

## Old Student Houses: Interiors Are Being Brought Up to Date

The old student houses (Blacker, Dabney, Fleming, and Ricketts) are no longer quite so noisy, dark, and shabby. Growing student discontent with campus living quarters coupled with administrative concern has set a series of changes in motion.

The first modification came at the end of last summer. Most of the 21 corridor walls were painted a glossy white; stairwells and accent areas at the ends of the halls were painted bright blue, red, or strong yellow. All stairs and corridors were carpeted to reduce noise, and in a few corridors orange carpeting provided the color accent in place of bright wall areas. Other improvements included new lighting fixtures, attractive bulletin boards in phone alcoves, and large, lidded Mexican straw hampers in place of battered plastic trash containers.

In October architects and students began meeting regularly to evaluate what had been done and to discuss further

work. Student reaction was generally favorable; any complaints seem to be based on a current nationwide student touchiness—that they weren't consulted early or amply enough.

Guided by those meetings, John Day from the Office of the Campus Architect and consulting architect Roland Coate Jr. are now having two rooms in Ricketts House remodeled as a pilot project. A unique feature of those two rooms will be flexible furniture units designed to make better use of the entire room volume—not just the floor space, of which there is precious little in many student house rooms. Beds can be high off the floor with storage and work space below, or they can be on the floor with storage area above. There will be boxes to arrange into units for holding books or for other uses. At year's end students can remove the boxes—contents and all—to the summer storage area, then move them back into their new rooms in the fall. On graduation the inexpensive boxes can go home with the students.

The architects have already tried out the furniture arrangements on the students, setting up two rooms over a weekend and soliciting responses. Thirty percent of the students responded, and 80 percent of the responses were favorable. Those students who don't care for the new arrangements, when they are eventually implemented, can still choose more traditional furnishings.

*Continued on page 3*

## Nine at Black Colleges Join Research Center

While Caltech's faculty and administration carefully explore ways to increase the Institute's black and brown student enrollment, the ASCIT Research Center has jumped ahead and brought nine black students from predominantly black southern colleges to study unofficially at Caltech this spring. The students, who will also be working on individual projects, represent Dillard and Xavier, New Orleans; Lincoln, St. Louis; Florida A&M, Tallahassee; and Texas Southern, Houston. The new program is made possible by a \$32,700 grant from the Ford Foundation to pay for travel and lodging. Caltech is providing accounting and other overhead services.

The five men and four women arrived on Feb. 6 and took an immediate liking to Caltech's scholarly atmosphere. Excellence, they claim, is an unknown word on black college campuses. Intellectual stimulation is virtually nonexistent.

*Continued on page 5*



Harold Brown (right) talks to guests on campus for the "Far Reach of Science" conference.

## Brown Is Off And Running

Harold Brown's first few weeks at Caltech have gone a long way toward establishing his new identity as President of the Institute. On his second day at the job (Tuesday, Feb. 18) he addressed a prestigious group of California's leading businessmen at the fourth (first on the Caltech campus) *Time/Life*-sponsored "Far Reach of Science" conference. On Saturday the 22nd he talked to 1,000 of southern California's top high school students and their teachers at Caltech's annual Students' Day. And on the following day he was feted by the faculty at a reception in the Athenaeum.

In his remarks at the "Far Reach of Science" conference, at which Caltech faculty James Bonner, Harrison Brown, William Fowler, Murray Gell-Mann, and Robert Sinsheimer spoke, the new President explained to his predominantly nonscientific audience why they should be concerned with what scientists are doing and saying.

"It is beginning to be clear," he said, "that any economic and social domestic issues also have a large technical component," and even that "a preponderance of national security issues contain a substantial admixture of factors either scientific or technological in nature. Indeed many such crises have a technical input as their largest factor."

Brown added that he wasn't suggesting that such problems and crises can be resolved solely by scientific means or that they ever will be—only that without understanding of the technological factors involved, they can't even be comprehended, let alone solved.

"Science," he said, "has become the identifying mark of our civilization, as faith is (for us) the identifying mark of the medieval world, and philosophy of the classical Greek world."

But, he cautioned, "science has not made a paradise on earth. Just as Greek philosophy did not prevent the Pelopon-

nesian War, which spelled death to the Greek city-state, and medieval faith was accompanied by the *auto-da-fe*, so the blessings of science have been accompanied in our age by the threat of nuclear extermination."

What science and its concomitants do now make possible, he said, is "an era of universal plenty, health, and peace, IF—and it is a big if—we have the wisdom to apply this knowledge for those ends."

Brown's words on Students' Day to the high school visitors contemplating careers in science touched on similar themes, and added one the students could probably appreciate more than the businessmen—that science, at least for scientists, is fun.

And as added incentive, he pointed out that scientists or engineers are no longer limited to jobs only in science or engineering—a change that has occurred in the last few decades. In industry, he said, "roughly a third of the presidents of large corporations now come from the ranks of those who majored in science or engineering." He added that "while only a very few congressmen in recent years have been educated as scientists or engineers, an increasing fraction of the managers and administrators in the Executive Branch have been recruited from the ranks of science and engineering. This is a relatively new situation. Indeed, it is only in recent decades that scientists and engineers have come to be even advisors, let alone managers, in the government."

