"I don't care what's fair, California / Lech

I just want my way."

Volume LXX

Pasadena, California, Thursday, February 27, 1969

Number 19



The new ASCIT Officers, from left to right, Standing: Bob Fisher, Gary Stormo, Marc Aaronson, Charles Creasy, Craig Sarazin, Jerry Feinberg, Bill Bradley, Bruce Ault, Phil Morgan; Seated: Leonidas Guibas, Derry Hornbuckle, Pete Szolovits, and Stephen Horner; Missing: Ira Moskatel, Jim Fuhrman, and Glen Spain.

## MIT Research 'Strike' Issues Call For Awareness

According to **Science** magazine March 4th will see a voluntary research halt by grad students and faculty at the Massachusetts Institute of Technology to focus atention on how the "misuse of scienific and technical knowledge presents a major threat to the existence of mankind." Similar stoppages are apparently in the works at Cornell University and other institutions.

The idea for the research stoppage originated with graduate students in the physics department at MIT, but the plan has the support of individuals in biology, chemistry, linguistics, and electrical engineering. These signitors included Victor Weisskopf (physics), P. Morse, H. Feshbach (both in physics); Noam Chomsky (linguistics); S. Luria (biology); and J. Y. Lettvin (electrical engineering).

Plans are for a convocation on the day of the fourth, dealing with the role of the scientist with regard to political action. Sen. George McGovern is slated to speak on reconverting the American economy from defense to domstic production, Cornell physicist Hans Bethe will talk

### **Court Injunction?**

on the Anti-Ballistic Missle system, Noam Chomsky on the (political) responsibility of intellectuals, and other speakers will cover such topics as chemical and biological warfare. Panels on the world food crisis, urban problems, and finding non-defense jobs for young scientists and engineers will also be held.

Though the graduate students who originally conceived of the research halt saw it as focusing on Vietnam, faculty feeling resulted in the expansion of its aims. The steering committee is equally divided betwen grad students and faculty members. Forty-seven senior faculty signed the original faculty statement which asserted that, "Through its actions in Vietnam our government has shaken our confidence in its ability to make wise and humane decisions. . . The response of the scientific community has been hopelessly fragmented. . . We feel that it is no longer possible to remain uninvolved. We therefore call on scientists and engineers at MIT, and throughout the country, to unite for concerted action and leadership."

## San Andreas Blues

# Throop Hall Declared Unsafe

#### by Nick Smith

Caltech's Board of Trustees are meeting Monday to decide the fate of Throop Hall. A remodeling study of Throop Hall showed that it could not stand a major earthquake.

In 1910, the main building of Throop Polytechnic Institute was dedicated Pasadena Hall. This building was renamed Throop Hall in 1920, when the school became Caltech. As the various departments spread out, Throop became the administrative center of the campus. For 59 years, Throop has served many functions, ranging from an office building to a publications center. It was once the home of lockers for off-campus students, and was once where all student mail had to be picked up. The dome has been the happy home of various objects, ranging from Christmas trees to the Great Pumpkin's landing lights. For many years the monstrous landmark has been the butt of many jokes. Well, the joke may have been on the original builders.

### 'Little Boxes'

Modern, earthquake - proof buildings of the same type as Throop are of the "concrete box" type. This is one of the strongest type of structure, and will withstand most quakes with ease.

# **ARC Bureaucracy Meets Twice Monthly**

#### by Kevin Savage

There is a new bureaurocracy functioning on campus. It meets by-weekly with students from Caltech, UCLA, and USC. The ASCIT RESEARCH CENTER is now a tri-campus organization running smoothly under the direction of Jim Beck. It is sponsoring or considering sponsoring several student research projects in the same style as the original ASCIT RESEARCH PROJECT. Although the ARC is limited to funding any given project for a maximum amount of \$500, it can offer guidance gained by experience in applying to various foundations for the rest of the money needed for any given project.

There are, currently before the ARC, six proposals for consideration. Four of these are from UCLA, demonstrating that this sort of activity, although it may have originated on this campus, is no longer a monopoly of this student body. For the most part, the research proposals are not all in the physical sciences. One of the UCLA proposals is for an experimental pilot film of a type of documentary that would be superior to current forms of televised news broadcasts. This pilot film would choose as its topic the disturbances at San Francisco State College.

One project that has already been initiated by the RE-SEARCH CENTER is a program of science education in grammer schools. A group headed by Gregg Wright and Jan Streiff (SRA-Grinnell College) is engaged in teaching a combined 5th and 6th grade class as well as a third grade class at Cleveland School. The Instructors have a free hand in the running of the Class as well as the complete responsibility for instruction in science. They are given one hour out of the normal classroom time, for the third grade class and they meet with the 5th and 6th graders after regular class hours. They are experimenting with the "discovery" or "Socratic" method and are achieving a great amount of interest among their students. The group has developed a water drop microscope with between thirty and seventy power that can be constructed for fifty cents each. The Cleveland School seems ω ne satisfied with the program to the extent that they are willing to turn anoher class over to the program if another volunteer can be found for the program who would take responsibility for this other class. In addition, the group has received inquiries from another school as to what exactly the program is and how they might be able to get in on it. The ARC also envisions the possible creation of a Southern California Student Research Center to replace ARC as the multicampus overseer. The functions (Continued on page 5)

Throop, on the other hand, was made on more of a floor-by-floor basis. This means that, in the case of a strong enough quake, the tile inside the walls could shatter and possibly collapse. If the ground motion was more intense, structural failure could result.

Dr. Housner, professor of civil engineering and applied mechanics, said that a shock causing a lateral acceleration .98m/sec/sec would cause minor damage, and one of 2.45m/sec/sec would cause major damage. According to his article in Engineering and Science, the probability of a minor damage shock in the almost sixty years of Throop's existence is around 90%. The chances of a major shock, however, are almost negligible in this location. It is not quite as if the entire building had to be evacuated tomorrow. It is true, however, that Throop Hall does not meet the earthquake standards that the California state legislature seems to consider valid for local public schools.

### **Decision Monday**

The Institute's board of trustees is taking up the matter at a meeting on Monday. The campus architect is currently doing a cost-benefit study of the major (Continued on page 4)

### Violinist Stern To Perform Fri., Attend Reception

World famous violinist Isaac Stern will play in Beckman Auditorium tomorrow night at 8:30.

Called the world's busiest violinist, Mr. Stern is on a nationwide tour following an active summer and fall concertizing in Europe, Israel and in Japan. He has performed with most of the major European and U.S. symphonies. In a recent dramatic appearance on Mt. Scopus overlooking Jerusalem with Leonard Bernstein, Stern was concerned that the blazing Israeli sun would damage his famous Guarnerius instrument. Taking note of the situation, Leonard Bernstein stood so that his shadow man-(Continued on page 4)

## **ASCIT Elections Spark Threats**

...Between Scylla and Charybdis...

