

Prevent  
Unwanted  
Quakes

Continued from Page One  
**The CALIFORNIA Tech**

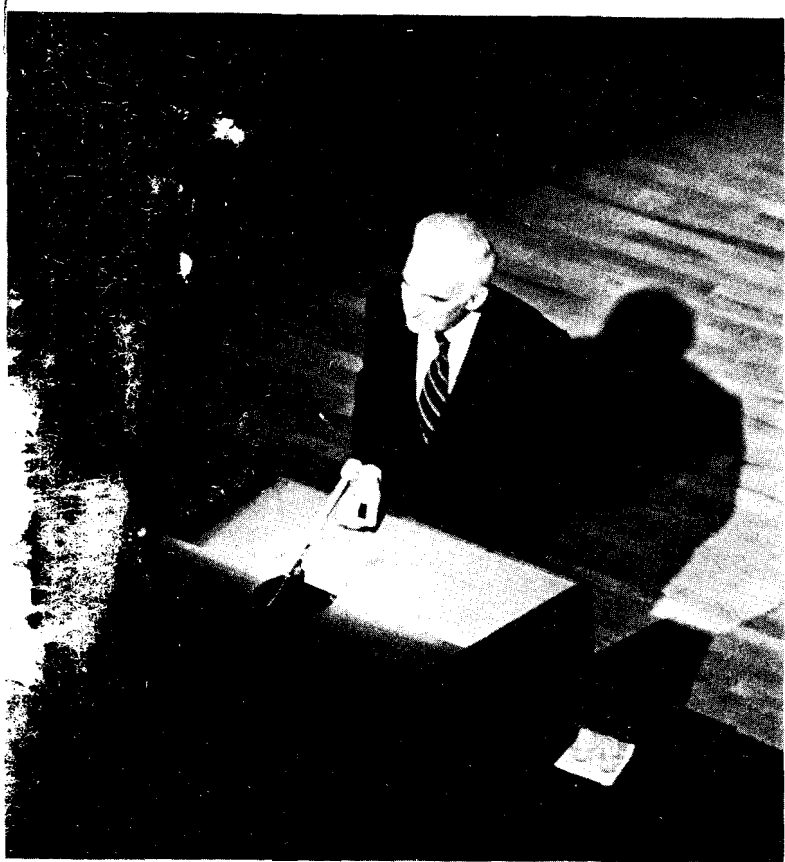
Copyright 1971 by the Associated Students of the California Institute of Technology, Incorporated.

Take  
Earth Control  
Pills

Volume LXXII

Pasadena, California, Thursday, April 1, 1971

Number 22



# Ramo Inaugurates Systems Engineering Seminar Series

by Paul Levin

Caltech's systems engineering course began Tuesday night with an unexpected dedication of Ramo Auditorium. After Dr. Arnold Beckman had introduced the principal speaker, Dr. Simon Ramo, he proposed a toast to a slightly bewildered Dr. Ramo and to the new auditorium. Niceties, like a bottle of champagne and a wine waiter, were thoughtfully provided by *The California Tech* and Dr. Ralph Miles, the professor in charge of Ae 241.

It was fitting that Dr. Ramo, a Caltech alumnus, research associate, and trustee, should be the first speaker. He is currently Vice-Chairman of the Board and Chairman of the Executive Committee

of TRW, Inc., which he helped to found. In introducing him, Dr. Beckman praised Ramo's untiring efforts on the Board of Trustees' various committees.

### Shopping List

Systems engineering, Dr. Ramo explained, is no easy matter. Even defining it is a difficult task. Hence he attempted to give the series a broad overview of the subject. To do this he had prepared a "shopping list" of important ideas.

It was first necessary to define systems engineering. He felt that a good definition would be "doing something right—so it's hard to argue against it [systems engineering]." He explained that this involved being logical and complete and considering interactions, goals

and alternatives. "The systems engineer must understand society as well as he understands science and technology."

This isn't the way in which everyone defines systems engineering. Many people have come up with narrow but inaccurate definitions. It would be fallacious to say that since systems engineering built the Intercontinental Ballistic Missile, systems engineering can improve education. Others have wrongly stated that since computers can model traffic flows on a freeway, computers can solve all of our problems. Neither view is correct.

### Fun and Games

Systems engineering requires that goals be defined, a rather difficult task considering that in most cases we don't know what we want. There is hope for this problem: public pressure has already made pollution, education and medicine matters of the highest priority.

Dr. Ramo mentioned that there is a conflict between systems engineering and the American political system. "Logic is not near the top of the list in the political approach." This does not mean that the systems approach isn't used in politics; it is just applied selectively. Whenever a candidate gathers a group of specialists to help him win a campaign, he is using systems engineering.

Once the goals for a project have been established, enough information must be gathered so that the project can be designed to meet these goals. This requires a team of people with diverse backgrounds and specialties. Here is where a computer can be an immense help, but it still can't solve the problems. Since no project has an infinite time limit, the team will always have to make do with something less than complete information.

### So What's New?

Systems engineering may be a new word, but it has been applied for many years. For example, when the telephone was invented, it was not sold to the customer as a single

Continued on Page Two

## Label Magnate Avery Post Mortem Joins Tech Trustees

Stanton Avery has become a member of the Caltech Board of Trustees according to Ted Combs, secretary to the Board. Avery is the founder and chairman of the board of Avery Products Corp.

After taking a year off from Pomona College to travel in China in 1929, Avery returned to find that when he received his degree (1932) a depression was on. That year, he borrowed \$100 from his fiancée and launched Avery Products by turning parts from a washing machine, a sewing machine, and a sabre saw into a label-cutting machine. (She married him for her money?)

The business grew and grew. Last year, sales exceeded \$127 million, a 15% over the year before.

At 63, Avery is still quite active. In addition to his business he is a trustee of the Huntington Library Art Gallery, the L.A. County Museum of Art, and the Claremont Graduate School.

## Frosh Orientation Part II

On Saturday, April 10 at Tournament Park, the Institute and the Y are co-sponsoring a Freshmen Education Workshop—a follow up to Freshman Orientation. It will be a chance for Freshmen to reflect back on their first two terms and to look ahead to the next three years.

The Saturday Workshop will comprise two sessions. The morning is to be spent in small groups devoted to an evaluation of the past seven months from the point of view of the freshmen participants. Where appropriate, the groups may begin to formulate proposals for change. Though the session will be in the hands of freshmen, upperclassmen and faculty will be present as resources.

The afternoon will focus on specific educational alternatives at Caltech. Among the groups already scheduled are

(1) Choosing an option—separate tables on Chemistry, Physics and Astronomy, Math, Biology, Geology, Engineering, and Humanities and the Social Sciences.

(2) Undergraduate Research—one cross-divisional table.

(3) The Independent Study Program

(4) Exchanging, Interning, & Leaving

(5) Planning the future of freshmen courses—a coordinated discussion of Biology, Physics and Math

(6) Preparing for Medical School. Others will be formed in response to issues raised in the morning.

### Free Food

The workshop will begin with coffee and donuts at 9:30 am, Saturday morning. A catered lunch will be served at noon, compliments

of the Dean's office. All upperclassmen, graduate students, and faculty interested in participating should contact the Y office, extension 2163. Freshmen can sign up with their Resident Associates.

Continued from Page One

All of the April fools at the California Tech office proudly [loudly?] present —

A View of War — Page Two  
Avoid the Draft by Blowing Glass — Page Three

Jazz Quartet to Compete at Pacific Coast Festival — Page Four

The Critical Earache — Page Four

Entropic Gangbanging; or, What's a Nice Guy Like You Doing at A Place Like This — Page Five

Andromeda Strain Infects Screen — Page Five

Tennis: The Ultimate Racket, with Coach Johnny — Page Six

Beckman Calendar — Page Seven

A Salute to Baxter; or, study in hexing — Page Eight

## News Briefs

## Caltech Fifth in Putnam Exam

The team of Leonidas Guibas, David J. Smith, and Andrew M. Odlyzko placed fifth in the annual William Lowell Putnam Mathematics Competition, which attracts the best college mathematics students in the United States and Canada. Odlyzko also received an individual honorable mention.

Over 1,500 students from 288 colleges and universities participated in the examination, which is in its 30th year. Teams winning any of the first five places of the Putnam event are considered outstanding.

In the past decade Caltech has won twice, been second once, third once, fourth once, fifth twice, and scored honorable mentions three times.