Brown reminded the students that he, a physicist by training, spent four and a half years managing research and development for the Defense Department, then spent three and a half years as Secretary of the Air Force. And, he said, "as a sort of ratification of this process, my successor in that position is an engineer, Dr. Robert Seamans." □



JOE RHODES (left) congratulates Stephen Horner, his successor as ASCIT President. Horner is a junior engineering major, president of Dabney House, and was the 1968 freshman camp chairman. □

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## Art and Science Wed at Caltech; Long Campus Honeymoon Begins

A long-planned Caltech excursion into the arts is finally gaining momentum. A newly formed Committee for the Arts has started a three-fold program to:

- Create a flow of exhibits, especially by artists who are contributing to the vitality of southern California's art scene.
- Acquire art objects that will add interest, and perhaps even some healthy controversy, to the campus environment.
- Establish a workshop guided by an artist-in-residence—a place where interested members of the campus community can really grub around in their own art projects.

"We want to bring scientists and artists together in a dynamic, informal relationship and see what happens," said J. Kent Clark, professor of English, who is the committee chairman. "What we're not going to have is a lot of hifalutin' seminars on the nature of art and science."

The program is well off the ground, thanks to the generosity of Mrs. Virginia Steele Scott, a member of the Steele family whose foundation endowed Caltech's Harry G. Steele Laboratory of Electrical Sciences. Her contribution started what is labeled A Fund for the Arts and has made it possible for Caltech to begin with two workable "art galleries."

The first has brought a new look to Dabney Lounge by means of movable wall

panels with their own lighting, designed by David Smith and Robert Rosenstone of the humanities faculty. The first show in juiced-up Dabney, "Four Printmakers," opened on Feb. 6 with an invitational meet-the-artists champagne reception for 250 members of the Pasadena and Los Angeles art world.

The second gallery is a small area in the Athenaeum basement that has also received new wall treatment and lighting. A group of lithographs and prints were displayed in January and February, and since March 3 it has held some representative modern tapestries from the widely known Hurschler collection.

Exhibits in both places were selected and hung by Lukas van Vuuren, a South African artist who is an art instructor at Scripps College. Clark described the 30-year-old Van Vuuren, who will oversee future exhibits at Caltech, as an artist who explores new media of expression. He was originally brought to the attention of the committee by Lindley Morton, a former Caltech trustee, and will be Caltech's first artist-in-residence.

"Of all the artists we talked to, Van Vuuren was the personality we could see making the creative sparks fly here on campus," Clark said. "We'll have the workshop ready by this coming fall."

The Committee for the Arts, besides



Opening day guests view "Four Printmakers" exhibit in the new Dabney Lounge gallery.

Clark and Smith, includes trustee Henry Dreyfuss, internationally known designer; Robert Alexander, consulting architect for Caltech; Richard Feynman, professor of physics; Mrs. Robert Bacher (wife of the Provost); and Alan Stein, '71, a former editor of the *California Tech*. There will soon be a graduate student member. The committee will raise money for the Fund for the Arts, acquire art, and hire further appropriate personnel as time progresses. Clark is also confident that by the fall of 1969 the committee will have begun an art loan collection for students.

The committee expects its program to extend further than the campus. "Beck-

man Auditorium was Caltech's first cultural link with the community," said Clark. "Interesting art should bring another dimension. We have the enthusiastic promise of cooperation from the Pasadena Art Museum and the County Art Museum, and of an encouraging number of other museum directors, artists, knowledgeable laymen, and Caltech people. The art world is becoming increasingly absorbed in the many fascinations of science, and where would you find a better place than Caltech to explore this combination? With all the creativity our students have, we think they could give something valuable to the artists." □



### CALTECH'S ORIGINAL ART EXHIBITS

Although the Institute may just be getting around to a formal program in the arts—as described in the article above—sculptors have been active on the campus for years. Examples range over such diverse objects as the Alexander Calder figures on the front of Throop Hall, built in 1910 (far left, top and bottom); an ornate window on Kerckhoff (left); one of a pair of urns adjoining East Bridge and Sloan (above); the undergraduates doing their things on the old student houses (right, top and bottom); and the beaver mascot on Winnett Student Center, sculpted in 1962 (below, middle). □





## YMCA's Journey Into Self: It Turns Participants Inside Out

"Everywhere I go I take me, and I spoil everything," lamented one student expressing his difficulty in understanding himself and in communicating with others. In response to this kind of attitude the Caltech YMCA is currently offering an eight-session series of workshops called "A Journey into Self/An Encounter with Others."

Originally planned to provide 130 persons—50 Caltech students, 50 coeds from other schools, and 30 non-students—with experiences to help them begin to resolve questions in the area of feelings and the barriers to expressing them, the series had so many registrations in all categories that two sections are being offered.

The first meetings, "Journey into Self," were led by Bill McGaw of the staff of the Western Behavioral Sciences Institute (WBSI) at La Jolla, who has also acted as consultant to the whole program. They were held on January 27 and 28 in Dabney Lounge, which is the meeting place for all of the sessions. Using audio-visual materials, fantasy, and encounter exercises, the participants formed themselves into groups of eight within which they worked to open up channels of communication and awareness.

McGaw also led two other workshops in the series, on February 24 and 25, and will lead two more on April 28 and May 6. In the first, "An Evening of Psychodrama," after briefly explaining the history and methodology of psychodrama, sociodrama, role-playing, and role-training, he invited members of the groups to portray dramatically some of their own experiences and those of others. In the second of these workshops, "Fantasy and Dream Interpretation," McGaw will lead the participants in learning to use these experiences as tools for developing creativity, imagination, and self-awareness.

"The Creative Human Encounter" was the title of the second meeting of the series, held on February 10 and 11. Pat Rice, who is currently a member of the educational innovation project for the Center for the Study of the Person in La Jolla, explored creative ways of meeting and relating to others. The workshop employed films, lecture, discussion, and participation.