#### by Paul Levin

Aren't you glad you're not a member of ASCIT's BOD? You would be if you were faced with problems like these: "Have we accidentally invalidated our own elections? Will ASCIT be sued? Will the BOD be thrown in jail for tampering with corporate elections?' This was the unofficial summary by Derry Hornbuck, ASCIT Secretary, of an emergency meeting of the Board of Directors meeting called, or rather gathered at 12:42 a.m. Feb. 24. To run any meeting at that unearthly hour of the morning would require a dire emergency.

#### It all started . . .

It all started with a seemingly trivial election Wednesday noon. This was not the choicest day for an election. By twelve noon,

when the elections were supposed to start, many people would have eaten and been on their way. Besides, how many people actually knew that an election was going to take place. It was to be handled by a grosslyundermanned committee headed by Paul Levin, the Elections Committee Chairman. He and one other person had to distribute ballots and ballot boxes to six houses at noon. All of the new houses and Blacker had their boxes and were voting reasonably soon after 12:00 p.m. The Elections Chairman suffered a slight delay in getting to his room after the 11:00-12:00 Glee Club practice, but if his memory and an erratic wrist watch serve him right, the boxes were delivered by eleven or twelve minutes after the hour. Unfortunately,

the President of Fleming House, John Forbes said after the results were announced he didn't find the ballots until 12:30 p.m.! In the old houses there indeed was a poor turnout; Fleming House had very few signatures at 12:40, when the Elections Chairman passed through again. The ballot boxes from the houses were duly picked up at 1:00 p.m. and counted in an hour.

At 5:00 p.m. the Elections Chairman was met at Louise Hood's office, where he had come to pick up the off-campus box, and was hurriedly escorted to a BOD meeting which was already in session. After the Elections Chairman hurriedly totaled the votes, the Board asked him if the election results were in order. Having heard no com-(Continued on page 4)

## 191 Class Goes To Al Beagle

Al Beagle, a junior, will represent Caltech at the NAIA National Wrestling Tournament on March 8. He won his weight class (191) at the NAIA District 3 tournament by a 7-1 decision. (See Page 7 for details).

What's Coming Off On This Campus? Come to the PARTY-PARTY at 8:00 Saturday night in Culbertson and we'll give you THE ANSWER. All Teckers with dates are invited.

### Editorial

## A Parting Gift

The Flying Fickle Finger of Fate dropped by Tech last Sunday and layed an enormous egg in the form of a decision by the old ASCIT BOD. In its final meeting, before swearing in the new officers, the old Board took action which we consider to be imprudent and ill-advised.

The Board reversed a prior decision by rescinding its confirmation of the result of the Breakstone-Spain runoff for Director at Large. These results (which indicated a victory for Glen Spain) had been confirmed on February 19 by a unanimous vote of those Board members present. The Board called for a new election, to be held Monday, March 3.

To take such an action, in the manner which they followed, showed a severe lack of judgment on the part of the old Board.

First, the action was taken at a closed meeting of the BOD. The Board of Directors are required (Article IV, Sec. 4, By Laws) to notify the student body seven days in advance of any meeting, of any legislative action which they propose to take. Passing such a motion for a new election without prior and proper notification to the Student body, and indeed to the candidates themselves, was clearly unjustifiable. In fact, the only non-BOD people present were John Forbes (Pres.-Fleming) and Paul Levin (Election Chairman). Forbes presented the case for a new election. The Board heard no other arguments, not even from the candidates themselves.

Second, the action taken was procedurally incorrect and of dubious legality under California state law. The By-Laws specifically forbid the Board from taking such action. So, the entire issue was left up in the air.

The result was that the new board immediately had to deal with the cacophony which the old Board's action caused. We think that the old Board's action did not reflect its experience and brought about a very difficult and delicate position for the new Board.

> Craig L. Sarazin Ira D. Moskatel

# Not So Far Away

On February 18, 1969, the Senate of the Associated Students of Occidental College to censure and suspend the operation of the campus paper, The Occidental. This week volume one, number one of the "wholly independent Occidental" was published by the former ASOC chosen co-editors, Charles Dulaney and Nason Dana "Tuck" Newport, completely under their own responsibility. With the publication of this issue, the whole question of the function of a college newspaper has been brought to a head on the Occidental campus.

Charges of everything from "misuse of funds" to "undermining the Senate" to slating news coverage and chosing stories improperly were leveled at the then official editors Newport and Dulaney. At the root of the issue, according to both Newport, in a rebuttal editorial, and ASOC President W. Don Cornwell, in a letter distributed to the student body, is the question of whether the Occidental, the "Official Organ of the Student Body," is supposed to speak for the student body. Cornwell claims that the paper "has moved beyond the left-wing, right-wing rag with the usual slanted editorials to slanted newsreporting which does not reflect acod journalisitc standards."

We believe in the unbiased reporting of news; however, we see little justification in the campus newspaper reflecting solely the opinions of the student governing body. We see the newspaper as a source of facts and thought provoking opinion, be it favorable or not to the decisions of the student body. We believe a university newspaper is to represent the student body, not to speak for it. Representation includes printing letters of differing ppinions, not emasculating the editorial voice of the paper. The California Tech will continue to express opinions, many of which may differ from that of the student body officers. We wish the best of luck to editors Newport and Dulaney in their present effort to fight campus censorship.

### Letters

# Savage Questions Board's **Right To Hold New Election**

Dear Editors,

On Sunday 23 February 1969 the outgoing ASCIT BOD attempted to pass a motion on a topic which the By-Laws of the corporation, as I will attempt to prove, specifically deny them the power to act. In doing so they left the incoming board with a difficult problem.

1. Minutes of BOD meeting of February 19, 1969: "4. Election (Feng-Smith) moved to approve election results of Feb 17 and 19. Passed 6-0-0."

2. These minutes as well as the results of the election were distributed on the evening of Feb. 19, 1969. This distribution constitutes proper notification of a candidate's victory in election. 3. The Bylaws stipulate that Robert's Rules of Order shall prevail in all circumstances not specifically covered by the bylaws and resolutions.

4. Robert's Rules of Order expressly forbides the BOD from reconsidering (Art. VI, par. 36, pp. 158-9) an already approved election in which a winner has been declared and notified in the usual way; unless that winner shall decline said position.

5. In consultation with Dr. H. C. Martel, the secretary, and therefore parliamentarian, of the Faculty Board, the conclusion was reached that the ASCIT BOD

would be in violation of Robert's Rules of Order, and therefore the By-Laws of the corporation if they attempted to reconsider or rescind the election of Mr. Glen Spain without his express consent.

