

BLOOM COUNTY will be run next week. My apologies. In any case, don't complain—THE RIVET is still to come!

# THE CALIFORNIA TECH

HEY HEY—Fall Room'n'Board contracts are now available in the Masters Office—turn 'em in by 5pm July 3 1985 or Face The Consequences! ~NO DEPOSIT REQUIRED~

VOLUME LXXXVI NUMBER 30

PASADENA, CALIFORNIA

FRIDAY 31 MAY 1985

## The Man Behind Xerography

by Jack Sturgess, BS30ME

Most of us know that Thomas A. Edison invented the electric light; Alexander Graham Bell, practical telephony; Guglielmo Marconi, radio; and the Wright Brothers, powered flight. How these great men changed our lives is everywhere appreciated.

But few know that Chester F. Carlson, Caltech BS30Ph, invented xerography, revolutionized paper copying, and sparked a new, billion-dollar industry.

On the same day (May 31) that his graduating class will hold their 55-year reunion, it is fitting that Carlson be commemorated for his extraordinary accomplishments.

Whereas most inventors leave follow-up to others, the concept itself of a "better way" did not satisfy Carlson. His driving motivation was to see xerography established as a labor saver, a cost cutter, a benefit to mankind.

Chester Carlson's life is a fascinating saga of vision, imagination, hard work, will-power, diligence, tenacity, leadership, perseverance, patience, modesty, generosity and gratitude. He had a "fighting heart." He had "guts."

He broke from the conventional, the stereotyped, the traditional. He saw a need and filled it. He was not a genius, but he was indomitable.

\* \* \*

Carlson's life was a struggle. Nothing happened easily. He was born in poverty to invalid parents. His pay from odd jobs after school was the family's main income. He worked his way through Caltech while supporting his parents.

When he graduated in physics in 1930, in the depths of the depression, he wrote over 80 letters applying for work. He received two replies. Both turned him down.

He went east, got a job in the patent department of P.R. Mallory & Company. There he saw the need for a better way to make paper copies. He decided to find it.

He would need a patent, so he enrolled in a night course at a law school, studied long hours at night and weekends, while working days. He used law books at the public library because he could not afford to buy them. Studying alone, he got his degree.

He would need a laboratory to analyze, to test, and to prove his ideas, so he set up one in the kitchen of his small apartment. He worked there nights, while working days at Mallory & Company. In 1937 he applied for a patent, three years after starting his quest. The following year he made his first successful laboratory test, creating the world's first example of electrophotographic copying.

He received his patent and sent descriptions of his invention to 21 major companies, including IBM, G.E., Kodak, RCA, Addressograph-Multigraph, and Lockheed. They all turned him down.

\* \* \*

What good are patents if nobody is interested in them? The old proverb says: "If a man can make a better mousetrap the world will beat a path to his door." To Carlson's door no path was beaten.

There followed years of frustration. He suffered from arthritis. His wife divorced him. He was distressed that American industry, with this "better way" before them, still clung to carbon paper.

He would show them! Another old proverb says: "You can lead

a horse to water but you can't make him drink." Carlson would lead them to his invention and convince them to accept it. He would emulate master salesman William Wrigley: "Tell them quick and tell them often." He would never give up. The inventor became a salesman. And finally they "drank."

First he received financial aid and engineering assistance from the Battelle Institute, Columbus, Ohio, and then from the Haloid Company, Rochester, New York. A demonstration before the Optical Society of America on October 22, 1948 (ten years to the day after his first successful laboratory test) was a brilliant success—even though copy production was only one per minute.

Haloid Company, who would build the copiers, asked Carlson to guide them in development and he negotiated with them for a share of royalties. By 1953, 40 patents had been received. The inventor-salesman had become a consultant.

In 1955, ground was broken for the first Xerox factory in Webster, New York. Haloid Company became Haloid-Xerox in 1958. Sales of the Xerox copying machine soared from \$47 million in 1961 to \$92 million in 1962. In 1964 Carlson's share of Xerox royalties was over \$3 million and by 1967 it was \$6 million. The inventor-salesman-consultant had prevailed over adversity, frustration, sorrow, and physical pain.