According to Prof. David Boyd, who supervised the Caltech entrants, the competition emphasizes ingenuity and problem-solving ability.

### Eugene R. Wilson Joins Caltech Development Program

Eugene R. Wilson has been appointed director of special projects in Caltech's development program, Truman Clawson, director of development, announced today.

Wilson comes to Caltech from Bowling Green State University in Ohio, where he was director of development and assistant to the president. He and his family have settled in Arcadia at 1126 La Rosa Road.

Wilson graduated from Bowling Green in 1960 and took a master's degree in radio and television broadcasting from Syracuse University. He worked in student personnel assignments at the University and later was manager of radio-TV advertising for Columbia Gas of Ohio in Columbus.

In 1966 he returned to the Bowling Green campus. In 1969 he

was named the outstanding young man of Bowling Green, Ohio, by its Junior Chamber of Commerce.

He and his wife, Mary Ann, have two sons, Jeff, 6, and Andrew, 3.

### Bust Talk At Ruddock Monday

What's it like to get busted? How can you avoid it? What should you do if you get busted? Mike Sperry will answer these and other questions Monday evening, April 5 at 7:30 p.m. in the Ruddock House lounge. All those interested in how "the man" operates or in my case, or don't believe the rumors, are invited to stop in.

### Thunderbirds to Fly Saturday

This Saturday, April 3, the Thunderbirds, the Air Force Aerial

Continued on Page Six

## A Physicist's Place Is...



Dr. C. S. Wu, physicist, discussed the place of women in the field of science at the latest seminar in the YMCA's Women in Science series. Topics discussed included the lack of women in the field of physics [with very few—but notable—exceptions, such as Mme. Curie] and discrimination against those women who do work in the field. —Photo by Ctein.

Guest Editorial

# War Is Hell

Samuel said to Saul, 'The Lord sent me to anoint you king over his people Israel. Now listen to the voice of the Lord. This is the very word of the Lord of Hosts: "I am resolved to punish the Amalekites for what they did to Israel, how they attacked them on their way up from Egypt." Go now and fall upon the Amalekites and destroy them, and put their property under ban. Spare no one; put them all to death, men and women, children and babes in arms, herds and flocks, camels and asses.' Thereupon Saul called out the levy and mustered them in Telaim. There were two hundred thousand foot-soldiers and another ten thousand from Judah. He came to the Amalekite city and halted for a time in the gorge. Meanwhile he sent word to the Kenites to leave the Amalekites and come down, 'or', he said, 'I shall destroy you as well as them; but you were friendly to Israel when they came up from Egypt.' So the Kenites left the Amalekites. Then Saul cut the Amalekites to pieces, all the way from Havilah to Shur on the borders of Egypt. Agag the king of the Amalekites he took alive, but he destroyed all the people, putting them to the sword.

-I Samuel 15:1-8

Ramo Says:

## "Design For Freedom"

Continued from Page One  
unit, leaving him to string his own wires and erect his own poles. The same company also undertook to install the wires, poles and switching equipment and to supply the operators and repair crews to make the telephone system work.

Contrast this with the way in which a city was built. It just sort of happened. Dr. Ramo commented that while the idea of engineering a city was an intriguing one, it did point up some of the limitations and difficulties of the systems approach: The goals of a city are well-nigh impossible to define, and the amount of information needed to design a city properly is staggering. He predicted that if a city were ever designed in this manner, the result would not be satisfactory to everyone, but it would still be far superior to any city in existence. "If you want freedom in a city, you're going to have to design for it."

Dr. Ramo said that we face a man-power shortage in the field of systems engineering, and that this shortage would continue for some time because there is also a shortage

of people to teach the subject. He said that the American universities could turn out systems engineers, but that the field needed to be made into an intellectual discipline. As in other branches of engineering, the best systems engineers are probably not the best instructors of the subject.

He was asked why he expected this country to have any more success with the systems approach than the Russians and other Communist countries were having (presumably they have been using similar techniques for quite some time.). Personal incentives and rewards, he felt, were chiefly responsible, along with a personal interest in the results. Besides, he said, if we make it our goal to do better, we can use the systems approach to achieve this goal, too.

\*\*\*\*\*

Next Tuesday at 7:30 pm, Dr. C. West Churchman, Professor of Business Administration at the University of California at Berkeley, will speak on "Systems Engineering, Operations Research, and Management."

# "Letters. . . We Get Letters . . ."

To the editor:

It is distressing to find that the *California Tech* employs a reporter who is quite insensitive to the aspirations of women. In your report on Professor Marjorie Caserio's talk you emphasize her role as a housewife, but do not even bother to give her the proper professional title. The report on the seminar she gave is supercilious in tone starting with the title of the published picture, "Kitchen Chemistry." Does Feynman's role as a husband and father interfere with his reputation as a physicist? I feel that the least the *California Tech* can do is publish an apology and insure that such seminars are covered more objectively in future.

Amitava Gupta,

Graduate Student in Chemistry

To the editor:

Can the Caltech academic community truly claim it welcomes women participants when the student newspaper denies a woman scientist her professional title and calls her Mrs! We refer to the photo of Dr. Marjorie Caserio, Professor of Chemistry at UC Irvine and co-author of a well known organic text used at Caltech, which appeared on the front page of the last issue of the *California Tech*. The caption of her photo, "Kitchen Chemistry," ridicules and insults a serious scientist. Such sexist attitudes have no place in an institution which prides itself on being superior.

Dr. Nancy Beach  
Dr. Paula Bernstein  
Jill Rawlings  
Chemistry

Good journalism dictates that proper titles should be given for people mentioned in the news. We erred in the caption cited in the two letters above, and we are truly sorry about it. We can only state that such a journalistic botch does not reflect the opinions of the editors or of the staff on any topic whatsoever.

To The Editor

The last election saw many new candidates and few new ideas. Of course, "few" does not mean "none," so perhaps the candidates with ideas will be among those who got elected. But this should not distract us from an overwhelming fact: it was a campaign of old ideas, not new ones. And if elections are like this, what must the rest of the year resemble?

What can we do about this wasteland? I propose that ASCIT pay students for new, clever ideas. More specifically, ASCIT should pay money for ingenious ways of improving things around here. The payment, of course, would be in direct proportion to the simplicity, helpfulness, and "ease of implementation" of the proposed idea. And it should be made clear from the start that the money will be paid before the idea is put into operation (so that ASCIT will be careful in selecting which ideas to work on, and so that students will receive payment soon enough to make a difference.)

The details of this plan have limited importance, so I will give only a sketch: (1) Suggestion boxes should be placed in all the houses. (2) Some open-minded (yet practical) people from ASCIT should regularly collect the ideas, judge them, and dispense awards accordingly. They should then put the plans into effect. (3) To begin with, I suggest the awards range from one to fifty dollars, most being close to ten.

Some objections: "The ASCIT budget!" Answer: One less "party party," ten or more new ideas.

Objection: "Students shouldn't have to be paid to come up with ideas, they should do it just for the good of others, with only some small gain for themselves. Virtue should be its own reward." Answer: Applied to the area of sexual relations, I think we can all see the error in this viewpoint. But let's look at some other examples: Some religions have not only Heaven, but also Hell; some supermarkets give

Blue Chip stamps right along with "bargain discounts;" and Caltech herself mixes the "Pass" with the "Fail." So ASCIT should have no fear of mixed motivation.

Why might people in ASCIT (who have the most to gain) not like this idea? It might give them something to do.