The new BOD, in the opinion of Dr. Martel, should never be allowed to rule on the validity of any of the elections that put its members into office because it would permit a board to invalidate a given election over and over again until a result that the board approved was obtained. In Dr. Martel's opinion, a new board should not have a veto power over the members of the board and the procedures that the corporation used to put the officers into office.

An argument used by members of the new BOD in attempting to decide to uphold the old BOD's decision was that there was a light turnout and that if there had been more voters the results would have been different. In the national election in 1960, Kennedy defeated Nixon by about one vote in each precinct in the U.S. in a light turnout election, yet this election was not even attempted to be ruled invalid. These members of the board further alleged, but did not prove (because it is im-

(Continued on page 3)

## **ASCIT Sec Tells Reasons Behind Board** Decision

### Dear Sirs:

I would like to express some of my personal opinions regarding the controversy over the recent runoff election for the second Directors-at-Large.

1) It is the duty of the BOD in conjunction with the Elections Chairman to have the ballot boxes out on time and in sight. This is part of the guaranteed right to vote and is especially important in this case since the election was held on two days notice without an announcement in ASCIT minutes or the Tech, and since many people eat early on Wednesday. The Elections Chairman has stated that some of the ballot boxes were ten minutes late, that one had only three or four signatures at 12:40, and that, in general, the election came off rather poorly. The complaining party said they saw no ballot box in their lounge at 12:20

2) The complaint was lodged only after the outcome was well known and because the complaining party didn't like the results. However, there is no established procedure for contesting an election, and it is the duty of the BOD to consider valid complaints regardless of motive.

3) Page House worked diligently to get out their vote despite the fact that their ballot box was equally late; however, the problem remains that a number of people in other houses were deprived of an important part of their opportunity to vote because the ballot boxes were not in sight after lunch, even at 12:10.

4) It would be a grave mistake to hold the election over if the poor turnout was due to apathy in some houses; but I think a significant part of the drop was due to late ballot boxes.

**Derry Hornbuckle** 

## Spain Tells Views On **Controversy About Vote**

#### Dear Editors:

In the recent by-laws and election scandal there were many actions and decisions taken of which many people are unaware. In light of the fact that corporate decisions involve every member of ASCIT. I find this situation intolerable. I intend to explain my reasons for the actions I took and I invite those members of the BOD and others involved to do likewise.

The second run-off election between myself and Mr. Breakstone, a resident of Fleming House, occured on Wednesday the 19th. That evening the election results of all the runoff elections were validated by the board it appeared that I was Director-at-large.

However, at least 17 hours later. John Forbes on behalf of unknown parties, filed a complaint on election procedure with the old Board, on the change that the election ballot boxes had not arrived in time as stated in (at noon, By Laws) but some twenty or thirty minutes late in Fleming, and therefore several people did not vote at lunch and that hence the election should be declared invalid. I was not informed until 8:00 Sunday night when I was told that I could not be sworn in. The earlier meeting of the old BOD was closed and secret and a vote was taken on the BOD decision to invalidate their previous decision and have vet another run-off. After the new Board was sworn in, they confirmed that decision and set an election for March 3rd. At this point members of my own house, Page, and several other houses got very angry and without my consent lodged several large and angry complaints. I found myself with Alan Breakstone smack dab in the middle of an Interhouse War over which neither of us had control.

The rules of combat were California Corporate Law and several suits were threatened on both sides. This was very very serious indeed.

After talking to Horner and in total confusion I did my best to dissociate myself from the conflict till I decided what to do, I made myself scarce and tried to find out what has happening.

The whole thing was rapidly getting out of hand and the runoff elections, for several officers were thrown into a legal tangle, since the motions involved could legally have invalidated all the run-offs, including Horner!

After thinking the whole thing over, it appeared that the Board's action was totally illegal! The decisions were according to Roberts Rules of Order, section 36, page 158, to be made with the full attendance of the elected officer involved and a reelection possible only with his consent. However, all Board meetings were secret (also of doubtful legal status) was never, at any time consulted. Check it yourself. For a corporation in this state, breach of Order can be quite nasty. Based on this fact-that I am indeed legally in office— I had to decide what to do and fast. My information is as follows: 1) Legally, the Fleming complaint would only have been valid if: a) it had been brought up before the election's committee before Board approval and; b) only if the complaint were dealt with according to Roberts Rules in an open meeting. 2) Morally (by my own standards the Fleming complaint was definitely not valid because: a) All the Houses received ballot boxes at more or less ( plus 5

minutes) the same time; b) The

Winnett box was open not till

4:00 but till almost 5:00 thereby

allowing anyone who was really

interested to vote, provided they

(Continued on page 4)

CaliforniaTech Published weekly during the school year except during holidays and exams by the Associated Students of the California Institute of Technology. The opinions contained herein are solely those of the newspaper staff.

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### Just You Wait, 'enry Censor

Undergraduates in all seven houses were shocked and bewildered two weeks ago as the results of the ASCIT BOD restructuring mysteriously disappeared from the front page of the California Tech. Amid rumors of official pressure, the former editors, Dave Lewin, Jim Cooper and Alan Stein vigorously denied that an act of censorship had taken place. Last week, as the investigation of who cut up Sue Martin continued, the aroused student body learned what the new ASCIT BOD was like. Although both the current and former editors have yet to discover the identity of the selfappointed censor, General Hershey has. Retribution was swift and unmerciful-an order to report for his pre-induction physical.

Business: Jeff Hecht, Manager; Metin Mangir, Circulation Manager; Art Selly, Staff.

California Tech, Publication Offices: 1201 E. California Blvd., Pasadena, California, 91109. Second-class postage paid at Pasadena, California. Represented nationally by National Educational Advertising Services, Inc. Subscriptions: \$1.50 per term, \$4.00 per year. Life subscription: \$100.00. Printed by Bickley Printing Co., 25 South Fair Oaks Ave., Pasadena, Calif. Volume LXX, Number 19, Thursday February 27, 1969.



#### by Jim Cooper

Soph Edward B. Barrelmaker of the Mythological Institute of Technocracy peered nervously into the carpeted room.

"Come in," said the new president of the Institute from behind his desk. "What can I do for vou?"

"Hello, Dr. White," said Barrelmaker. "My name is Edward B. Barrelmaker, and I'm a sophomore here, and I just thought I would drop by to welcome you to the institute."

'Why, thank you, Mr. Barrelmaker. That's mighty kind of you. I'm really looking forward to serving the students here. And how have things been going with you?"

Barrelmaker gulped hastily, thought about the overly exciting lectures in Basic Theocratics 2b; the campus workmen who had ripped out his dorm's electrical system by mistake; and about the \$45.00 he owed the institute; and decided he had better not mention anything.

