extra rooms to share. Utilities and furniture included. \$295/month. Contact Vickie Lin (818) 447-6189

SERVICES-

NATIONAL SUMMER SUBLET EXCHANGE List your apartment or find sublet in Boston, New York City, Chicago, Washington DC, San Francisco, Los Angeles, or other US cities. A service for students nationwide. Call (800) 877-3007.

.....\$4.00 for first 30 words; BATES. ...10¢ for each additional word.

Send written ad with payment to 40-58. Deadline is 6 p.m., Monday before issue. No charge for on-campus lost & found.

2-20-93 SHOW4 ALL PRICES AND PRODUCTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE

Notices

Bi 137: Multicellular Assemblies—There will be an O.M. for this class today, April 2, at 10:00 A.M. in the Biology Library. Call Prof. Revel at x4986 if you have any questions.

Hum 119: Ethnic Visions (3-0-6)—This combination film series and academic course will look at how members of the African American, Asian American, and Latino American communities portray their own ethnic groups on the screen. Autobiographical works by ethnic writers will also be covered. Instructor: Rosenstone. Films— Monday 7:30 P.M.—Baxter Lecture Hall (April 12-May 24). Lecture & Discussion—Tuesday 1-2:30 P.M. Baxter 125 (March 30-June 1).

Guitar Classes at Caltech—Classes for the Spring Term will meet on Tuesdays starting April 6 in Room 1 of the SAC. Beginners from 4:30 to 5:30 P.M., intermediate from 3-4 P.M., and advanced from 5:30 to 6:30 P.M. For more information, contact Darryl Dennings at (213) 465-0881.

Attention all club leaders—The 1993-94 AS-CIT Budget Meeting will be held at noon on Sunday, April 25. All clubs, old or new, that desire ASCIT funding should fill out a budget proposal information form, available outside Angie Bealko's room (Page 109), by April 23. Further information can be found on the proposal sheets.

Patti Renstrom—Donations for Patty Renstrom's living trust fund are still needed. Checks can be made out and mailed directly to the trustee of the fund: Ann Rossi, Trustee, 301 Encina Hall, Stanford University, Stanford, CA 94305.

Colfing Chub Meeting and Tournament—The next meeting of the Caltech Golfing Club will be on Wed., April 7 at 5:15 P.M. in Winnett club room #1. Light refreshments will be provided. Our spring tournament will be on the weekend of April 3-4. The event is very informal, and is open to members and non-members of any skill level. For more information about either event, please contact Bob Blake at x6576, MC 114-58.

Poetry Sought for Book—Ceneral poetry is being accepted for the Western Poetry Association's 1993 poetry book entitled "Poetry: An American Heritage." Poets are invited to send one or two original poems of 30 lines or less on any subject. Poems with a point of view or statement are preferred. Please make copies of your poetry. W.P.A. will not return submissions. Mail submissions to Western Poetry Association, P.O. Box 49225, Colorado Springs, CO 80949-9445. There is no reading fee.

Events and Services

Caltech Y ExComm Meeting—The Y invites anyone who wishes to cosponsor an event to attend on the first or third Monday of each month.

Friday Prayer—Prayers organized by Caltech Muslim Students are held in the Caltech Y lounge at 12:30 P.M. every Friday.

Caltech Hillel/Jewish Community Weekly Meeting—An informal gathering, every Thursday at noon in the Y lounge. For information call Caty Konigsberg at (213) 259-2959.

Mass—Thursday at 8:15 in the Y lounge and Sunday at $10 ext{ A.M.}$ in Winnett lounge. Sacrament of Reconciliation (confession) is given 20 minutes before masses. Refreshments are served after mass.

Bible Study and Discussion—Every Wednesday at noon in the Y lounge. Bring your own lunch. For more information call Mike Cerfen at 356-4886.

Gay, Lesbian, Bisexual Support Croup-



Meets the first and third Tuesdays at 7:30 P.M. IN the Health Center Lounge. This confidential meeting is open to all Caltech community members looking for a supportive context in which to address questions and concerns about sexual orientation—including coming out, being out, selfdiscovery, coping with families.... We begin with a focus topic but move to whatever is feeling most relevant to the group that night. Refreshments are served. For information, please call x8331.