-Seth Roberts  
Dabney House

Dear Sirs,

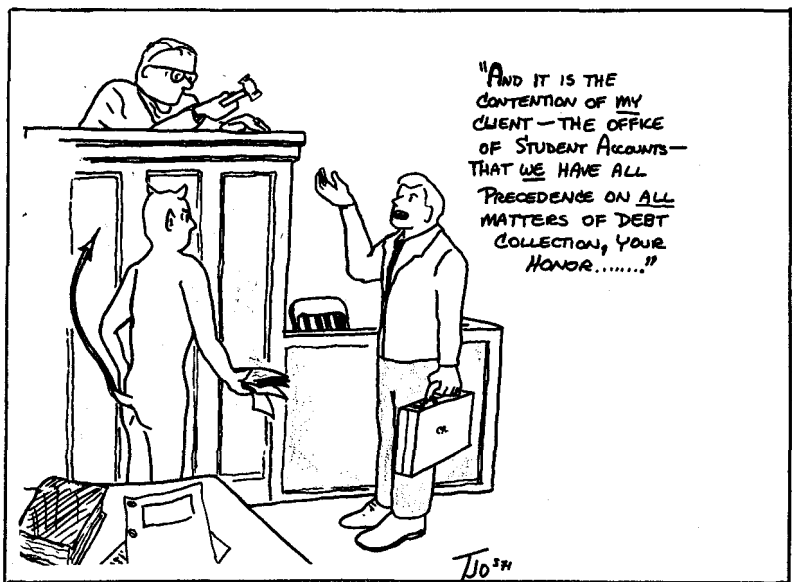
Now that the Congress has approved a Constitutional Amendment to lower the voting age to 18 years for all elections, it is the responsibility of each state legislature to decide whether this measure will become law. For over one hundred years the Republican Party has supported the extension of the franchise. We supported the 15th Amendment to allow Black Americans to full voting rights of all citizens. We supported the 19th Amendment to extend the franchise to women. It is now time for our party at all levels to welcome America's youth into the rolls of the nation's voters.

We believe that eleven million new voters can make a significant contribution to the dialogue of democracy which we pursue daily. This dialogue will be expanded by the elimination of the legal inconsistencies that presently exist in the dual system of laws governing federal and state elections.

We urge you to press for the speedy approval of this Amendment to ensure that young people 18-20 years of age will have the opportunity to take part in the full range of electoral activities next year and hereafter.

-Bob Dole  
Chairman

Republican National Committee



**PASADENA**  
TRANSMISSION  
LOCALLY OWNED

**AUTOMATIC TRANSMISSION SPECIALISTS**  
792-6104

26 N. Hill (at Colorado) PASADENA

10% discount to all Caltech students and faculty

**ACADEMY AWARD NOMINEE**

"ONE OF THE YEAR'S 10 BEST!"

"Best Actress"

— Rex Reed & Roger Greenspan, N.Y. Times

diary of a mad housewife (R)

CO-FEATURE

The Baby Maker

THE Esquire

PASADENA 2670 E. COLORADO MU 4-1774 SY 3-6149

Starring BARBARA HERSHEY

**The CALIFORNIA Tech**  
Thursday, April 1, 1971  
Volume LXXII Number 22

Published weekly except during examination and vacation periods by the Associated Students of the California Institute of Technology, Incorporated. The opinions expressed in all articles herein are strictly those of the author and do not necessarily reflect those of the editors or the newspaper staff.

Copyright 1971 by the Associated Students of the California Institute of Technology, Inc. All rights reserved.

Editors-in-Chief ..... Peter W. Beckman  
Paul A. Levin  
Philip M. Neches  
Entertainment Editor ..... Nick Smith  
Photography Editor ..... John Fisher

Staff ..... Bob Bresler,  
Patricia Clabaugh, Pat Dunn,  
Emden Gansner, Roger Goodman,  
Malcolm Handte, Bob Kieckhefer,  
Philip Massey, Ralph McGee, Terry O'Neil, David Peisner, Etaoin Schroedlu, Alex Seita, John Tristano, millikan troll.

Photographers ..... John Belsher,  
Bill Loucks, Ken Mills, A. J. Owens, Alan Stein.

Business Manager... Marvin Mandelbaum  
Circulation Manager ..... Kim Border

The California Tech Publication  
Offices: 115 Winnett Center, California Institute of Technology; 1201 East California Boulevard; Pasadena, California 91109. Represented by National Educational Advertising Service, Inc. Printed by News-Type Service; 125 South Maryland Avenue; Glendale, California. Second class postage paid at Pasadena, California.

Subscriptions.....\$1.50 per term  
\$4.00 per year  
Life subscription .....\$100.00

More News Briefs

Totem Material Selection Continues

Material for the first of two third term Totems is in the final selection state. Any creative items, such as short stories, poetry, photographs, drawings, or whatever, should be given or sent to Philip Massey, Ruddock House, or left at the Tech office in Winnett, as soon as possible.

Sign-up sheets for the first Totem will be appearing in the houses and in Louise Hood's office shortly. The Totem will be free to ASCIT members, but it is still necessary to sign up for it in order that the proper number of copies be printed. They will be available to non-ASCIT members at a slight charge, not yet determined.

There will also be another brief, but inconsequential meeting of all those interested in working on the selection and production aspects of the literary magazine, to be held tomorrow at 2:30 in the Tech office.

Phil. 104 Seminar Monday

Lee Browne, Caltech Director of Secondary School Relations, is teaching Phil. 104 this term — a new course on educational issues. His goal is to take apart the myths of education. Then, after doing some hard work on educational goals, school systems, student and

faculty rights and other problems, the class will try to put together a picture of a new kind of school.

Four educational innovators will be special guest resources to the class and will be presented by the Caltech Y to the campus community in open sessions. Haziah Williams will be the first of these guests on Monday, April 5th. Mr. Williams is a member of the Berkeley Board of Education, past President of that board and the author of the voluntary integration plan in Berkeley. In addition he is on the faculty of the bay area Graduate Theological Union, Urban Black Studies Department, as well as being on the staff of the experimental Church of Tomorrow in Berkeley.

All Caltech students and faculty are invited to the 4 o'clock discussion in Winnett Lounge with Mr. Williams. His class lecture will be at 7:30 in Baxter, where he will respond to the question "What do We Want from Education?" Audits are welcome.

Other guests include Liz Mahoney of the Educator Training Center in L.A. who will talk on April 12th about innovations in curriculum. John Niederhauser of Cal State L.A. and the State Accrediting Committee, will be speaking April 26th on problems of school administrations. On May 3rd, Bonnie Flynn, IHC education faculty member, will speak on teacher training and commitment, and on May 24th a panel of teachers and students will discuss the rights of teachers and students.

Learn a Trade!

Apprenticeship Deferments

by Mark Peterson

If now or in the future you are not eligible for either the 2S of the 1S(C) student deferments, you might be able to get a 2A apprenticeship deferment. The 2A deferment is available to full-time students enrolled in technical programs, e.g. programs which do not give the student either a bachelors or an associated arts degree. It is also available for men who are working on apprenticeship programs recognized by the state director of Selective Service.

If you are now in a technical program, have your school inform your draft board. You should be able to get the 2A deferment with little difficulty and should be able to keep the deferment until you complete your training.

Draft Appeal?

Unless you are in a technical program you are probably not now eligible for a 2A deferment. However, if you leave school you may be able to get a 2A if you start work in an apprenticeship program. You may be able to use the 2A deferment to get past the age of 26 when you will be permanently safe from the draft. After you are classified 1A when you leave school you can appeal that classification for a year or two, using the methods described in an earlier article. Then, when your appeals are about to run out, you can enroll in an apprenticeship program. One advantage of the 2A apprenticeship deferment over a 2S student deferment is that you can hold the 2A after you are 24 years old. Hold the apprenticeship deferment until you are about 25 and then if you quit you can appeal past your 26th birthday.

There are all types of apprenticeship deferments which will be recognized by the state director of Selective Service so you should find

one you like. You might work in the skilled trades such as carpentry or cabinet-making or work in a factory. If you prefer a job not so involved in the dominant commerce you should ask a draft counselor, attorney or the office of the Bureau of Apprenticeship Standards of the California Department of Human Resources for the list of apprenticeable occupations. You may receive deferments for such jobs as jewelry making, leather working, sign and pictorial painting or repairing electric guitars.

To get an apprenticeship deferment you must get a job as an apprentice. If you wish a "straight" spprenticeship job check first for jobs listed with the Bureau of Apprenticeship Standards. They will tell you of available programs and will refer you to the hiring union or business. You can also contact directly likely unions or businesses. Openings in apprenticeship programs do exist. Although unemployment is sharply up in California, the number of apprentice openings is actually increasing because apprentices get paid less than regular workers.

Some Are Gems

If you wish an apprenticeship for an unusual job such as jewelry making, find someone who is willing to hire and train you. Then contact the Bureau of Apprenticeship Standards for approval of your "program." You and your employer will have to work a list of skills you will need to be skilled in your trade and a schedule of when you will be competent in those skills. Also, you may need to attend occasional evening classes, but this requirement can be waived if there are not appropriate classes. If your trade is on the apprenticeable list and you can demonstrate you will learn that trade with your employer, you program should be improved.