"Everything's going fine with me, sir," Barrelmaker managed to say.

### Barrel, Barrel

"That's wonderful. You know, I want to make it my policy to listen openly and freely to student complaints. I believe that all of the troubles that plague our nation's campuses came about as a result of people not listening to other people. Why, for instance, if all those demonstrators had just listened to the police, nothing at all would have happened.

"I just hope I'm not too late, however," Dr. White said.

"What do you mean by that?" asked Barrelmaker.

"Well, just the other night I was working late in my office and I heard the most frightening sounds of a huge demonstration going on right outside.'

The president looked as though he were getting upset. "And you know," he continued, "I looked out and I saw that it really was a riot. Why, there must have been some four or five hundred students milling around, being led by what obviously must have been some off-campus agitator. He even had a school

welcome to the Campus Barber Shop in Winnett Center Three Barbers to Serve You to 5:15 Monday - Friday Paul A. Harmon

jacket on and it wasn't even our insuring that you don't mistake school.

"And there were shouts of 'On strike! Shut it down!', and something else that sounded like "Way for the elephant." The latter was obviously some kind of slogan denoting the secret organization that led the riot."

#### Here's Your Story

By now, the president was in a state of utter catastrophe. "Oh my," he shrieked, "and then the worst part happened. There were sirens and evidently the students had taken over a National Guard tank, for there was this great big thing lumbering along in the midst of them."

All this time, Barrelmaker had been trying to interrupt to explain that the entire scene was caused by a normal-going-awaycelebration - at - Theoc-for-a-wellliked-professor, but he had been unsuccessful in getting the president to notice him.

By now, the president was nearly sobbing. "Oh, it was so lucky that the papers didn't pick up the news of the riot. It would have been such a scandal for such a thing to have happened during my first week in office."

The president suddenly pulled himself together, and grew grim. "But I warn you, Barrelmaker, and the rest of the students that the adminisration will not tolerae such nonsense nor will allow it to disrupt the everyday life here at Theoc."

### You've Come to Tech

Again, Barrelmaker tried to explain that the demonstration was more or less normal for Theocers, but again he was unsuccessful.

The president went on sternly: "I've just come from a position in which I had to deal with bigger enemies than just a simple student body at a college, and as I knew how to deal with the enemies of our nation, I'll know how to deal with dissident students. Have you ever heard of 'Fail Safe?' '

Barrelmaker nodded his head. "Well come here," said the president. "I want to show you something.'

Barrelmaker went around the big desk and looked into the secret panel which the president had opened. There he saw a large red button."

The president now had a gleam in his eye. "That, my boy, is the 'Fail Safe' button, and if I ever press it. . ." the president left that sentence unfinished.

"Now, Mr. Barrelmaker," the president was all smiles again. "Is there anything I can do for vou?"

a practice riot for the real thing? I mean, how about installing a direct phone line from the student dorms to your office?"

The president was ecstatic. "My boy, that's a wonderful idea. Why we could call it the 'Hot Line' and everything. Thank you very much for your wonderful suggestion, and it just goes to prove to me that if I keep my ears and mind open, we can get a real constructive dialogue going."

**Burma Shave** 

### **Notice**

#### VISTA

VISTA will be on campus (on the Olive Walk or in Winnett Lounge depending on the weather) Monday through Wednesday, Mar. 3-5.

Come to a Y Lunch Wednesday noon, Y Lounge and see what's happening.

by Robert Geller

HKJ9732

C K Q 10

East

SK 6

C 9 3

H A 10 4

North

4C

Pass

DKJ10864

North

S 10 8

D 9 2

South

H Q 8

SA732

DA73

North-South Vulnerable

The Bidding:

West led the queen of diamonds.

trip to Stanford for the Regional

Playoff in the 1969 Intercollegiate

Bridge Tournament on Febru-

ary 14. In the two session, six

table events, Tom Davis-Michael

Lamanna finished third and Dean

Ballard-Ron Stevens finished out

**Duplicate Tactics** 

course of action to try to defeat

the opponent's contract in rubber

bridge and imp team of four play,

attempting to do this in match-

point play can have catastrophic

results. It is just as important in

While it is always the best

of the overall ranking.

Two Caltech pairs made the

West

Pass

Pass

C A 8 6 2

West

H 6 5

D Q 5

South

1 NT

4 H

SQJ954

CJ754

"Fourth?"

East

4D

Pass

### Stephen Horner

### Pres. Tells Plans For Year by Stephen Horner

I want to thank the members

of ASCIT for giving me their confidence for the coming year. This column is the first of a series in the Tech in order to help promote my goal of better communications at Caltech.

Forming a secure link with Dr. Harold Brown is vital in order that the administration is aware of the needs and aspirations of the student body. I have had a chance to meet with him, and I anticipate that Teckers will be served well by his leadership.

Also important are better relations between the trustees and the students. It is desirable that each group be more aware of the opinions of the other, and plans are being formed to establish ties between these two bodies.

ASCIT can benefit much through better contact with grad students and their Graduate Student Council. Many valuable ideas are lost to all when the holding of a bachelor's degree

diamonds and led the king of spades, hoping to find his partner with the ace of spades, so he could promote his ten of hearts for the setting trick. This is probably the correct play in rubber bridge, but it is questionable at match-points. South took the ace of spades and started to run the hearts. This was the position as the last heart was led. South led the last heart, throwing

south led i	me fast neart, tino
	North
	S 10
	H 3
	D —
	C K Q 10
West	East
SQ	Immaterial
н	
D —	
CJ754	
	South
	S 2
	н
	D
	C A 8 6 2

the two of spades, and West was squeezed. For making the overtrick, South received an excellent score

In spite of his defensive strategy, East still could have held declarer to four by leading the king of spades before cashing the diamond. Now the squeeze will not work and declarer will be held to his contract.

becomes a barrier to communication.

The formation of an ASCITrun FM station has been proposed. Although there are difficulties in finding a frequency, enough qualified people to maintain the station, and financing, these could be solved, giving ASCIT a forum for Caltech news, replays of Monday night lectures, and music. The studio would ideally be in the student houses.

The need for better communication with girls' schools is obvious. It could be fulfilled with activities such as an ASCIT tutoring program for girls at neighboring schools and lowpressure events in the social program.

In order to truly represent Teckers, BOD members and other ASCIT officers need your ideas. I plan to visit another house at least once a week in order to maintain personal contact with as many ASCIT members as possible. The communications problem can be solved with enough effort by the right people.

### See Europe For Less This Year

Teachers can now spend their long lazy summers in Europe. working off their nine months of isolation. The Graduate Student Council has set up a travel bureau in the Winnett Center to give information about countries in Europe and ways and means to get there, and, when you do, how to really swing.