\* \* \*

Another old saying, "from rags to riches," might seem to apply. But it doesn't. Because Carlson was never strictly "in rags" and he was never really "rich," because he gave most of his income away—to foundations, institutions, universities—over \$100 million, including millions to Caltech, most of it anonymously. The inventor-salesman-consultant had become a philanthropist.

Said Carlson in 1965, "If I hadn't taken that course at Caltech I'd never have been able to understand the first principles of a copying machine." He was ever gracious, ever modest.

He proved that the opportunity for invention by an individual, as opposed to team research, is not extinct. His supreme achievement was combining imagination with indomitable will-power against seemingly insurmountable odds to reach his goal.

It took time. From graduation at Caltech to:

His first patent	7 years
His first successful lab test	8 years
His first major financing	16 years
His first successful demonstration	18 years
Earliest general acceptance	30 years

Today about 2 million Xerox copiers throughout the world produce about 10 billion copies daily. All copiers based on Carlson's patents total 4 million and produce about 20 billion copies daily. Xerox revenues in 1984 were \$9 billion. Their largest machines cost about \$200,000. Their fastest machines produce 2 copies per second.

\* \* \*

Before he died in 1968 at age 62, Chester Carlson had received over 20 prestigious honors and awards. The giants of business paid him homage. His first crude model was destined for the Smithsonian Institution.

At his memorial service, U Thant, Secretary-General of the United Nations, said: "To know



—photo by Ron Gidseg

## Emilia Galotti Opens

Gotthold Ephraim Lessing's most controversial drama explores the obsessive desire of a ruling prince for the beautiful and unobtainable daughter of a middle-class subject. The story is rich in psychological characterizations, and rife with social and political

overtones. Lessing's acclaimed tragedy, set in northern Italy in the late 1700's, will be presented in period atmosphere in Dabney Hall Lounge on the evenings of May 31, June 1, 2, 7, 8 and 9; Fridays and Saturdays at 8:00 pm, Sundays at 7:00 pm. Alice Cronin-Golomb, a

Caltech Research Fellow in Biology, provides an original translation of the play from the German. Admission is \$3 for Caltech students, \$4 for other students, \$5 for members of the Caltech/JPL community, and \$6 general admission. Tickets are available from the Caltech Ticket Office or at the door.

## Dilraj Kaur in Baxter

by Ketan Shh

A popular exponent of North Indian classical and light-classical vocal music will perform at the Baxter Lecture Hall tomorrow evening at 8 pm.

Dilraj Kaur was trained in the North Indian classical music tradition at the prestigious Marris College of Music at Bhatkande University in Lucknow—in the state of Uttar Pradesh. Somewhat of a prodigy, she received her B.A. in music at the age of 13 and her M.A., also in music, three years later. She simultaneously received an M.A. in English Literature at the University of Lucknow. In a telephone interview last Sunday, she reflected on her college days and said she felt quite out of place in a music class whose average age was 45.

Besides learning all the important ragas, Ms. Kaur also learned how to play the *tablas* and perform *kathak* (Hindu temple dances relating stories of gods and goddesses).

In Bombay, Ms. Kaur frequently sang at the Sur Sringar Sangh, a music institution that serves to introduce young, talented classical

musicians to the public. There she received numerous awards including the highly coveted Haridas Sangeet Sammelan award.

During the interview, she briefly described her repertoire. It runs the gamut from classical to popular, and a lot in between. In a classical piece, a singer chooses a *raga* (a scale that conveys a particular mood) and slowly explores it, improvising all the while. Ms. Kaur is very well known for her *ghazals* (Persian-Urdu love lyrics). *Ghazals* are poems sung in couplets. Last Wednesday at 1 pm on radio station KPFFK, Harihar Rao, lecturer in music at Caltech, explained the tremendous popularity of *ghazals* in India today. *Ghazals* can be considered light classical songs as they require equal emphasis on both the lyrics and the melody and rhythm. Pure North Indian classical music eschews lyrics while popular music places great importance on them. The *ghazals* are thought to have originated in the sixteenth century.

Ms. Kaur also sings *tumri* (classical love songs), *bhajans* (Hindu love songs) and *geet* (literally, "songs"). Her versatility

has led to national television and radio concerts in India and live performances in both India and England; she recently sang at the Royal Albert Hall, London.