Once it is approved, contact the

state director of Selective Service and ask him to also recognize your program. If it has been approved by the Bureau of Apprenticeship Standards you should have little trouble. Note, however, that is no apprenticeship program existed for your trade during the past year, it may take a year for approval and a year wait for your deferment.

If you have previously held a 2S the draft board may be hesitant to give you a 2A, especially if you have had four years of a 2S. However, you should be able to get a 2A for at least as many years as you would have still been eligible for a 2S. If you have received a bachelor's degree you may still be able to get an apprenticeship deferment but you will have to convince your draft board that your college studies and apprenticeship are both necessary to train you for your occupation.

If you have any questions you would like discussed in this paper by a draft lawyer write: Mark A. Peterson, 1627 West Washington Blvd., Venice, California 90291.



VENUS THEATRE 2226 E. Colorado Blvd. Pasadena Open 11:00 a.m. - 2:30 a.m. Daily Sundays Noon-Midnight For Sexy Info Call "The Voice": 796-8118 Pasadena's most unique, daring, and controversial theatre. EXCLUSIVE Featuring this week March 30 thru April 5 "Five Card Stud" Caltech students - \$1.50 off regular admission with this ad Starting April 6 "A Star is Born" A completely new show every Tuesday Seeing is Believing!

The Owl and the Pussycat is no longer a story for children. R RESTRICTED Under 17 requires accompanying parent or adult guardian. COLUMBIA PICTURES AND RASTAR PRODUCTIONS PRESENT A RAY STARK-HERBERT ROSS Production Barbra Streisand George Segal The Owl and the Pussycat 2nd BIG FEATURE GEORGE SEGAL / EVA MARIE SAINT Loving co-starring STERLING HAYDEN / KEENAN WYNN / NANCIE PHILLIPS. Executive Producer: RAYMOND WAGNER • Screenplay by DON DEVLIN • Music by Bernardo Segall Produced by DON DEVLIN • Directed by IRVIN KERSHNER • COLOR. CONTINUOUS PERFORMANCES Thursday and Friday from 6:45 Starting Saturday from 12:45 Daily 2588 E. COLORADO BLVD. • PASADENA • 796-9704

*The Critical Earache*

# You Are Not Alone On The Road To Ruin

**CAST A LONG SHADOW** by Little Richard; Epic EG30428

This album is a repackaging of two 1967 records, "The Explosive Little Richard," and "Greatest Hits," as a double album. The idea seems to be to cash in on the rock and roll revival. If one is interested in good old-fashioned rock and roll, this is an album to buy. It has Little Richard doing songs such as "Lucille," "Long Tall Sally," "Tutti Frutti," "Whole Lotta Shakin' Goin' On," "Jenny, Jenny," "Land of a Thousand Dances," and "Function at the Junction," most of which he wrote. In the field of rock and roll, Richard Penniman really has "Cast a Long Shadow."

**RING OF HANDS** by Argent; Epic 30128

If you have listened to any rock radio stations lately, you have probably heard one cut from this album, that cut being "Sweet Mary." Please do not confuse this with the bubblegum "Sweet Mary" by another group; this is the funky one.

Anyway, Argent is not a supergroup, and "Ring of Hands" is not a super album. They are both good, however, ranging from commercial funkiness to more abstract rock. In the name of music, please ignore the disc jockeys who keep saying that either a) Argent is new name for the Zombies or b) that "Sweet Mary" is the best song on the album. Neither is true, contrary to the opinions of KRLA and KHJ. Listen to the album. You may even decide to buy it.

**YOU'RE NOT ALONE** by Dion; Warner Brothers WB1872

This is the third album by the modern Dion, and the second on this label. It is a thing of beauty in the way that music by Elton John or James Taylor is beautiful. Dion wrote most of the songs himself, but he included three others, one by Melanie and two by Lennon-McCartney. The one thing holding

the album together is the presence of Dion DiMucci's voice and guitar. On this album he seems a bit more self-assured and alive. It is a good album.

**ROAD TO RUIN** by John and Beverly Martin; Warner Brothers 1882

This is a better than good album. This album is the child of a marriage of folk and jazz, and it is a beautiful child. The first cut, "Primrose Hill," is now one of my favorite songs. The musicianship of the whole album is impressive. The vocals are beautiful, and the instrumental passages are impressive, too. The mind boggles.

**MANNA** by Bread; Elektra EKS-74086

This album shows that Bread is not just a random group full of bubblegum. There is evidence that Bread is turning into a really great group. For the time being, they are a good group with very good lyricists as members. I wish, however, that they would have a word with the album design people at Elektra, because "Manna" is strangely packaged. But then, when did you last see a package of manna anywhere?

-Nick Smith

**Jolivet: Concerto for Piano and Orchestra; Milhaud: Concerto for Piano and Orchestra No. 1; Milhaud: La Creation du Monde (Quartet Version) Orchestre de las Societe des Concerts Du Conservatoire de Paris, conducted by the respective composers, Trio a Cordes Francais, Entremont, piano. Columbia MS 7432.**

Milhaud, along with Honegger, was probably the most vital and sophisticated member of the "Les Six." This creative vitality and sophistication is very evident in both the concerto and the "Creation," especially in his use of 1920's jazz idioms.

The piano concerto is by no means a great concerto. It lacks in both form and development, the barcarole is far too vague to pull the listener along, making the movement seem overlong. And this condition is almost saved by the finale.

However, as mentioned, the concerto is full of ideas, most of them highly imaginative. And some of the resolutions in the first movement are beautifully interesting. As might be said, the first movement alone is worth the price of listening.

"La Creation du Monde" is probably one of Milhaud's most

popular pieces in its orchestral form. This version, for piano and string quartet, was arranged by Milhaud from the ballet score. Things are both lost and gained in the translation, making this an almost totally different piece. What is lost is obvious; it is the same thing lost when a string serenade is reduced to a piano piece. Gained is an adhering neo-Classical clarity and form reminiscent of Stravinsky. The ragtime/syncopation and blues third become something new, something totally different from their orchestral counterparts.

Jolivet composed mainly under the influence of Berg and Schoenberg. His works are twentieth-century program music, highly reflective of Jolivet's philosophy and ideas. His concerto is a reworking of a composition of his that is based on music from Africa, Asia and Polynesia. It provides 23 minutes of music, with some parts worth listening to.

Technically the record is well done. Entremont's playing is good, although his style is a bit too grandiose for the "Creation." He does manage to bring out as much of the best as possible in the two concertos, while leaving enough clarity in the "Creation" suite.

-E. Gansner

## Caltech Jazz Quartet to Compete in Pacific Jazz Festival

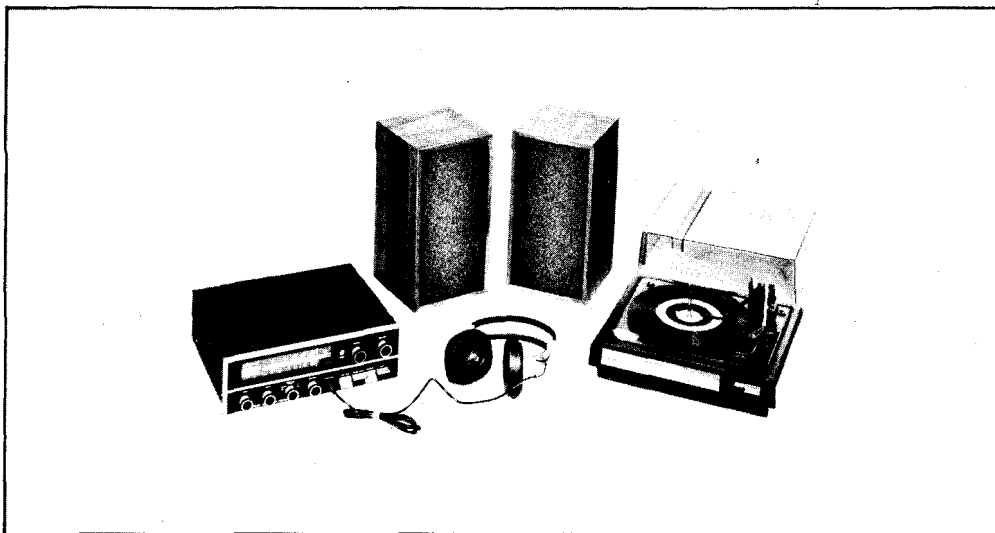
The Caltech Jazz Quartet, an organization formed this year as an offshoot of the Caltech Jazz Band, will compete in the Pacific Coast Jazz Festival on Saturday, April 3, at San Fernando State College. The members of the group are Russ (Wop) Pinizzotto (Lloyd), drums; Wayne Anderson (Fleming), electric; Don Simons (graduate student), piano; and A.J. Owens (graduate student), trumpet.