On March 3 and 4 Sam Keen, professor of philosophy and Christian faith at Louisville Presbyterian Seminary, led workshops on "Storytelling and the Discovery of Identity." Using a variety of experiences—fantasy exercises, time and space exploration, experiences in intensive telling and hearing, focused wishing and willing, and group intervention—participants investigated how they tell their own stories and how they listen to the stories of others.

"Self-Awareness and Communication through Movement," on March 31 and April 1, is designed to widen the range of expressive body movement available to and recognized by the participants. There will be exercises to aid the lessening of

tension, to communicate non-verbally, and to improve sensitivity to the movement of others. These workshops will be led by Heather Keen, a dancer who is particularly interested in the therapeutic aspects of movement and who has worked as a dance therapist. She is currently a member of the staff of the Kairos Institute at Rancho Santa Fe.

The April 21 and 22 workshops on "Meditative Techniques and Depth Imagery" will be led by Dr. Robert Gerard, a psychologist in private practice in Los Angeles. Participants will practice basic meditative procedures. Gerard is a pioneer in the development of new therapeutic techniques and is especially interested in the integration of American, European, and Eastern approaches to psychological growth. He is president of the International Foundation for Psychosynthesis.

The final programs of the series, "Getting High without Drugs," will be led on May 12 and 13 by Dr. Anthony Rose of WBSI and Kairos. He is doing research on developing group process techniques that can serve as viable alternatives to deadening classrooms and dangerous drugs. In these workshops he plans to use a variety of methods—fantasy, meditation, readings, sensory bombardment, and encounter—to explore exciting non-drug ways of "taking a trip."

The Y's organizing committee for the series consists of Bob Fisher, '71, chairman, assisted by Derry Hornbuckle, David Schor, and Stephen Horner, all of the class of '70, with Wes Hershey providing staff assistance. □

## Banker Frederick Larkin Elected Caltech Trustee

Frederick G. Larkin Jr., 55, chairman of the board, chief executive officer, and chairman of the managing committee of Security Pacific National Bank, has been elected a member of Caltech's board of trustees. Larkin, prominent in southern California civic, charitable, and business affairs, is a charter member of Caltech's President's Council and is a member of the California Institute of Technology Associates. He is also a trustee of Occidental College.

A native of Seattle, Larkin is a graduate of the University of Washington and Stanford University. He joined the banking firm in 1936 as a research assistant. In 1956 he became a member of the bank's central loan committee, and in 1960 he was elected a senior vice president. The following year he was named to the firm's administrative and executive committees and became a member of the board of directors. Later in 1961 he was elected president and became a member of the managing committee. □



New trustee Larkin

Photo by Ulli Steltzer



Eric Goldman

## Historian Eric Goldman At Caltech For One Term

Eric F. Goldman, author of *The Tragedy of Lyndon Johnson* and special consultant to President Johnson from 1963 to 1966, will join Caltech's faculty for the spring term as a visiting professor of history. The noted historian, Rollins Professor of History at Princeton University, also gave Caltech's annual Haynes Foundation lectures in early March.

Goldman's book, the first one on the Johnson administration by a former aide, was published on Feb. 10 by Alfred A. Knopf, Inc. It is an alternate selection of the Book-of-the-Month Club, and excerpts have already appeared in the *New York Times Magazine* and the January issue of *Harper's*.

The publication of his book, Goldman's first public comment on the administration, represents his account, analysis, and reflections on this era. In it he says of President Johnson that "in periods of triumph and downsweep, in peace as in war, he stood the tragic figure of an extraordinarily gifted President who was the wrong man from the wrong place at the wrong time in the wrong circumstances."

Goldman, who arrived at Caltech in late February, will give a course in the history of the United States since 1940. He is the author of two other books about modern America: *Rendezvous with Destiny*, which won the Bancroft Prize in 1952; and *The Crucial Decade—and After: America 1945-1960*, published in 1961. □

## LETTER

Editor:

It looks like about \$1.7 million was dropped out of the gift summary on page 4 of the February *Caltech News*. As one old proofreader to another, I know how easily—and irritatingly—this can happen.

My purpose in bringing this matter up is not to exhibit any visual acuity of mine; I have a real interest in Caltech's gift and grant revenue, and I'm professionally curious about the unnamed source of the extra money.

Could you let me know please?

Grice Axtman, '41  
Claremont, Calif.

Would that we had dropped a \$1.7 million entry. Actually, the total was just plain incorrect; it should have read \$13,492,978. That is still the most private money ever received in one year, but it falls about two endowed professorships or one building short of the figure printed. —Ed.

## Nobelist Khorana Gives First Buchman Lecture

Har Gobind Khorana, 1968 Nobel Prizewinner in chemistry, was the first Edwin R. Buchman Memorial Lecturer at Caltech. Khorana, a co-director of the Institute for Enzyme Research and the Conrad M. Elvehjem Professor of Life Sciences at the University of Wisconsin, was on campus in February. His visit culminated in a lecture on "Current Work on the Total Synthesis of Genes for Transfer Ribonucleic Acids." Speaking in Beckman Auditorium, he explained his efforts to build by chemical means a segment of DNA that will produce fully active transfer RNA (which serves as a template for the DNA instructions for building proteins outside the cell's nucleus).