As a film playback singer, Ms. Kaur has generated a large following. In India, film playback singers are idolized almost as much as the movie stars. Ms. Kaur has also composed light-classical and popular music for movies and has been a music director for some feature films. She has a couple of LP's to her credit.

Ishwar Lal will accompany Ms. Kaur on *tabla*. He is from Benares. Ravi Shankar may be at hand to make the introduction. There will also be accompaniments on *harmonium* and *tambur*. Ms. Kaur will sing both classical and light classical music tomorrow.

The concert, sponsored by the Division of the Humanities and Social Sciences, is free and open to the public. The event is coordinated by Mr. Rao. It will take place at Baxter Lecture Hall on Saturday, June 1 at 8 pm. Call (818) 449-6987 for further information.

## The Survey Said—

Computer surveys have now been completed and returned to the Dean's Office. Dabney House wins the \$50 beverage prize for greatest response rate, though congratulations also go to Page House for returning the largest number of surveys (see the table below).

This is considered a good response rate for a survey of this kind. Anyone who did not complete a survey is still invited to do so, and then bring or mail it (mail code 102-31) to the Dean's Office

House	Surveys Returned	Percent Response
Dabney	48	94%
Page	85	92%
Fleming	63	83%
Ruddock	49	53%
Lloyd	39	51%
Blacker	27	42%
Ricketts	29	41%
TOTAL	340	65%

Chester Carlson was to like him, to love him and respect him. He was generally known as the inventor of xerography, and although it was an extraordinary achievement in the technological and scientific field, I respect him more as a humanist...he belonged to that rare breed of leaders who generate in our hearts faith in man and hope for the future."

Source for further information: *My Years With Xerox, The Billions Nobody Wanted*, by John H. Dressauer, Doubleday, New York, 1971. (Catalogued as TR 1045 D39 in Millikan Library.)

## Ruddock Defeats Page to Win Interhouse Trophy

In yesterday's final interhouse football game, Ruddock defeated Page, 13-6. The game was tied 6-6 after the first half, as Kurt Schwartz of Ruddock and Steve Roskowski of Page each ran in a touchdown. No one scored in the third quarter, but in the fourth

within the next week. Results will be tabulated (by computer, of course) and made available to all those involved in planning student curriculae, in setting up the computing network, or simply those interested in student opinion.

Thanks to the House Computer Tutors for coordinating the survey distribution and to all those who took the time to share their thoughts on the state of computing at Caltech.

Schwartz completed a touchdown pass to Jim Hamrick. Ruddock converted the extra point, to go up 13-6. With time running out and Page inside Ruddock's five yard line, Eddie Yin intercepted a pass in the end zone to ice the game for Ruddock—and clinch the championship.



LETTERS

ENTERTAINMENT

A ReView to a Kill

by John Fourkas  
*A View to a Kill*  
 MGM Pictures  
 It all begins high on a snowy hill in a Soviet installation. James Bond is searching for an agent buried in the snow. Just as he finds the agent, Bond is spotted by the Russians. He hurriedly opens the agent's locket and removes a microchip, then skis off into a fantastic chase scene. Unfortunately, it's all down hill from there...  
 I really had high hopes for *A View to a Kill*. Blasphemous although it may be, I really prefer Roger Moore to Sean Connery (or

George Lazenby). Furthermore, I enjoyed *Octopussy* and thought that *For Your Eyes Only* was Moore's best yet. *A View to a Kill* came to me as a great surprise and disappointment. It lacks everything which has made Bond movies so enjoyable—fast-paced action, dastardly villains, fiendish plots, and neat gadgets. The best gadget that this movie manages is a credit card that opens windows—a far cry from the Lotus submarine.  
 Another thing I have come to expect from James Bond movies is exciting car chase scenes. Although the opening sequence of *A View to*

*a Kill* is very good, the only other noteworthy chase is a short one which takes place in Paris. Both of these chases seemed to almost parody the classic Bond chase, in which he escapes despite the fact that all of his equipment has fallen apart.