The Festival is a competition among college jazz groups. The entries are in the categories of big bands, combos, and vocalists. Each group performs for twenty minutes before a panel of judges, and the winners will go to the national competition in Illinois.

The Jazz Quartet under its professional pseudonym, Ancient Clay, has performed several times on campus and for various private parties. They will play in the Festival at the ridiculously early hour of 10:00 a.m. The Festival is open to the public and admission is two dollars.

IF YOU WANT TO KNOW ABOUT PEANUT BUTTER — ASK A PEANUT BUTTER FREAK — HE KNOWS!

### IF SOUND IS YOUR THING COME TO DOW SOUND CITY WHERE THE SOUND FREAKS WORK!



#### THE SYSTEM 200

If you're on a budget but insist on a great quality stereo system — dig this. You get a Nikko 301 40-watt solid state FM-AM-Multiplex receiver (walnut case optional) . . . two fantastic DSC I bookshelf speakers with a frequency response of 50 Hz to 17,500 Hz, a 6" diameter bass speaker, a 2" diameter midrange/tweeter, enclosed in fine hand rubbed walnut. The BSR 5500X automatic changer complete with base and dust cover will make any system complete — but just for fun we've added a set of DSC stereo earphones to start you grooving.

Retail price	\$307.30
Dow Sound City price	199.95
You save	107.35

FREE! \$20.00 stereo earphones with any purchase of \$70.00 or more and this ad!

Easy Terms — Trade-ins Accepted

The Sound Freaks Honor Master Charge, BankAmericard, and Money.

## Dow Sound City

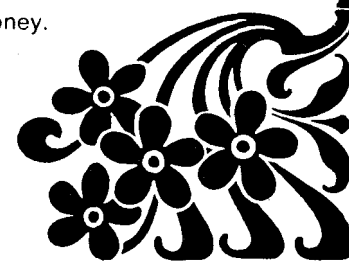
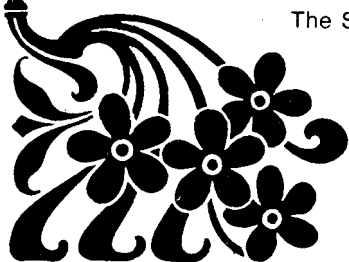
A subsidiary of MILO ELECTRONICS CORP.

1759 EAST COLORADO BOULEVARD, PASADENA  
PHONE: 793-1195 OR 681-3416

Other store locations are: Goleta, Oxnard and San Diego

**PAPER BACKS**  
by the  
**THOUSANDS**  
EASY  
TO FIND  
the one  
you  
need  
at  
**VROMAN'S**

695 E COLORADO BLVD PASADENA  
449-5320 681-6669



# Andromeda Strain

by Pat Dunn

Someone is spreading a germ in Hollywood. I think it's Robert Wise with his latest screen disease. Trying hard to outdo the compelling artistry which garnered him an Oscar for the *Sound of Music* Mr. Wise might score again with his latest G-rated cinematic splashdown.

The neat little science chiller from which it was lifted documented a crisis caused by exposure to earth of a space-spawned organism. In adapting *The Andromeda Strain* to the screen, Mr. Wise has failed to equal Michael Crichton's hair-raising realism. Nevertheless, in pure Hollywood contrivance, the screen version will still keep the audience glued to their seats unheeding of the call to popcorn or the lavatory.

A U.S. satellite has returned to earth and gone kerplunk in Piedmont, Ariz. (Piedmont, Ariz??) The populace knows what to do... they carry it to the local M.D. Logical? Of course. With fundamental wisdom the doc decides to vivisect. Sensible? Of course. Zap! Old doc has goofed again. Bodies everywhere... *Andromeda* is loose and on the town. Two government trackers in search of the satellite go the same route. Mission control sends replacemnts in protective gear. Their inventory comes up with 49 or so bodies (dead), 1 satellite (damaged), and 2 survivors (1 baby, 1 old man). Conclusion: we finally

O  
D  
D  
By O  
Dan  
K  
I  
O'Neill  
S



DEAR FRIENDS... IF YOU ARE UPTIGHT ABOUT  
A. VIETNAM  
B. THE WAR IN THE STREETS  
C. INFLATION  
D. POLITICAL DEAD-ENDS  
E. "FLEE TO HERE"  
F. "FLEE TO THERE"  
G. "FLEE TO THERE"  
H. "FLEE TO THERE"  
I. "FLEE TO THERE"  
WATCH YOURSELF  
ONEILL

did it. We fin-a-l-ly did it. We fooled around and fooled around in outer space and finally did it.

BUT WAIT! The ultimate in technological preparedness is about to be revealed to you. It's time for Operation Wildfire, and even those who badmouth at the disposition of their tax money had best be impressed. Constructed expressly for the isolation and study of unknown organisms (well, maybe a little biological warfare stuff on the weekends), the Defense Department has paid the rent (with a little help from their friends) on a 5-level underground hidaway: Quiet desert setting; style, ultra-mod and conical; novel descending entranceway; decontamination sauna with hot-and-cold-running alpha chlorophin stocked laboratory; food for a year; Musak, and a self-destruct system for that "special occasion."

What better place for a few friendly scientists to gather for a day or two with *Andromeda* and the two survivors. It's save-the-world-time in Hollyland.

You really must see what happens. There isn't any sex (hiss-boo), but there's a computer in that pad that will blow your mind.

It's worth the price of admission just to watch a real pro in action.

If you can't get up the dough but want to see the film, try the following- (if this description does not already fit): Sleep in your socks for a week, mess your hair, select your favorite outfit (the more holes and patches, the better). Present yourself at Universal City with the message that you are a forward-looking campus leader. They will escort you at once to the Executive Projection Room. Once there, a Universal representative will rap with you and other freeloaders in an attempt to get you to pass the word on campus that movies are better than ever. Raise your hand when he asks who in the group hasn't seen a film in the past 10 years... this will discourage his spiel on the new discount card. Then sit back and enjoy the free flick.

It's really good-honest-and besides, guess who's in the credits under "Scientific Background Support Provided By...?" Yup, Caltech and JPL, the old hambones.

That's show biz...

# Matoing Around

by Tom Matoi

Last term, the new ASCIT BOD was futilely attempting to survive during finals week and did little to gain the confidence and support of the students. Now, in less troubled times, in a continuing effort to increase the rapport between ASCIT members and the Board, the members are strongly urged to write to the ASCIT office giving their suggestions, criticisms, and reactions concerning BOD policies and decisions. Furthermore, if a member would like to bring a request or a possible resolution before the Board, a memo should be sent to the ASCIT secretary, Jeff Hurn, in advance, so that the material may be researched and placed on the agenda.

One of the more crucial meetings of the year will be the upcoming budget planning session, where a tentative budget for the present fiscal year, March 1, 1971 to February 29, 1972, will be adopted. This meeting will be held on the night of Thursday, April 1, in clubroom one at 7:30 p.m.

Here is one final item for those who were left wondering about our "new" tax status, 501 (c) (3), which was mentioned in the March 4th Board minutes. Pending a more comprehensive study to find all the loopholes and traps, it is at least necessary to relate that this tax status requires ASCIT to satisfy the criteria of a non-profit organization and requires ASCIT to refrain from supporting any political candidate.

## Books

### Entropic Gang Banging

The Last Hurrah of the Golden Horde by Norman Spinrad Avon Science Fiction, 1970

The *Last Hurrah of the Golden Horde* is a collection of Spinrad's short stories that have been published in various magazines (including *Playboy* and *Analog*) over the past few years.

The eighteen stories in the collection cover quite a range of science fiction. Some, such as "Outward Bound" and "Once More With Feeling," reflect such standard themes as faster-than-light travel and time travel. Others represent the "new-wave" type of sci-fi story.

"Subjectivity" and "Neutral Ground" are concerned with hallucinogenic drugs and their relationship to the space-time continuum (imagine meeting an alien from another universe while tripping), while "The Entropic Gang-Bang Caper" is so avant-garde that it is completely incomprehensible.