The Buchman Lectureship—sponsored by Caltech's division of chemistry and chemical engineering—honors the memory of Edwin R. Buchman, a research associate at Caltech from 1938 until his death in February of 1968. Buchman was known for his role in the first commercial synthesis of vitamin B-1, thiamine, the anti-pellagra factor. □

## Old Student Houses: Changes Enliven the Scene for Next Fall

Continued from page 1

The two pilot rooms will be completed in time for the former occupants to move back in and try them out during third term. Their responses, as well as those of other students, will be weighed in the next step, remodeling of rooms 50 through 63 in Fleming House. That project, to cost about \$75,000, is expected to be complete by the beginning of the fall quarter of this year.

Still another project, for which Caltech has allotted \$20,000, will be to redecorate the old house lounges and dining rooms this summer. The ongoing student-architect-administration meetings will produce the general specifications for the work. Students have already indicated great dislike of "that steel and naugahyde kind of stuff." They want to retain all the flexibility they now have, and want any new furniture to be substantial and relate well to the house character.

The refurbishing plans received their impetus last year. President Lee DuBridge, aware of widespread student complaints about campus housing facilities and the exodus off campus of many undergraduates, appointed a committee of faculty to investigate the residences and recommend remedial procedures. The committee members went and saw and shuddered. In a report to the president in May 1968 they referred to "depression, claustrophobia, and shabbiness," and categorized the principle problems as "noise, storage space, and furnishings."

The faculty added that "we emphasize that these conditions do not result from overt neglect, but are more often the result of normal use, the passage of time, and evolution of our standards and sensibilities. From whatever cause, we find that these quarters do not meet the normally accepted current standards for student housing, and we feel most strongly that vigorous steps must be taken, starting at once, to remedy the situation." □

SAVE MAY 10 FOR  
THE ALUMNI SEMINAR





RETIRING MASTER of Student Houses Robert Huttenback, who left in February for six months' research in England, leads a parade in his honor down the Olive Walk on Feb. 18. Participants in the bash for Huttenback, incoming Dean of Students, included hundreds of students, skirling bagpipers, kegs of beer, presents, and (Why not?) an elephant. □

## Humanities Have Growing Pains

As a result of expansion in teaching and research in the division of humanities and social sciences, Caltech is finding itself with inadequate library resources. The division currently has 25 undergraduate majors (ten in economics, seven in history, eight in English) and may soon offer a fourth undergraduate option (political science). Faculty research, which resulted in 15 published books between 1950 and 1960, led to 39 between 1961 and 1968.

"Unfortunately, we really don't yet have sufficient books and journals for all of our teaching and research needs," says Ned Munger, professor of geography and head of a newly formed group of humanities and social science faculty who are working to upgrade the library. "The economist's or political scientist's library serves the same function for him as a well-equipped laboratory serves for the scientist or engineer. Both are basic research tools for the respective scholars. But because of our library limitations, several distinguished social scientists have hesitated to join our faculty."

Munger adds that the Institute, of course, recognizes this problem; the library acquisitions budget for the division

has been increased from less than \$20,000 four years ago to almost \$50,000 this year. In addition, several special funds (notably, gifts from trustee L. F. McCollum, the Sloan Foundation, and Xerox Corporation) have provided substantial additional funds in the last few years. And a gift from alumnus Anthony L. Larrecq, '29, has established two memorial funds to provide income for books in French and French culture. Nevertheless, Caltech's social science holdings are still not comparable even to those of small schools offering similar undergraduate-only programs.

The new library committee is now trying to find additional non-Institute sources of books and periodicals. One source, says Munger, may be people—particularly alumni—who have specialized collections of books or long runs of periodicals to give or bequeath to Caltech. In such a case the material would be placed in the library or, if not needed, exchanged with other libraries. Gifts of books or money are tax-deductible, and the donor's name—or that of someone for whom the collection is established as a memorial—can be inscribed in the volumes. □

## Feb Sports: Wrestler to NAIA Nationals; Swimmers Point for SCIAC, NAIA Meets; Golfers Start Strong

### Swimming

After winning the SCIAC Relays, Coach Lawlor Reck's swimmers suffered a close dual meet loss to Occidental (64-49) and a humiliating loss to powerful Claremont-Mudd (85-28). The swimmers then picked up three wins in their next four meets, beating Cal Poly Pomona (64-49), Pasadena City College (77-36), and Mount San Antonio College (58-35). The lone loss in that sequence was to Long Beach State (66-45). The team is now pointing for the SCIAC Championships on March 5, 6, and 7, as well as the NAIA Nationals in mid-March.

Steve Sheffield continues to break records. He has set new school marks in the 200-yard butterfly (2:07.1) and the 1,000-yard freestyle (10:58.0). The 800-yard freestyle relay team of Mabry Tyson, Steve Sheffield, Greg Wright, and Maarten Kalisvaart also set a new school record of 7:52.8 in the Mt. SAC meet. Record as of Feb. 24: 7 wins, 5 losses.

### Wrestling

Caltech is having its finest season ever in wrestling. The Beavers, coached by Tom Gutman, hosted the NAIA district 3 tournament on Feb. 21 and took fifth place (out of ten). Alan Beagle, a junior who also plays football and baseball, won the championship of the 191-pound class. He'll go on to the NAIA Nationals in Omaha in March. Freshman Randy Lewis took second place in the 137-pound class; another freshman, Bruce Johnson, had to settle for fourth in his heavyweight division when he broke an ankle in the consolation finals. Season record: 7 wins, 8 losses.

### Golf

The golfers have started off the season with two decisive victories, one over Cal State Dominguez Hills (29-7) and the other over Cal Lutheran (43-11). Coach Hal Cassriel says this is the best team he's had in his five years at Caltech, even though his starting lineup has no seniors in it. Top men are junior Neil Holmes, freshman Al Woodson, freshman James Simmons, freshman Roger Goodspeed, sophomore Robert Hammond, and junior Chris Reed. Record as of Feb. 24: 2 wins, 0 losses.