Charter flights to Europe offer the trip from the West Coast and back for \$295 even. The flights that the Grad Council offers are those of the National Student Travel Association. The Council can issue the International Student I.D. card, which is a boon for discounts in Europe for accomodation, food, clothing, travel, and the host of museums and art galleries of the Continent.

Within Europe the I.D. card allows you to use the extensive complex of student charter flights that are available. Hotels often require the card to verify student status.

All this information is on the racks opposite Louise Hood's office. And there will be a body outside Winnett to answer questions about the flights . . . Monday to Thursday, 5 to 6 p.m.

Take the plunge . . . and fly away to Europe this summer.

### STUDENTS,

if you need HELP in fulfilling your language requirement - inquire about tutoring services at

BERLITZ, THE LANGUAGE CENTER 170 South Lake Ave. Pasadena SY 5-5888

THE

Starts Mar. 12

CHARLY

### And Gotten Horny

"Well, sir, I was just thinking that perhaps a mistake could happen. Wouldn't it be more appropriate if we had some way of

WELCOME CAL-TECH 10% discount, parking in rear KLEKER HARDWARE (795-8361) 912 E. California, (Near Lake) Open 10-6 Monday - Saturday

**ESQUIRE THEATRE** 

2670 E. Colorado SY 3-6149 --- MU 4-1774

Kirk Douglas in

and

**Michael York in** 

STRANGE AFFAIR

BROTHERHOOD

match-point play not to throw away overtricks in quixotic attempts to set contracts. Today's hand, played last weekend in the Bakersfield Sectional Tournament, is an illustration of this theme.

The bidding, although it seems strange, is rather straightforward. North's four club response to South's weak notrump is a South African Texas (That is not a misprint) transfer bid asking his partner to bid four hearts. The theory behind this convention is that the notrump opener will often hold tenaces which should be led up to. In this case South held no tenaces, nevertheless he compiled with his partner's wishes by bidding four hearts.

#### Squeeze Play

East overtook West's lead of the queen of diamonds with the king, which declarer won the ace. South now led the queen of hearts which East won with the ace. East now took the jack of

## Savage Rides On Roberts

### (Continued from page 2)

 $\operatorname{possible}$  to prove but easy to conjecture), that the reason for this light turnout is that the ballot boxes were put out late. In no election in ASCIT memory have the ballot boxes been opened on time (except way back when there were no time specifications in the By-Laws). This is therefore hardly an unusual circumstance. In addition, if one questions a significant portion of the membership of a house such as Ricketts, one will find that people who knew of the election did not remember either of the candidates and therefore had no basis for choosing one over the other. This would seem to indicate that there is considerable doubt about the claim of late ballot boxes causing a drop in the vote. If a person had missed lunch hour voting, he could still

have voted in Louise Hood's office until 5 p.m.

The fact that a board that is willing to admit that it is not well versed in parliamentary procedures is willing to make a decision of this kind over excessively voiced opposition without consulting competent authority such as the Secretary to the Board of Trustees or the Secretary to the Faculty Board (the parliamentarians of their respective organizations who might be available for free consultation) leaves a doubt in my mind about the desire of the present board to govern the corporation within the limits of the constraints placed on them by the By-Laws and the California State corporate laws.

> Up on my white horse Kevin Savage

## Corporate Suits...

#### (Continued from page 1)

plaints (he had classes for a good part of the afternoon) he answered in the affirmative. The Board then approved the results of both the first and second runoff eletcions with one motion.

#### What a Legacy

Just before the new Board was sworn in on Feb. 23, the old Board held a short closed session to hear Mr. Forbes' protest and to allow the Elections Chairman to give his position. Forbes' position has already been stated. On the basis of poor publicity, a poor day (the already-mentioned Wednesday difficulty), and the possibility of losing an olive drab ballot box on a table loaded with books (where the box was placed), the Elections Chairman recommended that the election be rerun. After some discussion the Board voted to hold the second runoff over again on March 3. After the new Board was sworn in "Joe Rhodes reported on the irregularities in the runoff election, and the action of the old Board was approved." (from minutes)

Later on in the evening or early the next morning Stephen Horner contacted the Elections Chairman concerning this election. It seems that Kevin Savage had threatened to get an injunction to prevent the new election from taking place. Out of this discussion the Board meeting mentioned in the first paragraph was called. After two hours of discussion, at which Craig Sarazin, a California Tech editor, Kevin Savage, and the Elections Chairman were also present, the Board decided that the action of the previous Board was of doubtful nature and attempted, without the aid of a copy of Robert's Rules of Order, to re-do the old Board's action in a more legal manner. The Board voted six for, none against, and one abstaining to reconsider the approval of the runoff results. They then voted six for and one abstaining to reconsider the approval of the runoff results. They then voted six for and one against to rescind approval of the results of the second runoff. The election was again set for March 3.

quiet, but Wednesday morning at 11:00 a.m. the Board will again meet. It looks as if things were still not done legally, because the agenda for this meeting subtitles the election discussion "or the use and abuse of Robert's

Rules." It now appears that the new Board may not have the authority to rerun the election unless the candidate-boardmember (?), Glen Spain, consents. Funny thing about that. Meanwhile, "don't miss the next exciting issue of the ASCIT Minutes. . ."

### Stern

### (Continued from page 1)

aged to fall on the priceless violin while Stern was performing. Under the Wrecker's Axe

Although Mr. Stern gives more than 100 concerts a year throughout the world, he maintains a busy schedule of civic, cultural and philanthropic activities. He is president of Carnegie Hall, having saved that historic building from the wrecker's axe. He president of the Americais Israel Cultural Foundation. He is a member of the National Council on the Arts, helping to formulate and guide the cultural policies of the United States Government.

Mr. Stern's program will be: Devil's Trill Sonata by Tartini, Sonata in E flat major, Op. 120, No. 2 by Brahms, Sonata No. 2 (1922) by Bartok, Adagio in E major, K261 and Rondo in C major, K373, by Mozart, and Tzigane by Ravel.

Mr. Stern has agreed to meet

### Personal Motivation

## **Program Set For APC Approval**

#### by Jeff Ross

Many Caltech students have heard of the Scholars Program, but did not know that it was being seriously considered. However, the Academic Reform Committee has been working on it, and it is now in its final stages. The program is explained below as it will be submitted to the Academic Policies Committee (unless there are any last-minute changes).

The Scholars Program, also known as the Independent Studies Program, is designed as a limited, selective course of study for students showing high potential for creative scientific research. The intent of this program is to allow such students to realize their capabilities to the fullest by permitting an encouraging them to do research. They would gain the benefits of more student-teacher contact primarily through a variation of the advisor system. This program would allow the mature student who already has a good

and talk with members of the Caltech community. A reception will be held in Ruddock House following the concert tomorrow night.