Spinrad comes across best in his humorous stories "Age of Invention" and the title story, "The Last Hurrah of the Golden Horde," which involves a linear combination of Red Chinese, Mafiaosi, a boxcar full of heroin, \$50,000,000, a narc agent, and 200 blood-thirsty and senile Mongols. It ends with one of the funniest scenes of rape, pillage and murder that I have ever read.

*The Last Hurrah of the Golden Horde* provides pleasant reading for any science-fiction fan or someone just looking for a good way to flick. While the stories contain no great messages they provide interesting and entertaining reading.

-Peter Beckman

## Words of Wisdom

by Ira Moskattel

April Fool!

# Your Best Buy in Vitamins is right in your own Bookstore.

Vitamin E 100 I.U. \$ 1.95 per 100  
Vitamin E 200 I.U. 2.95 per 100  
Vitamin E 400 I.U. 4.95 per 100

Vitamin C 250 mg. Chewable \$ 1.15 per 100  
Vitamin C 500 mg. 1.20 per 100  
Vitamin C 500 mg. -Time Release 2.48 per 100  
Vitamin C 1000 mg. (1 gram) 1.96 per 100  
Vitamin C Soluble Crystals 4.45 1 lb.  
Vitamin C Soluble Crystals 8.35 1 KILO

Plus many more outstanding values and interesting vitamin formulations from BRONSON PHARMACEUTICALS

Now at THE CALIFORNIA INSTITUTE OF TECHNOLOGY BOOKSTORE

## CAMPOUT BUS TOURS

June 26-14 days \$310-Vancouver Island-Western Canada-The Inside Passage  
July 17-14 days \$255-The Canadian Rockies-Banff and Janper Natl. Parks-Vancouver Island  
August 7-14 days \$575-Alaska-The Yukon-The Inside Passage-Northern British Columbia  
Please write for free brochure:  
DICK MILLER TOURS  
1223 Frances Ave.  
Fullerton, CA 92631  
(714) 879-3741

## CONSIDERING ALASKA???

Accurate, comprehensive brochure about opportunities in construction, oil, fishing and canneries, others. Send \$2.00 cash or money order to JOBS IN ALASKA, P.O. Box 1565, Anchorage, Alaska 99501.

NOW THRU APRIL 4  
**MELANIE**  
AND  
**JACKSON BROWNE**  
COMING NEXT  
**CAT STEVENS**  
DOUG WESTON'S  
**Troubadour**  
9081 SANTA MONICA BLVD., L.A. 276-6168  
COCKTAILS • DINNERS • HOOT MONDAYS • NO AGE LIMIT

UNIVERSAL STUDIOS TOUR  
Mon.-Sat.: 10:00 A.M. thru 3:30 P.M. • Sundays: 10:30 A.M. thru 3:30 P.M.

**"FASCINATING!"**  
...THE PUREST SCIENCE FICTION THRILLER TO COME TO THE SCREEN IN YEARS!  
- Judith Crist, NBC-TV, New York Magazine  
**"SPELLBINDING SCIENCE FICTION DRAMA..."**  
I found it engrossing!  
- Charles Champlin, L.A. Times  
  
Rated **G** but may be too intense for younger children.  
A ROBERT WISE PRODUCTION  
From the Best Seller by MICHAEL CRICHTON  
**THE ANDROMEDA STRAIN**  
Starring: ARTHUR HILL - DAVID WAYNE - JAMES OLSON - KATE REID  
Production Designed by BORIS LEVEN - Screenplay by NELSON GIDDING - From the Novel by MICHAEL CRICHTON - Directed by ROBERT WISE  
Soundtrack Album exclusively on Kapp Records Music by GIL MELLE  
TECHNICOLOR PANAVISION A UNIVERSAL PICTURE  
NOTE: NO ONE WILL BE SEATED DURING THE LAST 10 MINUTES.  
EXCLUSIVE ENGAGEMENT NOW PLAYING!  
Every Day at 12:30 • 3:00 • 5:30 • 8:00 & 10:30  
For GROUP SALES Information call Ed Prues, Phone 985-4321 Ext. 1853



## Howell's Homer Starts Season

by John Tristano

Tom Howell started Caltech's baseball season off with a real blast last Tuesday as he ripped the first pitch of league competition over the right field fence for a home run. The game looked easily in hand until the second inning when Redlands broke through to starting pitcher Dave Turner for three runs. They then clobbered Dave for nine runs in the third. Tom Howell and Doug Matchett finished off the pitching, yielding a total of twenty runs to Redlands. Fielding errors cost Tech many runs. In the seventh inning Doug Matchett led off with a triple and scored on a throwing error. The Beavers fought until their last out in the ninth inning when Tristano, Pleva and Howell drew walks with two outs to load the bases. The rally ended, though, with a strike-out. Final score was 20-2.

Is Alice Watts Pregnant?—P.D.

## IH Bridge Qualifying Rounds to Be Held Sunday in Winnett

by Charles Johnson

The qualifying round for this year's Interhouse Bridge Tourney will be held Sunday at 1:00 in Winnett Club Room 1. Any team of 4, 5 or 6 members from a particular undergraduate house will be eligible to compete. Multiple entries from a house are invited, but each member of a competing team must be from the same house. We hope that all interested players will come out for a relaxed afternoon of bridge and help unseat present interhouse trophy holder Page.

The format will be Swiss Team of Four at victory points. This features a series of short, power-matched, team vs. team contests with the outcome rated on a scale according to the final point differential. The top three or four teams in the final standings will play off in longer matches for the trophy.

The appropriate style of play is that of standard rubber bridge. This will put all the teams on the most equal footing competitively.

## The Racket Squad

### Inside Tech's Tennis Team

by Coach John Lamb

The Caltech Varsity Tennis Team seems a little weaker than last year and the opposition a little stronger, in most instances.

The loss of Bill Almassy, last year's school champion, and George Lantos, number four singles player, has not been offset by incoming freshmen. There are, however, two good frosh prospects, Gary Rabins and Bruce Jacobsen, but they are relatively inexperienced.

At mid-point in the season, the team lines up in order with Ken Pischel, junior; Andy Chow, junior; Don Smith, senior; Bruce Eisenhart, sophomore; Jim Crawford, senior; and Gary Rabins, freshman. In doubles, Pischel and Chow are No. 1, followed by Smith-Crawford and Eisenhart-Rabins.

Andy Chow has been the best scorer in matches to date, followed by Jim Crawford. Until Gary Rabins was sidelined by an ankle injury, he also held up the scoring for Caltech. Doubles results have been more balanced, with each team having its good and bad matches.

Results to date:

Caltech 1 Loyola	8
Caltech 2 Cal Lutheran	7
Caltech 0 U San Deigo	9
Caltech 0 Redlands	9 *
Caltech 1 Occidental	8 *
Caltech 0 CHM	9 *
Caltech 1/2 Whittier	8 1/2 *
Caltech 0 Pomona	9 *

\*—Conference Match

The Junior Varsity Tennis Team has fared a little better than the Varsity, with a one won, three lost record.

The line-up in singles in order of strength is as follows: Arthur Ellis, sophomore; Bruce Jacobsen, freshman; Pat McCrea, freshman; Alan Brothers, sophomore; Neil Risch, junior; Don Franks, sophomore. In doubles, Brothers and Jacobsen play No. 1, followed by Ellis-McCrea, and Ken Tummel-John Zima, both freshmen, at No. 3. Season to date:

Caltech 1/2 Redlands	8 1/2
Caltech 0 CHM	9
Caltech 7 Whittier	2
Caltech 3 Pomona	6

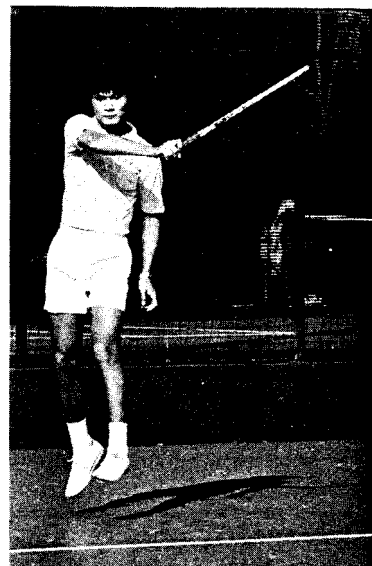
Occidental is not fielding a Junior Varsity Team this season.