### Fencing

Fencing, a recent addition to Caltech's athletic program, had a poor year, but shows considerable growth potential. Although the team leaders have been a pair of New York City seniors (Murray Smigel—foil, and Bob Hsu—epee), coach Delmar Calvert is encouraged by the performance of sophomores John DeVries and Richard Pelletier and freshmen David Smith, Lance Optican, and Paul Re. At the prestigious UCLA Invitational Tournament two Caltech fencers—Smigel in foil and Pelletier in epee—advanced to the second round.

Season foil record: 0 wins, 10 losses.

Season epee record: 1 win, 8 losses.

### Tennis

Coach John Lamb's varsity tennis lineup this year is headed by freshman Ken Pischel, followed by seniors Greg Evans, John Healy, and Martin Frost, then freshman Andy Chow, finishing with sophomores Jim Crawford and Don Smith. The team was blanked in two of its three meets, losing 9-0 to both Terminal Island Navy and Claremont-Mudd. It beat the USC junior varsity 5½ to 3½.

Record as of Feb. 24: 1 win, 2 losses.

### Basketball

Basketball season is over, and while the team's defense showed improvement towards the end of the season, the inability to put a complete offensive game together hurt Coach Hudson Scott's team badly. Sophomore Tom Heinz led both Caltech and the league in rebounds. Season record: 5 wins, 21 losses. □

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## THEATRE IN THE DINING ROOM

Students and staff of the Pasadena Playhouse were invited to Fleming House on February 14 to acquaint Caltech with what goes on behind the scenes in the theatre. After dinner and a sherry reception the actors demonstrated the elements of putting a play together. They concluded with a performance of Part One of "America Hurrah" (left), then talked with the audience (above). □



## Alumni Surpass \$2,000,000 Goal

The alumni phase of Caltech's development program topped \$2 million on February 3, 1969. Thirty-six percent of Caltech's 9,600 alumni have now participated in the current drive. When major alumni gifts (more than \$100,000) are added to the \$2 million, the total is more than \$6.8 million for this solicitation. At the end of the last development program in 1961, total alumni support—from 47.5 percent of the alumni—was about \$2.3 million.

In light of the excellent dollar results to date (combined with only fair participation), Simon Ramo, PhD '36, Caltech trustee and national chairman of the Science for Mankind program, has proposed that an additional 30 percent of the alumni should be able to contribute another \$1 million.

Thirty-two of the 83 geographical areas have now surpassed the goals assigned them in 1967. The most successful is Santa Monica, headed by George Todd, '40, which has produced 317 percent of its \$21,000 goal. One other area (Santa Clara County, headed by W. Lawrence Noon, '48) is also over 300 percent, and four more have passed 200 percent.

Up to now the primary means of fundraising has been personal contact—alumnus to alumnus. Most of the future solicitation will be conducted through a mail program directly from Caltech. □

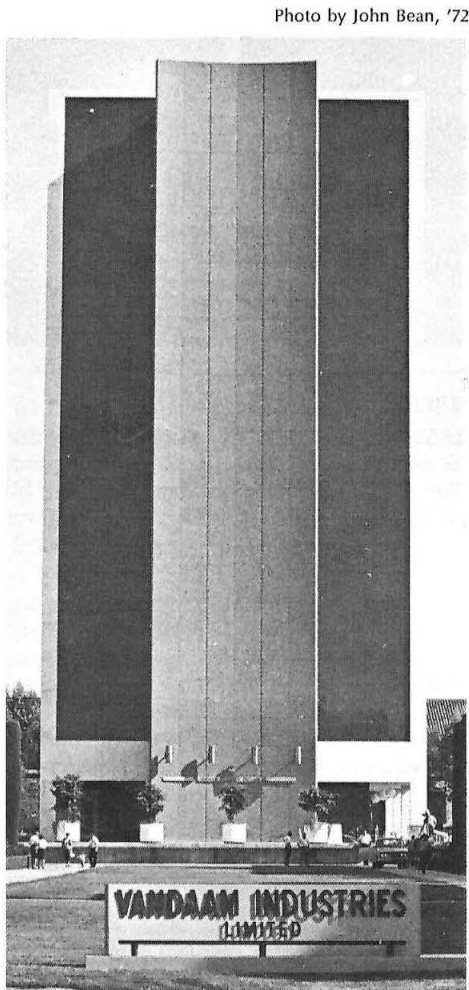


Photo by John Bean, '72

WHEN THE CREW and cast of TV's *Mission Impossible* came to Caltech last November to film scenes for their series, Millikan Library was transformed into the "Vandaam Industries" building (left). When the show was aired on Feb. 16, Caltech's own impossible missions group took its cue. The following week, in time for the annual visit of 1,000 high school students, the library's fictitious identity was mysteriously revived (right). □



## ALUMNI CALENDAR

March 7, 14, 8:00 p.m. Athenaeum  
ANNUAL WINE TASTING.

March 27, San Diego  
ALUMNI DINNER. Caltech Glee Club will sing. Speakers to be announced.

April 12, Swiss Park, Duarte.  
BARN DANCE.

May 10, all day, campus.  
ANNUAL ALUMNI SEMINAR.

June 11.  
ASSOCIATION ANNUAL DINNER MEETING.