The acting in this movie was also of rather poor quality. Roger Moore did a fine job, as did Patrick MacNee. (How dare they kill him off?! John Steed would never get caught!) Grace Jones also puts in a good (although unbelievable) appearance. Tanya Roberts, who plays the woman in distress, is a terrible actress. If her performance in *A View to a Kill* is any kind of indication of her true talent, then I am utterly sure that she could not act her way out of a paper bag. Finally there is Zorin, the villain. Not only is his part acted badly, but he is also a poor bad guy. He is actually supposed to be the result of Nazi experiments involving injecting pregnant women with steroids. One spends far too much time feeling sorry for him to even bother to think of hating him.

Next in line is the plot. While Bond movies are expected to have silly plots, all of the evil schemes the villains hatch are at least a bit scary and realistic. What does Zorin want to do? Take over the world? Nope. He wants to cause a big earthquake that will sink Silicon Valley so that he can corner the world microchip market. Big deal. He does not even plan to cause the earthquake with a nuclear bomb. What kind of villain is this that just wants money?

I have been entertained by almost every Bond movie, no matter how silly (*Never Say Never Again* excepted). Amazingly, I spent most of my time watching *A View to a Kill* being bored. Other Bond movies are at least so fast-paced that I don't have time to notice how bad the acting is. Not so this time. To add insult to injury, the movie is long—130 minutes. It pains me to say it, but: don't waste your money....

To the Editor:

More than 500 scientists at Caltech and Jet Propulsion Laboratory, including six Nobel Laureates, have signed a petition opposing the growing militarization of space and President Reagan's Strategic Defense Initiative. The petition questions the technical feasibility of the "Star Wars" programs, calling them "at best an enormous waste of scientific and financial resources" which may "increase the risk of nuclear war by destabilizing the existing strategic balance." The signers expressed the hope that "an unnecessary and costly new arms race can be averted, and that instead, the peaceful utilization of space may point the way to a less confrontational and more cooperative future."

[The petition, printed in the March 1 issue of *The California Tech*, among other places, called upon Congress to: (1) Declare an immediate moratorium on the development and testing of all space weapons, including anti-satellite and ballistic missile defense systems; (2) Resume negotiations for a mutual and verifiable treaty banning the testing, production, deployment or use of all space weapons; (3) Reaffirm our commitment to the provisions of the 1967 Outer Space Treaty and the 1972 Anti-Ballistic Missile Treaty.]

The Space Weapons Study Group, which circulated the petition, last week sent the petition to every member of Congress. Members of Congress were urged to support amendments to the Defense Authorization Bill to extend the moratorium on tests of anti-satellite weapons, continue adherence to existing arms control treaties, and eliminate funds for "Star Wars" demonstration projects. The group called upon Congress to reduce overall SDI funding to a level consistent with that of a pure research program rather than a weapons development program.

Caltech has long been respected as a leading center for engineering and scientific research. Caltech and the Jet Propulsion Laboratory, which Caltech administers for NASA, have had a long association with the civilian space program. JPL has conducted such planetary exploration projects as the Viking Mars landing and the Voyager flyby of Jupiter and Saturn.

The Space Weapons Study Group was formed at Caltech last spring to promote discussion of the militarization of space and the Strategic Defense Initiative in particular. The group has co-sponsored the campus talks of speakers such as Richard Garwin, noted "Star Wars" critic, and Gerold Yonas, scientific head of SDI, and has distributed literature from diverse viewpoints.

The Space Weapons Study Group can be contacted at 463 S. Oakland Ave., #1, Pasadena, CA 91101.

—S.W.S.G.

To the Editor:

On behalf of the Los Angeles Area Child Passenger Safety Association, I thank the Caltech community for generous support of the Buckle-Up Walk-A-Thon on May 19 to fund health education programs. Unlike Caltech faculty and students, most people have no concept of the dynamics of motion nor of the devastating impact on anyone in a vehicle collision who is not buckled up. Our effort to increase public awareness of the #1 cause of death and injury among those under age 44 relies substantially on volunteers and community funding.

I also want to confirm that Elspeth and Laura Benton, my husband, and my daughter Kerstin indeed completed the 5-mile course. We were cheered by all of the Caltech backing and, in particular, by the Captain Maxwell supporters—and their dedicated coordinator, Vincent Chow! Capt. Maxwell acquitted himself well.