The league seems to be in better balance than in the past few years, as the perennial champion, Redlands, is not as strong as usual and several other league schools seem stronger. Claremont-Mudd should be favored to upset Redlands if anyone does, with Occidental having an outside chance based upon their depth.

## News Briefs

Continued from Page One  
Demonstration Team, will perform and 1:00 p.m. at George Air Force Base in Victorville.

Since their formation eighteen years ago, the Thunderbirds have demonstrated precision flying to more than 85 million persons. Saturday's performance, flown in F-4E Phantom II aircraft, is part of a "Salute to the High Desert" open house, 10:00 a.m. to 3:00 p.m. at George AFB. Everyone is welcome.



—Photo by Dash

## Classified Ads

### HELP WANTED

Typist for the Tech. Reasonably fast, willing to work on campus and at weird hours. Call campus extension 2154.

TRANSLATORS — ROUMANIAN with scientific training required. All languages and disciplines. Free-lance. Send resume to Box 5456, Santa Barbara, CA 93103.

### FOR SALE

BUY A REFRIGERATOR  
Why rent when you can buy? Only \$45. Perfect for dorm or apartment. Limited supply—first come basis. Call Bob 746-7505 or write UPC, 666 W. 36th St., Los Angeles, CA 90007.

'67 Peugeot station wagon, power breaks, 8 track stereo, \$1400. Call 355-3482, evenings 355-1208.

Surfboard: 9'10" Hobie "Mini Model" \$45.00. 792-1607 evenings.

14' Fiberglass Hull Sailboat, 2 sets of sails. \$300. 793-7550.

### TRAVEL

EUROPE—ISRAEL—EAST AFRICA  
One way and round trip student travel discounts. SOFA agent for over 2000 inter-European student charter flights. Contact: ISCA, 11687 San Vincente Blvd. Suite 4, L.A., CA 90049. Tel. 826-5669.

EUROPE CHARTERS  
50 departures, also from New York. India—Africa—Israel. 60% off. Free info: EASC, 323 No. Beverly Dr., Beverly Hills, CA 90210. Phone: 273-6293.

### REAL ESTATE

Sierra Madre, 4 bedrooms, dining room, fire place, large basement, \$21,950. Ydren Realty. 355-3482.

### SERVICES

TYPING SERVICE for students. Term papers, thesis, resume. See us for your typing needs. We offer quick service, accuracy, and professional results. Rates: \$1 per page, \$1.50 with footnotes. \$10 minimum for resume including copies. Management Services, 37 E. Huntington Dr., Arcadia, 91006. Phone 445-5794.

Expert typing, my home. Rates: 45¢ per page; 1 copy free, extra copies 20¢ per page. Free pick up and delivery. Phone 681-7702.

Buying or selling something? You, too, can take out an ad in the California Tech!!!! \$1.50 per inch plus 20¢ per extra line for Classifieds. Bring ad copy to the Tech office, or phone Caltech extension 2154. O.K.?



Visit the future  
where love  
is the ultimate crime.

## THX 1138


Warner Bros. presents THX 1138  
Robert Duvall and Donald Pleasence  
Technicolor® Techniscope®  
© 1971 Warner Bros. Kinney company

EXCLUSIVE ENGAGEMENT **4th RECORD WEEK!**

Daily: 12:30 • 2:30 • 4:30 • 6:30 • 8:30 • 10:30  
Midnight Show Fri. & Sat. at 12:00

**LOEWS**  
ON HOLLYWOOD BLVD.  
near HIGHLAND 463-3263

MAN, WHAT A SHOE!



# adidas

Made with  
**ORANGE STRIPES**  
THE WORLD'S MOST WANTED SHOE

Preferred by the Pros. Soft, light leather quickly conforms for custom fit. Stripes eliminate stretching. Order yours now, give dress shoe size. Check or money order. \$17.95 postpaid. SIZE \_\_\_\_\_

ORANGE STRIPE     BLACK STRIPE

## ATHLETIC HOUSE

BOX 1085 — KNOXVILLE, TENN. 37901


NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_

STATE \_\_\_\_\_ ZIP \_\_\_\_\_

## FRANK D. CLAY & SON



### CHEVROLET

**CAL-TECH STUDENTS AND EMPLOYEES!**  
For special consideration on your new Chevrolet Car or Truck ask for **ERNIE HAYWARD, Fleet Manager**, or **JERRY SHEPHERD**, general manager.

**"SERVING PASADENA SINCE 1922"**

**2605 E. COLORADO BLVD.**  
**PASADENA 796-2603**

**CHANDLER'S**  
**PRESCRIPTION PHARMACY**  
*Serving Caltech*

Page E. Golsan III, Pharm. D.  
*Free Delivery*

1058 E. Green Street (Corner Greer & Wilson) 792-2211      185 S. Euclid Avenue 793-0607  
Pasadena, California

**SPECIAL DISCOUNTED**

**STUDENT    AUTO    INSURANCE**

**43% AVERAGE SAVINGS**  
**NO SACRIFICE OF COVERAGE OR SERVICE**

- PAYMENT PLAN TO FIT YOUR BUDGET
- LICENSED BY STATE OF CALIF. DEPT. OF INSURANCE
- NO MEMBERSHIP FEE REQUIRED
- PLACEMENT GUARANTEED

**COLLEGE STUDENT INSURANCE SERVICE**

5440 Pomona Blvd., L.A. (near Atlantic)      (213) 723-0712  
Robert Wallace

Sunday      Monday      Tuesday      Wednesday      Thursday      Friday      Saturday