Advance notice only. Details of each event—including ticket information—will be mailed by the Alumni Association. □

Membership in the Caltech Alumni Association (\$10 a year) brings:

- *Engineering and Science* magazine nine times a year
- Alumni Directory, to be issued this year
- Athenaeum membership privilege

ARTICLES IN THE FEBRUARY *ENGINEERING AND SCIENCE* MAGAZINE

- *Confessions of a Genial Abbot*. As Robert Huttenback moves from Master of Student Houses to his new position as Dean of Students, he looks back on his colorful 11-year career as spiritual counselor, intellectual guide, and sheriff-in-residence to Caltech undergraduates.
- *Research Notes*. Predicting creep. The eye of the catfish. The computer learns English.
- *South Africa: Are There Silver Linings?* by Edwin S. Munger. An analysis of contemporary domestic developments and trends that point to the possibility of a relatively peaceful transition to a more just South Africa.
- *Arie J. Haagen-Smit: Caltech's Crusader for Clean Air*.

## Black Students Arrive

Continued from page 1

"It's a brainwashing process," says Melvin Parker from Xavier. "Southern black students go to college for the degree. They've been led to believe that a mere college degree is an automatic door-opener to a job they wouldn't get otherwise."

Ernie Roberson, an Xavier biology major, complains that the colleges try to discourage their students from reaching too far. He wants to study medicine but says his counselors consistently suggest that he settle for being a medical technician. Roberson is auditing biology courses at Caltech and is hoping to learn some computer science while he is here.

All the students want to return to their colleges and try to help improve the quality of the education there. Their dedication shows up in their individual research areas. Lois Davis from Dillard is interested in devising intelligence tests that would be fair to black students as well as whites. Patsy Williams, also from Dillard, will spend her time at Caltech trying to create better ways of teaching reading to black children.

The nine students—first of an eventual 20—radiate the qualities Caltech recruiters went looking for during their trip south last Thanksgiving. Two of Caltech's five black undergraduates headed the recruiting: Charles Creasy and Bill Hocker, both juniors.

"We wanted young people who were independent, risk-oriented, and able to think creatively," Creasy says. The recruiting was done by two teams—Hocker and senior Dick Rubinstein; and Creasy and Vicky Vaughan, an Immaculate Heart College black student who works with Caltech students in the research center.

Under terms of the grant, the visiting students will stay on campus until June. Members of the research center are hopeful, however, that arrangements can be made for those who want to remain through the summer. □

## COMING CALTECH EVENTS

Wednesday, March 12, 8:30 p.m. Beckman  
NEW STANCES, OLD PROBLEMS. Eric F. Goldman. Third Haynes Lecture. Free.

Friday, March 14, 8:30 p.m. Beckman  
FIRST CHAMBER DANCE QUARTET of New York in a program of contemporary classical ballet. \$5-4-3.

Sunday, March 16, 3:30 p.m. Beckman  
SMETANA QUARTET from Prague will perform Mozart (K. 458), Janacek (Quartet No. 2), and Beethoven (Op. 132). Coleman Chamber concert. \$4-3-2.

Sunday, March 23, 3:30 p.m. Beckman  
COLEMAN AUDITIONS WINNERS concert. Free.

Tuesday, March 25, 8:30 p.m. Beckman  
The second Evangeline Burgess Memorial Lecture presented in cooperation with Pacific Oaks College and Children's School. Burton L. White speaking on *EARLY CHILDHOOD EXPERIENCE AND HUMAN COMPETENCE*. Free.

Monday, April 7, 8:30 p.m. Beckman  
SUNSPOTS AND THE SOLAR MAGNETIC CYCLE. Robert B. Leighton. Caltech Lecture Series. Free.

Thursday, April 10, 8:30 p.m. Beckman  
NEW YORK STRING SEXTET performing Brahms (Sextet in G major, Op. 36), Schubert (Quintet in C major, Op. 163). Coleman Chamber concert. \$4-3-2.

Sunday, April 13, 3:00 and 8:00 p.m. Beckman  
PASADENA SYMPHONY ORCHESTRA. \$1.75 (all students \$1).

Monday, April 14, 8:30 p.m. Beckman  
IN DEFENSE OF FREE SPEECH. Abraham Kaplan. Caltech Lecture Series. Free.

Friday, April 18, 8:30 p.m. Beckman  
Caltech Band. HUNTER MEAD ANNUAL MEMORIAL CONCERT. □

Sunday, April 20, 8:15 p.m. Dabney  
GOLDMAN-BROWN DUO performing Beethoven (Sonata in F major, Op. 24); Brahms (Sonata in A major, Op. 100); Bartok (Sonata No. 2). Free.

Monday, April 21, 8:30 p.m. Beckman  
REBIRTH OF POLITICAL EXTREMISM IN GERMANY? Eberhard K. Jobst. Caltech Lecture Series. Free.

Friday, April 25, 8:30 p.m. Beckman  
ALI AKBAR KHAN, sarodist in a program of Indian classical music. \$5-4-3.

Monday, April 28, 8:30 p.m. Beckman  
SMOG: A MODEST PROPOSAL. Sheldon K. Friedlander. Caltech Lecture Series. Free. □

## Chem Engineer Prausnitz Is 1969 Lacey Lecturer

A distinguished chemical engineer, John M. Prausnitz, visited Caltech in January as the recipient of the second annual W. N. Lacey lectureship in chemical engineering. Prausnitz, professor of chemical engineering at the University of California, Berkeley, gave two lectures, one on "Physical and Chemical Representation of Liquid Mixtures" and the other on "High-Pressure Phase Equilibria."