Adult Children of Alcoholics—A 12-step group which meets on campus every Tuesday, from 12 noon to 1 P.M., in Y club room 2. The group is open to any student, staff or member of the faculty who grew up with family alcoholism and other problems. For more information call Dinah Lee Schaller at x2961.

Open Line—Open Line meets every Tuesday in the Y lounge upstairs during lunch, between 11:30 and 1:00. Topics discussed include developing a youth center for ages 5-12 for tutoring services, activities and cultural development for the children of Caltech students, staff and faculty, developing a multicultural book for the understanding of all nationalities, traditions and customs. Open to all of the Caltech community.

The CIT-KNIT Group meets at noon on Tuesdays in the Benioff Conference Room (256 S. Mudd). For all levels of knitters. Come and join us.

Baby Furniture Pool—The Caltech Service League loans out baby furniture to students and postdocs on Wednesday at 324 S. Chester from 10 to 11 A.M. For more information call 952-1631.

Entertainment

All-Mozart Concert—The Caltech Chamber Singers and the Caltech Wind Ensemble perform an all-Mozart program in Dabney Lounge on Saturday, April 3 at 8 P.M. and Sunday, April 4 at 3:30 P.M. Admission is free. For more information, call x4652.

The Wallace Collection—Tonight, 8 P.M. Beckman Auditorium. John Wallace and company perform a selection of pieces for bras and wind instruments entitled "Turkish Delights and other Trumperies." For more information call x4652.

Caltech Animé—Tonight, April 2 in the SAC T.V. room, Caltech Animé, the Japanese animation club at Caltech, will present *Baoh* and *Armor Hunter Mellowlink*. Then, at 9 P.M. the feature film *Patlabor: The Movie* will be shown.

Caltech Jazz Bands Play the Baked Potato— On Sunday, April 18, from 8:30 P.M. to midnight, the Caltech Jazz Bands will appear at The Baked Potato at 26 E. Colorado in Old Pasadena. This club serves food, drink, and gourmet baked potatoes. Ceneral admission is \$8, and \$4 forstudents with ID, and there is a two (2) drink minimum. For more information call The Baked Potato at 564-1122.

Caltech Y—The Caltech Y presents The Steed Woodwind Quartet today at noon in the Winnett Quad. Also, the Y has tickets to the Pasadena Symphony on Saturday at 8:30 P.M. for \$6 and tickets for *Phantom of the Opera* tonight at 8 P.M. for \$15. Go to the Caltech Y (second floor of Winnett Center) for details and tickets.

German Film Series—On Thursday, April 8 at 7:30 p.m., the film "Verlorenes Leben" (with English subtitles) will be presented in Baxter Lecture Hall. There will be an introduction and

discussion after the showing.

The Pasadena Folkdance Co-op offers beginning and intermediate instruction every Friday at 7:45 r.M. in Throop Unitarian Church on the corner of Los Robles and Del Mar. A program of varied international dances follows the instruction at 9:00 and continues until 11:00. Wear soft-soled shoes. A contribution of \$1.50 is requested.

International Folk Dancing—Tuesday nights in the Dabney Lounge. Beginning instruction starts at 7:30 P.M.; intermediate at 8:00 P.M. and open dancing takes place from 9:00 until midnight. Donations are accepted. For more information call Mike McKenna at (310) 692.0366.

Israeli Folk Dancing—Sundays in Winnett lounge, Beginning instruction starts at 7:30 P.M., intermediate at 8:00 and open dancing goes on from 8:30 to 10:30. For information call Nancy Macmillan at 795.3655. Admission is \$2.00.

Scottish Country Dancing—On Wednesdays in Dabney Lounge from 8 until 10 P.M. Beginners are welcome and no partners are needed. For more information call David Hills at 354.8741.