Sincerely yours,  
 —Stephanie Tombrello

The Inside World

Blacker: EPISODE 3: Some Hope

I woke up last Tuesday in the middle of some science fiction universe. It wasn't fun being the only one in a crowd for a change. I couldn't help but be mysteriously drawn to the little fellow: his short, stout looks made him appear, at least on the surface, as if he knew just a little bit more about Shakespearean drama than I did. Oh, he had the usual timid, not-so-run-of-the-mill "hey can I buy you a beer" smile and all, but still when I entered the dimly lit chasm the whole effect just sort of "blinked" for a moment. It was as if the prime minister and what's her name had just released the whole shipment for naught. What could I say? In my state I just signed over the papers and tried to get out of the house as quickly as I could. Sure, it was rounded. And cheap. Ned had always told me that no matter what your physical mood was at the time, something else, some other inner part would just fold up involuntarily and leave you with that nebulous feeling of guilt. As I looked up, I could just barely make out the cloudless sky through the underbrush. Well, I thought to myself, the time had come. It would be useless to try to swim even three more lengths without risking more damage. Yeah, she knew I was alone—but by the time the trucks got there the damn cat had climbed down the tree itself. So much for chivalry.

—Sven Censorskap

Fleming: Congrats to the Seniors, Outdoor Olympiad was a great success. How about that shotput Tekanic, and the frosh-senior volleyball game, impressive. Hey Bondo, do you think that the U. S. Mail will get your diploma from UCLA to you by the time you go for the bar-exam. Oh, an Janice, we may just start you a cornerback next year in interhouse football.

—Al Fansome

P.S. C-League rolls on, next stop, the championships.

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The Caltech Y Fly-by

Friday... May 31

Xenophobic? Too bad! It's The Strangers! Noon Concert, on the Quad.

Saturday... June 1

Take me out to the Ball-Game... L.A. Dodgers vs. the Montreal Expos. 7:05 PM. Tickets: \$5. The Y-Car leaves at 6:20 PM. Sign up and go!

Sunday... June 2

Skeptical about ESP? I thought so. Join the Southern California Skeptics and the Y for a talk on ESP with Scott Rogosin, retired Columbia University Psychologist. Baxter Lecture Hall, 2 PM.

Saturday & Sunday... June 8 & 9

Supercalifragilisticexpialidocious can't describe it. It's the incredibly, astoundingly phantasmagorical DECOMPRESSION!!! Food, fun, games, movies, and more food. Stop trolling and have a good time. Winnett Lounge, 8 PM until ???

Also...

Start signing up if you want rides to the Airport Bus. The Y will be making runs during business hours of finals week.

Any comments, ideas, or questions?  
 Stop by the Y or call 356-6163

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Turn in copy to the Tech office mailbox, room 107 Winnett. The deadline for copy is Wednesday at 5 p.m.; for announcements, Tuesday at 5 p.m. Late copy may not be printed unless previous arrangements have been made with the editor.

The story will be continued next week.

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# Ars Amore Social Graces

by Charles Barrett

Teachers have a bad reputation (not wholly undeserved) in the area of social skills. Granted, the public-at-large is all too eager to lump students of mathematical and scientific disciplines under the single heading "nerd" and leave it at that, pitting us all against a presupposition at the outset: Yet even without the popular bias, many of us here come across as awkward and maladroit.

To say these symptoms are universally applicable to the campus would be as ridiculous as saying that *anything* is universal about Caltech. One doesn't have to look very hard to see that we as a group consist of athletes, musicians, artists, actors, singers, dancers, creative writers, and yes, even politicians, to name a few.

It takes an effort to remain (or become) well-rounded in our academically demanding surroundings. The Institute requirements in the liberal arts force us, to a certain extent, to make an effort in the non-technical fields of study, but the course offerings are often dismally few. I was reminded of

our somewhat peculiar habit around here of referring to non-science, non-math courses as a lump labeled "Humanities and Social Sciences" when I was corresponding with a friend at a liberal-arts college back East. She found it somewhat amusing to put literature, language, and history, let alone philosophy and psychology, under one heading. Of course, she pointed out, her college didn't even *have* a physics department, so I guess it balances out.

College life, by its very nature, allows the freedom to develop a sense of self and identity. Peer pressure is not a force to be lightly dismissed, but there are enough diverse groups about that one can find his or her own level. If the trappings of social protocol were never very important before, nothing at Tech will act to impose them.