The lectureship, established last year, honors William Noble Lacey, Caltech professor emeritus of chemical engineering, who now lives in San Diego. Lacey, a faculty member for 53 years, also was dean of graduate studies and dean of the faculty at Caltech. The lectures were made possible by the W. N. Lacey Fund, set up by his friends and former students. The objective of the lectureship is to bring experts currently active in chemical engineering to the campus. □

## Placement Assistance To Caltech Alumni

The Caltech Placement Service may be of assistance to you in one of the following ways:

- (1) Help you when you become unemployed or need to change employment.
- (2) Inform you of possible opportunities from time to time.

This service is provided to alumni by the Institute. A fee or charge is not involved.

If you wish to avail yourself of this service, fill in and mail the following form:

To: Caltech Placement Service  
California Institute of Technology  
Pasadena, California 91109

Please send me: (Check one)

- ☐ An application for placement assistance
- ☐ A form indicating a desire to keep watch of opportunities although I am not contemplating a change.

Name.....  
Degree(s)..... Year(s).....  
Address.....  
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## PERSONALS

### 1932

JAMES D. COBINE, MS, PhD, '34, a physicist at the General Electric Research and Development Center in Schenectady, N.Y., is the 1969 winner of the Lamme Medal of the Institute of Electrical and Electronics Engineers. The Lamme Award is given annually for meritorious achievement in the development of electrical and electronic apparatus or systems; Cobine was cited for his contributions to the knowledge and development of high-power vacuum interrupters. Cobine joined GE's research laboratory in 1945.

### 1934

NEPHI A. CHRISTENSEN, MS, PhD '39, professor emeritus of civil engineering at Cornell University, now heads the American Advisory Group to Rezaieh Agricultural College, Rezaieh, Iran. His appointment was made by Near East Foundation, a private organization serving developing nations through technical aid. Christensen will be involved with the development of a four-year accredited agricultural college, patterned after American land-grant institutions, a project contracted for by Near East Foundation through the Iranian Ministry of Science and Higher Education.



Cobine, '32



Price, '42

### 1937

JOHN S. RINEHART, MS, has been appointed professor-adjoint of mechanical engineering at the University of Colorado in Boulder. He is director of university relations and senior research fellow of the Institutes for Environmental Research of the Environmental Science Services Administration.

### 1941

JOHN K. ARNOLD JR., MS, is the new vice president for student affairs at Florida State University, Tallahassee. He had been serving as acting vice president since October 1968. Arnold joined Florida State in 1958 as professor of air science. Since then he has been in charge of air science, assistant dean of students, and associate dean of students.

### 1942

HARRISON A. PRICE was recently elected Chairman of the Board of Trustees for the California Institute of the Arts, Los Angeles. Price is president of Economics Research Associates, a nationwide management consulting firm. He served the California Institute of the Arts as vice chairman prior to his recent election. He is also a director of American Nucleonics Corporation, Scope Industries, and the Southern California Choral Music Association.

### 1946

JOHN J. BURKE, MS '48, has been elected to the board of directors of The Reuben H. Donnelley Corporation in New York. He is chairman of the board of the Howmet Corporation, New York-based metals and metal components producer.

EDWARD G. NEALE JR. is Commodore of the 11th Coast Guard District Auxiliary for a two-year term. The Coast Guard Auxiliary is a civilian, volunteer organization of private boat owners who assist the Coast Guard in the recreational boating field. Neale, who has been vice commodore for the past two years, has performed numerous assists for distressed vessels in the Santa Monica bay area.

### 1947

DEAN A. WATKINS, MS, was recently appointed to the University of California Board of Regents by Governor Ronald Reagan. Watkins, a former electrical engineering professor at Stanford University, is co-founder of the Watkins-Johnson Co., an electronics manufacturing firm in Palo Alto, Calif. His term on the Board of Regents will expire in 1984.

### 1948

WILLIAM A. BARKER II, MS, professor of physics at the University of Santa Clara, Santa Clara, Calif., has been named chairman of the department of physics there. Barker has been at Santa Clara since 1964 and prior to that taught physics at St. Louis University.

HARVEY O. NAY, MS, AE '52, is the new vice president-advanced technology for Lear Jet Industries, Inc., in Torrance, Calif. Formerly associated with the aircraft division of Hughes Tool Company, Nay joined Lear Jet as manager of the advanced technology group at the time of the department's inception in February 1968.

### 1953

WALTER J. EAGER, a commander in the U.S. Navy, is program manager for underwater construction of Project TEKTITE I. This project calls for the construction of an underwater habitat in which four men will live and work for 60 days on the ocean floor off the Virgin Islands at a depth of 50 feet. Eager will direct the underwater construction operations on site and will also direct the support operations, maintenance, and safety diving functions.

### 1958

W. J. KLENK, MS, has been named department manager for guidance analysis and software in the Electronics Systems Laboratory of TRW Inc.'s Houston, Texas, operations. Klenk joined TRW's Systems Group in Redondo Beach, Calif., in 1960 as a member of the technical staff in the Controls Systems Department.

### 1959

RICHARD M. GOLDSTEIN, MS, PhD '62, section manager of the Communications Systems Research Section at Caltech's Jet Propulsion Laboratory, has been awarded an Exceptional Scientific Achievement Medal by NASA for his contributions to the exploration of space. Goldstein was cited "for outstanding engineering and scientific leadership in development and exploitation of advanced technique deep-space communication," and "for the contribution and application of precise techniques for weak signal processing." His work led to the discovery of surface features on Venus and its retrograde rotation, and it also aided in observations of the asteroid Icarus during its recent near-earth passage.