## McKven Like Olives, **An Acquired Taste**

#### by Alan Stein

### Greatest Hits of Rod McKuen. Warner Bros.-Seven Arts WS1722

Rod McKuen's voice is like olives. The first time you try it, you can't stand it, but after a time it grows on you. The same holds doubly true for this album. McKuen is backed up by a wispyvoiced soprano chorus, the farthest thing from McKuen's own gravel throat. The first time I heard this album, I hated the arrangements. The second time, they weren't too bad. The third, well . . . Now, I think they are

The selection of songs for this

does include some of his best. 33, 45, 78, Hike!

My favorite cut is The Lovers. This is the longest cut (six minutes) on a fairly long album (46 min.). It is a beautifully subjective description of loving, and losing, and loving again. It has "they-had-to-believe-that-theya live-happily-after" ending. Mc-Kuen has an extraordinarily soft sounding voice, for all its roughness.

Stanyan Street is on this album. It is very difficult to say whether McKuen sings this better than Glenn Yarbrough. I prefer McKuen's version, slightly, since most of the work is poetic reading, which McKuen excells

idea of his study needs a chance to bypass courses which he and his advisor deem unnecessary. Finally, the program is designed to draw existing capabilities into a single coherent program with a well-defined objective.

#### **Small Enrollment**

At presently envisioned, the program would be limited in participation. Students who wished to apply would be eligible beginning in their sophomore year. They would be required to find five faculty members who would be willing to sponsor and oversee them. A selection committee would be established to consider admissions. To prevent an overload, no more than ten per cent of a particular class could be enrolled at the same time.

Students who are accepted into this program would be encouraged to examine problems of personal interest to them. To allow freedom of action, both Institute and Division requirements would be formally waived. A group of three advisors would be chosen from the names originally submitted as sponsors. They would direct the student's progress to see that it is adequate. Course work would not be formally required, though it could be instituted by the advisor group. Courses which are taken could either be audited, taken pass fail, or taken for a grade at the recommendation of the advisors. If either the student changed his mind, or his advisors thought his progress inadequate, the student could returned to the regular program, possibly with loss of time. At the end of his senior year, the advisor group would decide whether the student warrants graduation.

#### **Difficult** Program

This program is not designed as an easy alternative to the present course of study. Indeed, such a program would make even more demands upon the student; those enrolled under this program would be expected to maintain a high standard of achievement. Fortunately, studies seem to show that a student learns more, better, and faster when he is self-motivated. The hope of the program is that the more gifted student would have a chance to get a better bachelor's education.

If anyone has any questions about the proposal, or would like to discuss it, contact Mike Kahn in 104 Ruddock.

### Shakey Throop

### (Continued from page 1)

alternatives. Plans are being studied that would either replace or remodel Throop in such a way that no earthquake danger would exist.

It is emphasized that there is no immediate danger of Throop collapsing, since there is surprisingly little actual deterioration of the building itself. It would take a nearby quake of magnitude 5.5 on the Richter scale of 12 to cause the acceleration needed for minor damage. There are fewer than 300 independent quakes of at least this magnitude per century in the state of California. Since that is an area of 150,000 square miles, the reader may figure the odds of a quake under Caltech. The only problem is that the actual knowledge and techniques of quake safety were not known when Throop was built. Most of the buildings on campus would stand up quite well even during a major quake. The only other buildings that might suffer damage in a quake are Gates, Culbertson, and the old Heating Plant, none of which were quake-proofed.

Thus it is that the Teckers of the future may miss seeing that great landmark, Throop. They should be overjoyed.





## **Bob** Enenstein Arcadia Civic Center

Horse racing is known as the sport of kings, but what do you know it as? Most of you will probably say it's a sport where people can bet money. Admittedly, gambling is the primary attraction, but a lot more goes on at a race track.

Last Saturday, I paid a visit to the Arcadia civic center-the Santa Anita Race Track. After a fierce struggle to emerge from the hoards placing bets at the pari-mutual windows, I emerged at the base of the grandstand. I was greeted with a sensational view of the mountains, some

(Continued on page 7)

plam trees, and, oh yes, a race track. But even more impressive than the contrast of the race track with its computerized tote boards and the natural scenic beauty was the contrast among the various types of people. There were ladies in furs, men with cigars, and children in tennis shoes.

The interior of the track is known as the infield. This area is the biggest surprise. It is a large grassy area containing flowers, palm trees, betting windows, a bandstand, and a concession stand which sells hot dogs that make one long for institute

# Hoopters Shoot Well, Still Lose

92	Redlands	Caltech	61
122	UCSD	Caltech	48
110	LA Baptist	Caltech	68
111	Oxy	Caltech	59
74	SCC	Caltech	83
111	Whittier	Caltech	52

The Beavers improved the score the second time around against Redlands but not their shooting percentage. With only 8 less attempts they had 17 fewer field goals for 29%; and despite winning 8 more charity tosses, they converted only three more for 68%. Meanwhile, Redlands relatively sizzled from the field with 50% and from the freethrow line with 77%. With turnovers 22-8 against Tech, the score could have been even worse had the Beavers not outrbounded the opposition 64-47. High scorers were Carrie and Hanson with 13. Heinz led all rebounders with 13 and Hanson added 12.

Against a clearly superior team, Tech had a decent first half, shooting 35% to the opposition's 37% from the field, and 69% to 70% from the free throw line. The difference in the score lay in the 15 vs. 2 turnovers, the resultant 1½ times as many shot attempts, and the 10 extra free throws that San Diego enjoyed. Then in the second half UCSD went wild and Tech fell apart, shooting 18% vs. 63% from the floor, 43% vs. 82% from the line, and being outrebounded 31-15 as the Beavers seemed unable to find the basket for anything. To worsen matters, the officials chose to have a high score and ignored San Diego's crashing tactics on the boards as UCSD received 45 to Tech's 20. Hanson led the scoring and rebounding with 12 points and 13 retrievals.

In a run-and-shoot game against LA Baptist College, the Beavers proved themselves capable, though not a match for LABC's 6-10, 6-10, 6-8, 6-6, . . . height. A powerful offensive team, LABC proved itself relatively weak on defense as Tech made enough inside shots to offset its extremely cold outside touch (carried over from the UCSD game) and shot 31% overall from the floor and 53% from the line, against 40% and 77% respectively for LABC. Scoring was balanced with Ault regaining his touch for 17, Bicknell hitting for 11 and Hanson and Heinz adding 10 apiece. Hanson led Tech's rebounders with 10, with Heinz contributing 9 and Ault 8 as Tech held its own against the much taller opposition, being ourebounded only 79-63.