Academics are definitely important; after all, they're the primary reason we are here. But it is too easy to remain immersed in work, oblivious to the more interactive pursuits of life. The unbalanced male-female ratio is also

a hindrance for some.

Many who ended up at Caltech had their niche carved out in high school by being the "brainy one," always armed with the right answer or at least a good argument. Here, however, everyone is bright, and being "the best" is a virtually unobtainable goal. Although classwork takes up most of one's time, academics don't do much for distinguishing character and personality, especially in the social context.

Ease of manner, conversational skills, and social grace facilitate meeting new people and making friends. In dealing with visitors to campus or striking up an acquaintance away from Caltech, we already have the public assumption that we are boring nerds to overcome in many cases. If not, there is the matter of age. Most Teachers are more sophisticated than their age would betray, and so credit is sometimes not given where it is due in dealings with older individuals.

When I speak of social graces, I'm not just referring to knowing which piece of silverware is for what at a formal place setting, or knowing the difference between a Windsor and a four-in-hand knot

for a necktie. Mind you, a dressy situation is more pleasant if you are at ease and not self-conscious, so the good-manners-and-protocol knowledge comes in handy. In this day and age, most people our age have had little call for experience of this nature. There are still some hold-outs, however; my boarding schools required dressing for dinner (jacket and tie) five nights a week. [Factual note: until the late 1960's, so did most, if not all, of the seven Houses here at Tech.]

But true social grace is separate from the trappings and affectations of dressy functions. It is the ability to be comfortable in the company of others, and more importantly the ability to make *them* feel comfortable in *your* company.

As an example, there is the story of a well-known hostess who frequently threw lavish sit-down dinners. She made a habit of "accidentally" knocking over a wine glass or upsetting a bowl or platter early on in the dinner, so that her guests would not feel conspicuous if *they* spilled anything later on.

A truly gracious person is someone who can be comfortable in drastically different surroundings. Most of us will belong to more than one social circle in the outside world. There are the people at work, the people you meet at play (such as tennis partners, fellow scuba divers, whatever), the

people you meet in community or charity activities, and the friends of your spouse or lover. The various groups one belongs to have different things in common, and it is important to be able to feel comfortable in each of them.

A wealthy acquaintance whom I admire for his social flexibility can conclude business, leave the boardroom for his ranch, trade the limo for a pickup truck, the three-piece suit for blue jeans, and the martini for a cold beer. He is perfectly at home in dealing with executives over lunch or ranchers around a barbeque, even though the two groups are drastically different.

The ability to be at ease while also making those around you comfortable is a definite plus when pursuing a relationship. Shyness is perhaps the biggest obstacle any of us has to overcome in meeting new people and making friends. Public speaking courses, in high school or in E10 here at Caltech, can do wonders for one's development of self-assurance.

Communication skills, consideration, and an awareness of the needs and feelings of those around you are the main components of social grace. It's a nice thing to have when dealing with a group of people, but it's even better when you are only dealing with that special someone.



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# WHAT GOES ON

*Material for What Goes On must be submitted typed on or with an Announcement Form, available at the offices of The California Tech, by the Tuesday preceding the Friday of publication.*

## LUAU!

TODAY: 4:30-6:30 pm. Luau, on the Olive Walk. Servomation is serving a special dinner. Students on board contract will not pay. All others may purchase meal tickets at the Luau. Entertainment will feature Polynesian dancers, steel band, and fire and sword swallower. All Welcome!

## Smuggled Soviet Film

Come see *Hirelings & Accomplices*, an anti-Semitic Soviet film smuggled out of Russia. It was originally shown on prime time television in Leningrad. View this fascinating film and eat a delicious Bagel Brunch. Sunday, June 2, 11 am, Red Door Cafe. Soviet Jewry letter writing to follow. Questions? Contact Michael at (213) 208-4427 or x6163.

## Read All About It

There will be a meeting of the staff of *The California Tech* today at 12:15pm in room 127 Baxter. (This is also known as the class PA 15). Feel free to stop by if you're interested in working on the *Tech*.