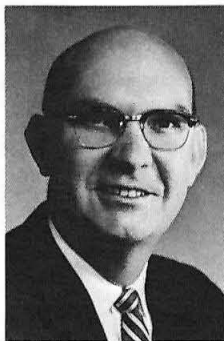
Burke, '46



Neale, '46

AKIRA KOBAYASHI, MS, is now associate professor of solid mechanics at the University of Tokyo, Japan. He is headquartered in the University's Institute of Space and Aeronautical Science.

ROBERT M. LEBOVITZ, MS '60, is a research associate at the Center for Theoretical Biology and the Neurobiology Laboratory of the State University of New York at Buffalo. He is working on cerebellar neurophysiology and its role in motor control.



Nay, '48



Scheerer, '60

### 1960

JAMES L. FARMER has accepted a position as assistant professor of zoology at Brigham Young University, Provo, Utah. He and his wife, Doris, have one child, a daughter, born in July 1968.

WILLIAM G. SCHEERER, MS, has been promoted to head of the Computer-Aided Analysis Department at the Bell Telephone Laboratories, Murray Hill, N.J. Scheerer, who joined Bell Laboratories in 1960, will now be responsible for the application of computers to the solution of engineering problems.

### 1961

JAMES B. BLACKMON JR., who is currently working towards a PhD degree in heat and mass transfer at UCLA, announced the birth of his first child in December.

RICHARD T. JONES, PhD, professor and chairman of the department of biochemistry at the University of Oregon Medical School, has been appointed to the Biochemistry Training Committee of the National Institute of General Medical Sciences, one of the eight National Institutes of Health, in Bethesda, Md. The committee reviews applications for research training grants and advises the Institute on training programs for young men and women.

ROBERT J. QUIGLEY, MS '62, writes in about his busy past year. He was married last June, and after a summer of doctoral research received his PhD in December from UC Riverside. He is now assistant professor of physics at the Illinois Institute of Technology in Chicago. In May he and his wife will go to Frankfurt, Germany, where Quigley will be a guest lecturer in physics at the Physikalisches Institut der Johann Wolfgang Goethe Universität.

### 1962

SIDNEY RICHARD COLEMAN, PhD, has been appointed professor of physics at Harvard University, Cambridge, Mass. This change will be effective in the fall of 1969.

MELVIN DAYBELL, PhD, former staff member at the Los Alamos Scientific Laboratory, New Mexico, has joined the faculty of the University of Southern California as associate professor of physics and engineering. Daybell will also continue as a consultant for Los Alamos.

MILTON E. MORRISON, MS, PhD '65, a first lieutenant in the U.S. Air Force, has been named Outstanding Junior Officer of the Year in his unit at Wright-Patterson AFB, Ohio. Morrison, who is a research engineer in the Aerospace Research Laboratories at Wright-Patterson, also recently shared an award for scientific achievement given by the office of Aerospace Research for his work on a Southeast Asia related problem.

### 1963

RICHARD S. ROBERTSON was recently promoted to assistant vice president of the Lincoln National Life Insurance Company, headquartered in Fort Wayne, Ind.

WILLIAM F. SAAM has completed his PhD in theoretical physics at the University of Illinois and has received a two-year post-doctoral fellowship to study at the L  ue-Langerin Institut in Garching, Germany, and at the L  ue-Langerin Institute in Grenoble, France.

DAVID S. SIEGEL is the new director of marketing for the Los Angeles facility of Applied Data Research, Inc. He was formerly system marketing manager for the data equipment division of Bolt Beranek and Newman Inc.

IVAR TOMBACH, Caltech graduate student in aeronautics, is the recipient of one of two new fellowships established by the Northrop Corporation at Caltech. Tombach, in his final year of graduate work, is studying aerodynamics, concentrating on turbulent mixing.

### 1964

DONALD E. DICK received his PhD in electrical engineering from the University of Wisconsin in June and is now assistant professor of physical medicine and rehabilitation and electrical engineering at the University of Colorado. He will divide his time between the School of Medicine in Denver and the college of engineering on the Boulder campus.

RICHARD KARP, a Peace Corps Volunteer in the Philippines, has signed on for a third year. He has moved from Baguio City to Manila, where he is teaching computer programming at the University of the Philippines.



Morrison, '62



Hammond, '67

### 1965

PHILIPPE R. CHALIER, MS, is an engineer at SERI Renault Engineering, a subsidiary of Renault (automobiles), and is living in Boulogne, France.

RICHARD A. HOUSE II, a physics research scientist at the office of aerospace research at Wright-Patterson AFB, has been promoted to captain in the U.S. Air Force.

### 1966

DAVID GAKENHEIMER, MS, has joined the research staff of the Engineering Sciences Department of The RAND Corporation in Santa Monica, Calif.

### 1967

DAVID A. HAMMOND has been commissioned a second lieutenant in the U.S. Air Force following the completion of his course at Officer Training School at Lackland AFB.

## OBITUARIES

### 1929

PHILLIP CRAVITZ, MS '32, vice president in charge of engineering for the American-Hawaiian Land Company in Westlake Village, Calif., died in December at the age of 62. Prior to joining American-Hawaiian he had his own construction company, and he was one of the first to participate in the "tract" building concept in southern California. He is survived by two sons. The Phil Cravitz Memorial Scholarship Fund is being established at Caltech.

WALLACE A. McMILLAN, manager of technical services for Texaco, Inc., in Beacon, N.Y., died in December. He had been with Texaco since 1959.

### 1934

PAUL H. LEDYARD, MS '35, president of Mid-Continent Geophysical Co., Ft. Worth, Texas, died in December 1967.