Music with James Boykl—Pianist James Boyk gives a performance each Wednesday from 4:30 to 6 P.M. in Dabney Lounge. The performance is open to the public and free of charge. Feel free to come late or leave early. For more information call x6353.

Lectures and Seminars

"New Light on the Nature of Darkness"— Beckman Auditorium, Wednesday, April 7 at 8 P.M. Dr. Jeff Kimble, professor of physics at Caltech, will give this Earnest C. Watson Lecture. Admission is free to all. For more information, call x4652.

FOCAL Luncheon—John Charles Fremont, a colorful and enigmatic figure in the history of the American West, will be the subject of a talk at the annual FOCAL luncheon on April 20 in the Athenaeum. Historian Andrew Rolle will interpret Fremont's career as explorer, general, and politician, based on his new biography. Reception at 11:30 A.M. on the East Patio; luncheon at noon, the Hall of the Associates. Cost: \$20 for FOCAL members and \$22 for non-members. For reservations, call Gloria Thomas at x6411.

McCarthyism and Caltech—On Thursday, April 8 at 4:00 P.M., Ms. Iris Chang will present a seminar on the career of Tsien Hsue-Sheh. The seminar will be held in the Judy Library, and refreshments will be served beforehand.

"Cooperation in Space"—Caltech Management Association presents Gus Guastaferro, Vice President, NASA Programs, Lockheed, discussing he current basis of Civil Space Program development and how the relationship has evolved between Government, Industry, and Academia. Thursday, April 1, 1993 at 5:00 P.M. in von Karman Auditorium, JPL. Refreshments will be served 15 minutes prior to the presentation.

Scholarships, Internships

& Competitions

The E.T. Bell Undergraduate Mathematics Research Prize—A cash prize of \$500 will be awarded for the best original mathematics paper written by a Caltech junior or senior. Contestants must be nominated by a faculty member familiar with their work. Each student is entitled to only one entry. All contestants nominated must submit their papers in final form to their faculty sponsors by April 27. A faculty committee will then judge the papers and announce its decision before the end of third term.

The Morgan Ward Competition-Any Caltech freshman or sophomore may enter this contest. An entry may be individual or joint (submitted by a group of two or more students), and each student may make at most three entries, of which at most two may be individual. An entry is to consist of a mathematical problem, together with a solution or significant contribution toward a solution. Any outside references used should be cited (the Honor System applies here). Entries must be placed in an envelope and delivered to the Mathematics Office, 253 Sloan, during the fourth week of the third term. The name of the contestant or contestants must be written on the envelope only, not on the entry. Prizes will ordinarily be awarded for the 2 or 4 best entries, the value of each being \$75.

Study in Korea this summer! This program is open to all international students who want to spend 6 weeks in Korea taking courses from many varied humanity and social science classes offered at Yonsei University, which is located in Seoul. Optional week-long field trip to Korea's historical sites and major tourist attraction is also available at additional cost. The total cost ranges from \$1350 to \$2400 depending on the contents of your option. Applications can be obtained from Henry Choi, (x6078, Mailbox 380) By the way, the program begins on June 26.

Planetary Society—College Fellowship Awards—Undergraduates majoring in science or engineering may apply for one of up to five grants of up to \$1,000 each. Each applicant must be a member of the planetary Society or be nominated by a member. Fellowships will be awarded on the basis of scholastic achievement, commitment to a career in engineering or a planetary-related science, and a 2,500 word essay on a relevant topic.

Mars Institute Student Contest-All high school and college students are eligible to enter the Mars Institute Student Contest. The prize is \$500 and an all-expense paid trip to a Marsrelated conference, awarded to the best essay on the years designated topic. This year's topic asks students to discuss the possibility that spacecraft landing and moving about on the surface of the planet Mars could contaminate the surface or atmosphere of that planet, and to propose procedures to prevent it from occurring. Entries to these programs must be received by the Planetary Society no later than May 17. Additional information and application forms may be obtained by writing: The Planetary Society, Scholarships Department, 65 N. Catalina Ave., Pasadena, CA 91106.