In a near duplication of the last Oxy game (Tech lost 111-61), Tech had balanced halves (31 and 28) but rather different ways of making them: a 35%-25% field goal split for 30% overall and 37%-60% free throw shooting for a 54% game. Comparing to Oxy's hot 51% field goal percentage and phenomenal 87% from the line with a 19 rebound deficit nothing short of the trouncing could be expected. Koenig was the only Tech scorer in double figures with 11 and Heinz was high rebounder with 11.

In what was probably its best played half of the season, Tech came back from a 42-31 halftime deficit to outscore Southern California College 52-32 in the second half and record an 83-74 victory against a team it had lost to previously (93-71), a first in several seasons. The comeback was accomplished through a 50% field goal percentage, a clean offense which committed only 4 turnovers, a close man-to-man defense which allowed SCC 45% from the field but 13 less attempts while committing only 5 fouls while forcing 11 turnovers, and using its height advantage to gain a 29-19 rebounding superiority. Overall statistics were a 43% from the field and a 56% from the free line for Tech vs. 42% and 82% respectively for SCC and a 58-48 rebounding edge. High scorers were Gary Koenig with 18, mostly in the second half on drives and rebounds; Heinz with 16 on inside pivot shots; Carrie with 16, 15 of it in the second half of free throws and 15-20 fot jumpers; and Hanson with 14 including 3 baskets in the last 3 minutes, 2 on baseliners, to put the game securely out of reach for SCC. Heinz and Koenig shared rebounding honors with 12 as Hanson added 10.

The expected materialized against Whittier in another retrouncing. The first half was reasonable if not close at 51-31 with Tech behind in all categories except free throw shooting and turnovers (in which they enjoyed an uncomfortable lead). With the reserves playing nearly half the second stanza, and an ineffective performance by the starters as the familiar opening-of-the-second-half-throw-the-ball-away mania returned; the Beavers were outscored 60-21 by shooting only 29% from the field and 13% from the charity stripe while being killed on the boards 46-22 and



The Queen's Nectarine ABCS-666 Machine



ABCS-672



Feelin' Glad

ABCS-669



ABCS-671



Puzzle

ABCS-655



presenting the ball to Whittier 21 times. Overall CIT had 30%

## Man The ARC!

### (Continued from page 1)

of such an organization would be coordination of research and fund raising at the different participating schools, providing contacts between the different research groups, publicising the possibility of student organized research, and the publishing of a journal of student research. These were considered among the wildest of ravings at the inception of the organization of the ARP and are now considered as feasible goals.

from the field and 56% from the line with 42 rebounds versus 44%, 68% and 80 respectively for the Poets. High scorers were Ault and Koenig with 9 apiece while Hanson needed only 8 grabs to lead Tech in rebounding.

## Grad Given Travel Prize

Kenneth Jassby, a Caltech graduate student in materials science, has won the 1969 Guinier Fellowship for travel in France, the Caltech graduate office announced today.

Jassby, 25, is a native of Montreal, Canada, and received his bachelor's and master's degrees in engineering at McGill University in that city.

The memorial fellowship was established by the parents and friends of Daniel Guinier, Caltech graduate student killed in a mountain-climbing accident in Southern California in 1959.

The late student's father, Prof. Andre Guinier, is a professor of physics at the University of Paris. The purpose of the fund is to assist an American or Canadian graduate student at Caltech in becoming acquainted with France, its people, and its culture, by helping him with his travel expenses for a summer stay.

Jassby, whose second language is French, will use the \$800 prize money to visit France's music and art festivals next summer. He expects to receive his Ph.D. degree in June. He also intends to pursue his interest in writing poetry. He will stay in France until mid-September when he will visit central Africa and Asia. He will return to Caltech in 1970 to do further research with Prof. Thad Vreeland in dislocation dynamics in metals.

## Fleming Hosts **City Players**

Students in Fleming House at Caltech built a bridge between science and the theater arts Feb. 14.

They invited 12 members of the Pasadena Playhouse drama staff and school to dinner and to spend the evening acquainting them with what goes on behind the scenes in the theater. The 12 guests demonstrated the elements of putting a play together, from first readings to the finished performance.

The evening was the idea of Zoltan Tokes, Caltech graduate student in biology, who is the Fleming House resident associate.

"In this way," explained Tokes, "the players can move out into the community instead of waiting for the community to come to them. And many students here have had little experience with drama and are interested in knowing more about it."

John Larson, instructor-director on the Playhouse staff, headed the group, and has indicated that the Playhouse would be interested in planning similar evenings for other groups in the community.

## This Year's Guests, Next Year's Frosh



Photos by CTEIN

Girls and other high school students were treated to a tour of the campus Saturday which included a live demonstration of Dr. Sherwood's orbit plotting PDP-8, a floor show at lunch, and words of wisdom from Caltech's new president Harold Brown

the ages of  $2\frac{1}{2}$  and 12 on a res-

ervation basis; of authorizing one-half fare tickets for persons

between the ages of 12 and 21

on a standby basis; or of auth-

orizing one-half fare tickets on a

standby basis for military per-

sonnel on leave," Olsen asserted.

feared a CAB ruling upholding

the recent decision "would ul-

timately threaten other special

"No one would benefit from

an elimination of these fares,'

Olsen said. "As a matter of fact,

it would very likely lead to a

general fare increase because

two of the three fare categories

involved apply only to seats

which would otherwise go va-

and desirable fares.

cant.

Continuing, Olsen said he

Representative Arnold Olsen (D. Mont.) was joined today 16 House members in introducing a resolution in the House recommending continuation of chil-

## **Congressmen Support Half Fares**

dren, youth and military fares on the nation's airlines. The concurrent resolution expresses the sense of the Congress that special fares now authorized by the Civil Aeronautics Board (CAB) "are consistent with the intent and purposes of the Federal Aviation Act of 1958."

According to Olsen, a Civil Aeronautics Board decision last month by Examiner Arthur Presen that airline vouth fares discriminate against full-fare passengers and should be eliminated did not reflect the intent of the Congress in passing the Federal Aviation Act.

"I do not believe it was the intent of the Congress in this Act to prohibit the existing practices of authorizing one-half fare tickets for youngsers between

### Noah's ARC In Millikan



### Notices

ARC EDUCATION PROJECT: JUNIOR HIGH GROUP ORGANIZATIONAL MEETING

The Junior High School Project will have a meeting tonight at 10:00 p.m. in the "Y" Lounge. The group is involved in educational experiments in math and English at Wilson Junior High School. Anyone interested is invited to attend.