## CLASSIFIED

### HELP WANTED—

**TRANSLATORS** urgently needed. All fields & languages. **Excellent pay.** At home or on campus. Flexible hours. Grads, post-docs, researchers, faculty, professionals. Send resume, transcript or vitae to ATI: P.O. Box 3689 Stanford 94305

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## GRADUATES

Remember—exit interviews will be held weekdays at 3:00 pm from June 3 through June 13 in the Keith Spalding Building, Room 118.

## Fundraiser Winners

The Children's Center at Caltech wound up its Annual Fundraiser last week, raffling off a trip for two to Hawaii, a computer, and forty-eight additional prizes. Our thanks to so many of you who generously bought tickets. A large percentage of the winners were Caltech people. The Hawaii trip was won by Maria Cuenca, a PCC student, and the IBM PC Jr. was won by Gordon Ellingsen of Caltech.

## Last Supper

Tonight will be the absolute last Friday Night Dinner of the year at the Bayit. All people interested in entering the Bayit next year *must* come or call to make other arrangements. Everybody else is also welcome. The festivities begin at 6:45 pm at 335 S. Greenwood. Call 793-3859 for information.

## ★C★L★A★G★S★

CLAGS will be meeting to tie up the year's activities and make plans for the summer. This will be our last meeting before the summer, so show up this Sunday and find out what's happening. The meeting will be at 2:00 pm in 210 Baxter.

## Traveling Abroad?

Don't leave home without it...No, not an American Express Card, but an International Student ID Card. You can obtain it from Ingrid at the International Desk, 105 Winnett Student Center, right across from the *California Tech* Publishing Empire, or phone x6330.

## The Voice of Voyager

Next Thursday, 6 June, Baxter Art Gallery will present a lecture on space photography at the Jet Propulsion Laboratory. The talk will be given by Dr. Albert R. Hibbs, starting at 8pm in Baxter Lecture Hall. It accompanies BaxArt's current exhibition, "25 Years of Space Photography." BaxArt will be open after the lecture.

## Yo! It Rocks!

After an absence of over twenty years, the Crew Challenge returns to Caltech. Each of the seven houses will be represented by ten of its finest (and fastest) beer drinkers. The winning house will have drunk twenty pints of beer (possibly Henry's) in the shortest amount of time.

The crew challenge is scheduled for Thursday 6 June 1985, on the Olive Walk, following the barbecue. Get psyched! Get practicing! (It's less than a week away!) All are welcome to watch seventy people get drunk off their asses in less than three minutes. For more details ask your house president.

## S.I.F. Meets

The last meeting of the Student Investment Fund for the term is on June 5 in the Millikan Board Room at 5 pm. The summer meeting schedule will be discussed then.

## Gamers Meet

For those of you who always wanted to play fantasy or science fiction games, role-playing, board or even card varieties, but are too busy during the term, this is your chance. The Caltech Gamers will continue to meet every Friday night in Winnett Clubroom 1 during the summer, as well as at various other times to be arranged. Also, if you are of a creative bent, various game design opportunities present themselves. Just drop in any Friday night and get to meet people, 7:30 pm to whenever people fall over.

## Skeptics Doubt ESP

Former Columbia psychologist H. Scot Rogosin will discuss the history, hopes, and failures of ESP research in America and abroad. The lecture will be entitled, "A History of ESP Research." The lecture is sponsored by the Southern California Skeptics in conjunction with Caltech. The lecture, which is free and open to the public, will take place in Baxter Lecture Hall on Sunday, June 2nd at 2:00 pm. For information, please call (213) 540-0915.

Rogosin has been actively involved in investigating ESP research for over fifty years. He was one of the original and most outspoken critics of the methodology of Joseph Banks Rhine's famous ESP experiments carried out at Duke University in the early 1930s. So much was he a part of that controversy that *Time Magazine* featured him at length in a 1938 article entitled, "Battle on Rhine," which contained a picture of him with the caption, "Has psychologist Rogosin stuck his neck out?" It took only the test of time and careful re-examination of Rhine's data to show that Rhine's work on ESP was not valid and that Rogosin's criticisms were correct.

Rogosin has been the author of numerous articles on the ESP controversy and has been featured on many panels discussing the topic. He is a former member of the Board of Directors of the California Psychology Association and has received many awards for his contributions to both psychology and humanitarian causes, including the Silver Psi award (1983) for outstanding contributions to psychology. Please join us for a fascinating topic.

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