Master-Program—Information Networking Institute of Carnegie-Mellon University. Brochures and Information about the Bellcore Graduate Study Program (GSP) are available in the Career Development Center, 8 Parsons-Gates,

The California Tech

x6361. This is a company sponsored program where students receive tuition, fees and a stipend and will work for Bellcore during the summer. For Details on the following announcements contact the Career Development Center, 08 Parsons-Gates, Ext. 6361.

Malin Space Science Systems has opportunities for grad students in GPS to participate in the operation of the Mars Observer Camera (MOC) in San Diego between September '93 and September '94.

RAND will be sponsoring interns in a wide range of academic disciplines in its Graduate Student Intern Program this year. They are looking for applications from students who have completed 2-3 years in Ph.D. study and are interested in the analysis of public policy problems.

For information on the following scholarships please contact the individuals listed at the end of each scholarship.

Attention Writers!-The Mary A. Earl McKinny Prize is awarded each year for excellence in writing. Only full-time Caltech undergraduates are eligible. Prizes will be awarded in the categories of poetry, prose fiction, and non-fiction essays. All submissions must be typewritten and double spaced. In the poetry category, entrants may submit up to three poems. Submissions of prose fiction should not exceed 12,000 words. Essays may be ones prepared for a humanities class or any good piece of original writing relevant to the humanities. The prize in each category will be \$300. Each student is entitled to only one entry in each category. All contestants must submit their work to Prof. Jenijoy La Belle, Division of Humanities and Social Sciences, 101-40, by no later than 5 P.M. on April 29. No entries will be returned. If you have questions, contact Dr. La Belle, x3605, or Barbara DiPalma, x3609.

SIF Award—Applications are now being accepted for the SIF Award as described in the catalog. This competition is established to promote excellence in financial research. An application consists of your name, address, phone number, class, and research report of reasonable length. The deadline for applications is May 1, 1993. Entries should be mailed to 142-58. Any questions should be referred to Dave Krider (577-9955).

The Jewish Family and Children's Services announces the availability of financial support for Jewish individuals and their families. Students may apply for aid by mailing the questionnaire to the JFCS office or calling Ted Schrieber at 415 561 1226 to receive an application. There are no deadlines and students may apply throughout the vear.

The John Gyles Education Fund is offering financial assistance to students in both Canada and the United States. Effective March 1st selected students will receive up to \$2500.00. Deadlines vary. A minimum GPA of 2.7 is required. For details and an application send a self-addressed, stamped (US \$29) No. 10 envelope to, The John Gyles Education Fund, Attention: R. James Cougle, Administrator, P.O. Box 4808, 712 Riverside Drive, Fredericton, New Brunswick, Canada E3B 5C4.

National Institute of Health is seeking juniors and seniors who would like to spend Fall 1993 at the N.I.H. Bethesda, Maryland biomedical research program.



PARIAN TRAVEL Caltech Officially Approved

Most professional, courteous, economical and efficient service for your **official** and **personal** travel needs. Free service to you

Buy Caltech cards and save, save, save					
CONTINENTAL					
TO ALL CALTECH STUDENTS, FACULTY, AND STAFF:					
All the time.	BREAKFAST \$2.19 with soft drink or coffee				
Seven days a week.	LUNCH \$4.95 with soft drink				
	DINNER \$6.25 with soft drink				
HEAR THE WEDNESDAY NIGHT	Breast of chicken, seafood, lamb, or the day's special				
JAZZ BAND	SPECIALTIES				
	Shish kebab Shaorma Souvlaki steak				
Mondays – Half price					
Tuesdays – Beer half price. Homemade pizza Gourmet hamburgers					
Wednesdays, Thursdays 3-7 p.m. We cater for all occasions 535 S. Lake Ave.					
– Happy Hour (free hors d'oeuvres with beer purchase). (818) 792-6634					

____ vou

Airlines, Cruises, Tours, Hotels, Car Rentals. Individual, Commercial, Groups. (818) 577-8200

468 S. Sierra Madre Boulevard, Pasadena

California Tech

Caltech 40-58 SAC Pasadena, California 91125