### ADMISSIONS WORK

If you will be at home (other than in L. A.) this term break and would like to take part in the interviewing of prospective frosh, contact Dr. Peter Miller in Throop or one of the four sutdents of the Admissions Committee (Pete Szolovits, Ed Schroeder, Bill Hocker, or Atul Jain). They will see if any arrangements can be made with the faculty member interviewing in your area.

### TWLF TO HOLD ORGANIZATIONAL MEETING TUESDAY NIGHT

The Caltech Physics Club will hold its second meeting this term next Tuesday night, March 4th. In keeping with the ecumenical spirit started last meeting Professor Max Delbruck, a biologist, will speak on The Relevance of Solid State Physics to Biological Transducers. The eting will be held at 8 p.m. at Professor Delbruck's house (1510 Oakdale). Professor Delbruck, a defector from Physics, is an excellent example of the axiom: 'Once a physicist, always a physicist.' All are invited to attend this reunion and share in the partaking of our refreshments.



Where's The Party-Party?

#### TOTEM LIVES

There will be a **Totem** meeting to discuss what will be included in our first issue this year, in the Coffeehouse at 9:30 p.m., Monday night. If you have anything you'd like to contribute, come to the meeting or give your stuff to Jack Falk in Dabney House.

Al Beagle, a junior, will represent Caltech at the NAIA National Wrestling Tournament on March 8 He won his weight class (191) at the NAIA District 3 tournament by a 7-1 decision. (See Page 7 for details)

(Continued on page 7)

### Enenstein's Travel's . . .

### (Continued from page 5)

cooking-yes, they are really that bad! The grass areas are every bit as nice as most parks. Families are able to enjoy picnic lunches, little children can play ball, and couples can lie in the grass and enjoy the scenery.

The race track's electronics would delight any EE. The main scoreboard shows everything from instantaneous odds on each horse, to the fractional times of the leading horse in each race. There are also several subsidary scorboards plus a complete closed circuit television system. The television features views of the scoreboard and instant replays of all the races.

Last, but not completely forgettable, is the race itself. There is always a loud murmur in the stands, but when the race begins, the noise level starts its ascent. As the horses round the far turn and begin their stretch drive, the fans, many of whom have a more than casual interest in the outcome, let their feelings be known. As the horses cross the finish line, one hears the oohs and aahs, moans and shouts of joy, and occasionally tears of either happiness or grief. Such is the setting of a day at the races.

Beagle Takes District Wrestling Tourney Honors

The NAIA District 3 wrestling meet was held at Caltech's gymnasium last Saturday. Two of the Beavers wrestlers gained high placing. Al Beagle won the championship in the 191-lb. class while Randy Lewis was second in the 137-lb. class. Both are now eligible to compete in the Nationals at Omaha on the weekend of March 8th. Another Beaver, Bruce Johnson gained fourth in the heavyweight class as he defaulted when he was injured in the consolation match.

Beagle drew a bye on the first round and then pinned his opponent on his way to the finals. Beagle wrestled a CHM opponent in the finals and won 7-1. During the first period he scored 4 points, both on take downs.

He was up during the second round and gained two minutes ride time. In the third round, he gained a point on a reverse and kept pushing his opponent who kept backing away from him.

Lewis was outmatched by his stronger, more experienced opponent in his final match. He was decisioned 12-4.

Overall the Beavers managed a fifth place. Cal Lutheran won by one point over Biola when Baumgartner (CL) pinned his opponent in the heavyweight division. Fisher (177) of Biola was named outstanding wrestler of the meet. He pinned all of his opponents in three minutes or less.

Cuban S. R. A.'s Arrive



Photo by Dash

Alan Beagle applies a pinning combination at the NAIA District 3 Wrestling Final which enabled him to take First Place in the 191 LB, Weight Class.

Photo by Cteir

### More Notices

(Continued from page 6)

#### GIANT GIVEAWAY

The first fifty Caltech students (with I.D.) to show at the box office will get in free to the opening night of "Amercia, Hurrah!" at the Pasadena Playhouse.

This surly looking group appeared in "The Finks", a movie which is being



### **Tennis Team Off** To Good Start With Victories

When the weather has permitted, the Caltech tennis team has been busy preparing for its season. After a loss to the Terminal Island Navy Base the team came up with a fine win over the University of Southern California Junior Varsity. John Healy, Andy Chow, and Jim Crawford won in singles and Ken Pischel-Andy Chow, Jim Crawford-Don Smith won in doubles with Greg Evans-John Healy tving. At Claremont-Mudd the result was a decisive 9-0 win for Claremont. They look like a definite threat to Redlands supremacy this year. Weather permitting the team faces Biola on Thursday at 3:00; Occidental on Friday at 3:00; and then journeys to Pomona on Saturday.

Coach Lamb is still looking for a manager and someone to help with the second team. Interested parties should contact him on the courts.

### **CLASSIFIED**

### FOR SALE

3-month old 40 Watt AM-FM Stereo Receiver \$85, Large Speakers \$30 each, Garrard Turnable \$35, Sony Tape Deck \$65, Headphones \$10. 839-2216.

2/3 OFF STUDIO SCOTCH AND AM-PEX RECORDING TAPE; 7" 1800" LOW NOISE POLYESTER REG. \$7.00 NOW \$1.95; 7" 1800' STANDARD OUTPUT POLYESTER REG. \$6.00 NOW \$1.50; VIDEO TAPE 1/2 PRICE; CALL FOR FREE CATALOG; MONEY BACK GUARANTEE.

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"IBM is so involved in the electronics field, I'd always assumed they weren't particularly interested in M.E.'s," says Andy Simon.

Andy got his M.E. degree in 1967. He's now a packaging engineer in memory development at IBM.

Andy found out why IBM needs good mechanical engineers when he went to his campus interview. As electronic packaging gets smaller and packaging density increases, a lot of new problems arise. And the M.E. has to solve them.

As Andy says, "When I design the hardware package for a micro-electronic memory unit, I deal with heat transfer and other thermal problems, vibration and shock analysis, and electromagnetic compatibility. The associated connector design work gets me into stress and creep analysis and Hertz contact stress and evaluation."

#### Then comes production

That's only part of Andy's job. After his team designs, develops, and produces a prototype memory unit, he has to work closely with manufacturing engineers, advising them on machines and processes to massproduce the unit.

"It's tough but rewarding work," says Andy, "because the problems change with each new assignment. So an M.E. gains a lot of experience fast. The kind of experience that's bound to help him move up the ladder quickly."

### Check with your placement office

If you're interested in the opportunities for mechanical engineers at IBM, ask your placement office for more information.

Or send a resume or letter to Harley Thronson, IBM Corp., Dept. C, 3424 Wilshire Blvd., Los Angeles, Calif. 90005. We'd like to hear from you even if you're headed for graduate school or military service.

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