<b>MARCH</b> 28	29 General Registration *** 8:30 - 3:30 ***	30 First Day of Classes  Done Tuesday After Lunch: <b>The Cosmic</b> Time of the Week	31	32	<b>APRIL</b> 2	3 <b>P.M.E.</b>
<b>APRIL</b> 4 BECKMAN AUDITORIUM 2 performances 3 p.m. & 8 p.m. Pasadena Symphony Orchestra with Patricia Gar-side and Susann McDonald performing Mozart's Flute and Harp Concerto, \$4-3-2; Students \$1.	5 BECKMAN AUDITORIUM 8:30 p.m. Caltech Lecture Series: <b>The Circulation Harvey Couldn't See</b> with Drs. Wallace G. Frasher and Harold Wayland. Free.	6 	7	8 <b>The Committee</b> 	9 ATHENAEUM, 6:30 p.m., Caltech Hillel's Second Annual Kosher Passover Seder. For reservations call ext. 2453.	10 
<b>APRIL</b> 11 	12 BECKMAN AUDITORIUM 8:30 p.m. Caltech Lecture Series: <b>The Contribution of Progressive Myopia to the Rise of Impressionism: Visual Problems in the History of Art.</b> Cary Lu, Division of Biology, Caltech. Free.	13 BECKMAN AUDITORIUM Silent Movies: 7:30 p.m.: "Singalong"; 7:40: "Perils of Pauline" Episode; 8:00 p.m.: Rudolph Valentino in "Son of the Sheik" General admission: \$2.50; Students: \$2; Caltech Students: \$1	14 BECKMAN AUDITORIUM 8:30 p.m. Pacific Oaks College and Caltech present Jerome Kagan, Ph. D., speaking on "Motive and Thought in the Young Child." Free.	15 BECKMAN AUDITORIUM 8:30 p.m. Direct from San Francisco, <b>THE COMMITTEE</b> , in an all new revue. \$5.50-4.50-3.50. Caltech students: \$1 off. Also reductions for Caltech family.	16 BECKMAN AUDITORIUM, 4 p.m. The Committee conducts a special workshop; open to ALL students (ID required); FREE. 8:30 p.m. <b>THE COMMITTEE</b> in an evening of improvisational theater. \$5.50-4.50-3.50. Caltech students: \$1 off; also reductions for Caltech family.	17 BECKMAN AUDITORIUM, 8:30 p.m. <b>THE KIPNIS MIME COMPANY</b> in a new revue called "Opus Blue . . . is Pink." Features Bartok's "Miraculous Mandarin." \$5.50-4.50-3.50; Caltech students \$1 off; also reductions for Caltech family. Examinations for removal of conditions and incompletes.
<b>APRIL</b> 18 8:30 p.m. Moved from <b>RAMO</b> to <b>BECKMAN AUDITORIUM!</b> Composer <b>TERRY RILEY</b> in the final event of the Encounters 70-71 Contemporary Music Series. Riley performs selections from "Poppy Nogood," "Rainbow in Curved Air," on electric organ, soprano saxophone with tape delay. \$3.50 general admission; \$2 for students; Caltech students: \$1.	19 BECKMAN AUDITORIUM 8:30 p.m. Caltech Lecture Series: <b>The Communications Gap in Science.</b> R. G. Bergman, Ph.D., Assistant Professor of Chemistry, Caltech. Free.	20 	21	22 	23	24 BECKMAN AUDITORIUM 7:30 p.m. <b>PACIFIC SOUTHWEST INTERCOLLEGIATE CHORAL FESTIVAL.</b> 300 tickets available at \$3.00 General Admission.
<b>APRIL</b> 26 DABNEY LOUNGE, 8:15 p.m. Dabney Hall of the Humanities. <b>THE CHAMBER ARTS PLAYERS</b> in a program of Beethoven and Brahms. Free.	27 BECKMAN AUDITORIUM 8:30 p.m. Caltech Lecture Series: <b>Isotopes, Climate and Ice Ages.</b> Samuel Epstein, Ph.D., Professor of Geochemistry, Caltech Free Midterm Week. . . . Grindgel	28 BECKMAN AUDITORIUM, Silent Movies: 7:30 p.m.: "Singalong"; 7:40: "Perils of Pauline" Episode; 8:00: <b>THE GREAT COMEDIANS</b> -Fields, Langdon, Keaton, Chaplin, Chase and Pollard. General admission: \$2.50; Students: \$2; Caltech students: \$1.	29 	30 	31 Midterm Week . . . Sigh!	<b>MAY</b> 1 BECKMAN AUDITORIUM, 11 a.m. (SOLD OUT) and 1 p.m. <b>CHILDREN'S SERIES: "Annabelle Broom"</b> presented by the State Repertory Theatre. Adults: \$1.75 General Admission, Children: \$1.25 General Admission. 8:30 p.m. <b>THE ROMEROS</b> , guitarists. Introduced to American audiences nine years ago as "the Royal Family of the Guitar." \$5.50 and \$4.50; Caltech students \$1 off.
<b>MAY</b> 2 8:15 p.m. DABNEY LOUNGE, Dabney Hall of the Humanities. <b>SHANLEY VIRTUOSI</b> in a program of Bach, Ravel, Rachmaninov, and Beethoven. Free.	3 BECKMAN AUDITORIUM 8:30 p.m. Caltech Lecture Series: <b>Reflections on Venus.</b> R. M. Goldstein, Ph.D., Visiting Associate Professor of Planetary Science, Caltech. Free. Mid-Term Deficiency Notices Due - 9:00 a.m.	4 <b>Tuesday Nights at the Silent Movies</b>	5 Today has been cancelled due to lack of interest	6 <b>The CALIFORNIA Tech</b> wants YOU as staff	7 Last Day to Drop Classes Exams for admission to upperclass status, '71-'72 <b>DROP DAY</b>	8 BECKMAN AUDITORIUM 8:30 p.m. <b>THE CALTECH BAND</b> presents their annual concert. \$1 General Admission, \$50 students, Free to ASCIT members. Exams for admission to upperclass status '71-'72
<b>MAY</b> 9 BECKMAN AUDITORIUM 3:30 p.m. Coleman Chamber Music Association presents <b>BORODIN QUARTET.</b> \$5-4-3. Caltech students: 50 FREE tickets available.	10 BECKMAN AUDITORIUM 8:30 p.m. Caltech Lecture Series: <b>Neutrinos from the Sun.</b> R. W. Kavanagh, Ph.D., Professor of Physics, Caltech. Free.	11 BECKMAN AUDITORIUM Silent Movies: 7:30 p.m.: "Singalong"; 7:40: "Perils of Pauline" Episode; 8:00: D. W. Griffiths' <b>INTOLERANCE.</b> General Admission: \$2.50; Students: \$2; Caltech Students: \$1.	12	13	14 	15 May 14 and 15, 8:30 p.m. <b>THE CALTECH GLEE CLUB</b> presents their annual home concert. General Admission: \$2.50; Students: \$1; Caltech Students: free; Caltech faculty and staff: \$2.
<b>MAY</b> 16	17 BECKMAN AUDITORIUM 8:30 p.m. Caltech Lecture Series: <b>Mayan Hieroglyphic Writing.</b> R. P. Feynman, Ph.D., Professor of Theoretical Physics, Caltech. Free. Pre-Registration for First Term [all week]	18 	19	20 <b>The CALIFORNIA Tech</b> is possibly the world's best newspaper.	21 BECKMAN AUDITORIUM 8:30 p.m. <b>SOLD OUT!</b> Dr. L. S. B. Leakey presents "Exploring in the Land of the Sonjo." General Admission: \$3; Students: \$2.50; Caltech Students \$2.	22 
<b>MAY</b> 23	24	25 BECKMAN AUDITORIUM, Silent Movies: 7:30 p.m.: "Singalong"; 7:40: "Perils of Pauline" Episode; 8:00: Fritz Lang directs the spectacular <b>METROPOLIS.</b> General Admission: \$2.50; Students: \$2; Caltech students: \$1.00.	26 	27	28	29 Final Examinations for Seniors and Grad Students Start
<b>MAY</b> 30 MEMORIAL DAY	31 Memorial Day Holiday for employees	<b>JUNE</b> 1 	2	3	4 Final Examinations for Seniors and Grad Students End	5
<b>JUNE</b> 6 <b>F</b>	7 Final Grade Reports Due for Seniors and Grad Students  Wagner Festival 7:00 a.m. 120 dB <b>I</b>	8 <b>Blark! It's Tuesday After Lunch Again</b> <b>N</b>	9 Curriculum Committee 10:00 am Faculty Meeting 2:00 pm <b>A</b>	10 <b>The CALIFORNIA Tech</b> Class Day <b>S</b>	11 COMMENCEMENT <b>S</b>	12 End of Third Term September 23 - Registration of Freshmen September 25 - 25 New Student Orientation September 27 General Registration September 28 Classes Begin



EXTREMELY LARGE STOCK • Evenings 'til 10

### PICKWICK BOOKSHOPS

6743 Hollywood Bl., Hollywood (213) HO 9-8191 • CR 5-8191

Topanga Plaza, Canoga Park (213) 883-8191



**POSTERS ART PRINTS**  
Extremely Wide Selection  
The Print Store, Inc.  
1515 E. Colorado (Opposite PCC)  
*Open Evenings Till 9*

**PAT'S LIQUORS AND DELICATESSEN**  
1072 E. Colorado 796-6761  
Open to midnight daily,  
1 a.m. Fri. & Sat.  
Keg Beer Party Supplies

**HI LIFE**  
1758 E. Colorado  
449-9705

**THE ASCIT FRIDAY NIGHT MOVIE**  
The BEST in Friday night entertainment!

**THIS FRIDAY**  
**THE GREAT ESCAPE**

7:30 p.m. and 10:30 p.m. in Culbertson Hall

**Admission 50¢**

**NEXT WEEK**

**FANTASTIC VOYAGE**

SPECIAL DAYTIME OFFER for Caltech students, faculty, alumni and employees over the age of 21.

Good from 12 noon to 3 p.m.

A sandwich and beer for \$1.00 (Your choice of eight sandwiches) Upon presentation of Caltech ID.

**PLUS TOP EVENING ENTERTAINMENT!**

- SUNDAY —Love Dance with Jicky and Bobby
- MONDAY —All amateur talent show
- TUESDAY —Toni Felice
- WEDNESDAY —New show—Adrienne's Space Odyssey Show
- THURSDAY —Adrienne in the Vibrating Bed Show
- FRIDAY —Lunch—New male & female nude dance  
—New act—Sadie: the Complete Sex Symbol, a 402 lb. bottomless dancer
- SATURDAY —Toni Felice in her Lilly St. Cyr Bathtub Act

Cover charge reduced to 50¢ from 7 p.m. to 12 midnight with Caltech student, faculty, alumni, or employee identification card.

Second Class Postage paid at Pasadena, California. The California Tech is published weekly except during exams and vacation periods by the Associated Students of the California Institute of Technology, Inc., Winnie Center, 1201 E. California Blvd., Pasadena, CA 91109. Subscriptions: \$4.00 per year.