

# CALTECH NEWS

VOLUME 7, NUMBER 7, OCTOBER 1973

PUBLISHED FOR ALUMNI AND FRIENDS OF THE CALIFORNIA INSTITUTE OF TECHNOLOGY



Finding a ground of interest common to the astronomer and the applied scientist, Norman Brooks, right, and Jesse Greenstein, center, peruse Stirling Huntley's data on achievements of the entering freshman class. All were speakers at Alumni Leadership Conference September 15.

## Council to Seek \$350,000, Sigworth Tells Alumni

The Alumni Fund Council will seek \$350,000 in gifts during 1973-74, Harrison W. Sigworth, chairman, told some 75 participants in the Alumni Fund Leadership Conference on the campus September 15.

Sigworth told the fund workers, who came from throughout the country, that an important priority in the campaign is to increase the number of donors. He noted that last year the fund exceeded its \$300,000 goal by more than \$50,000 but fell below its goal for individual contributions. This year, he said the council hopes to receive gifts from 3,500 alumni.

Sigworth continued, "This year we want to broaden participation by contacting more alumni on an individual basis. Our 75 area chairmen will be talking personally with almost 2,000 alumni between now and the end of this calendar year. We'll contact the remaining alumni by mail and telephone." The fund closes on June 30, 1974.

Sigworth reported that, later in the fall, the Institute will publicly announce its major five-year fund raising campaign, "Caltech . . . At the Leading Edge," and will seek gifts for capital projects, endowment, and operational funds.

He told workers that the Alumni Fund will continue uninterrupted through this period; that the Alumni Fund is the contact with the general alumni body; and that Alumni Fund gifts will count toward the \$130 million campaign goal—a figure representing the total gift dollars that Caltech needs during the next five years. This procedure is different from what was done in two earlier campaigns. During these efforts, the Alumni Fund was suspended and alumni were asked to contribute to Caltech through the campaign organization.

During the morning session, alumni heard reports by two members of the faculty—Norman Brooks, professor of environmental science and civil engineering, and Jesse L. Greenstein, Lee A. DuBridge Professor of Astrophysics—about research and teaching programs at the Institute.

Stirling L. Huntley, associate dean of graduate studies and director of admissions and financial aid, described the incoming freshman class and told alumni that Caltech students are as good or better than they have ever been.

At a noon luncheon, David W. Morrisroe, director of financial services, allayed a few myths about Caltech's wealth. He emphasized the special expenses that are a part of Caltech's program because of its role at the forefront of scientific research and education.

Three successful area chairmen from last year's campaign led an afternoon

"How To Do It" session as they explained ways of presenting Caltech's needs to fellow alumni. They were Robert E. Foss, BS '32; Herbert A. Lassen, BS '43, MS '47, PhD '51; and Joseph F. Rominger, BS '41.

After dinner in the Athenaeum, Robert P. Sharp, BS '34, MS '35, professor of geology and chairman of the Alumni Fund communications committee, gave a light-hearted and personal look at the Institute through his own experiences as a former student, faculty member, and worker in alumni activities.

The conference was planned by a committee consisting of Stephen H. Garrison, BS '65, MS '66; J. Benjamin Earl, BS '44; Glen H. Mitchel, Jr., BS '48; and Frank W. Davis, BS '36.

Alumni serving as area chairmen in their regions include:

Jonathan C. Tibbitts, Jr., BS '58, San Diego; Ben Benioff, BS '22, Laguna Hills; J. R. Lester Boyle, BS '30, Corona del Mar; Walter R. Larson, BS '40, Garden Grove; Richard K. Smyth, BS '51, Huntington Harbour; Charles F. Thomas, BS '35, Palos Verdes Estates; Thomas W. Cooper, BS '57, Torrance; Herbert A. Lassen, BS '43, MS '47, PhD '51, Los Angeles; Charles M. Finley, BS '57, San Gabriel; Richard R. Hodges, BS '54, Pacific Palisades.

David S. Rathje, BS '51, Culver City;  
(Continued on page 3)

## Tech to Battle Gridiron Foe At Homecoming

More than 400 alumni and their families are expected for Caltech's Sixth Annual Homecoming, Saturday, October 20, in Tournament Park. A football game pitting the power of the Teachers against Mt. San Jacinto Junior College at 1:30 p.m. will be the major event in a day of activity for the entire family.

Festivities will begin at 10 a.m. with a soccer match between the Caltech varsity and the Institute's Soccer Club. Alumni water polo veterans are invited to match strength and skill with the Institute varsity in a meet at 10:30 a.m.

Caltech's band will provide spirited background music during lunch. This year the alumni are bringing their own picnic lunches and the Alumni Association is furnishing free beer and soft drinks.

Gymnasium facilities and the pool will be open for exercise and relaxation throughout the day. All alumni who are planning to attend should send their reservations to the Alumni Office.

## 219 Freshmen Register, Including 30 Women

The number of students applying to Caltech increased this year while many private universities were continuing to experience a decline in applications.

There will be 219 students in the freshman class, approximating a number selected as ideal by the Caltech faculty.

Peter Miller, director of undergraduate admissions, said the number of students applying rose from 889 to 920. Applications had been down for the two years before this, in line with a national trend.

Generally, this decline has been attributed to a leveling off in the number of college-age young people, an increased feeling that college isn't absolutely necessary for success, and elimination of the draft.

Miller believes the upturn in applications is caused by increasing interest in science and engineering among young people and a more positive attitude toward these fields than has been typical recently.

He said the student of today is less likely to place total blame on science for environmental problems and more likely to see science as playing an important role in finding solutions for the problems of society.

Miller said the faculty picked 220 as an ideal number of freshmen after analyzing available laboratory space, teaching schedules, and the optimum number of students in a classroom.

Last year there were 230 freshmen, the largest number in Caltech's history, because of a flock of last-minute acceptances from students who had been offered admission but were no longer expected to accept.

This year, the Institute was more successful in getting the number of freshmen it wanted. A waiting list was kept open throughout the summer, rather than being closed early in May; this waiting list was composed of students not included on the original list of those invited to enroll. In this way it was possible to wait for replies from the first group of students before extending admission to students on the waiting list.

Miller said this year's freshman class is equal in quality to those of previous years and continues to rank in the upper 2 or 3 percent nationally in college entrance board examinations—as they have for the past 20 years. The average college board scores for entering Caltech freshmen are as high as those for any institution in the country, he said.

Based on a maximum college board score of 800, here's how the current freshman class ranks:

Mean College Board Scores	
SAT-Verbal	654
SAT-Math	748
Physics	748
Level II Math	779
Chemistry	738
Biology	733
English	663

Mean High School	
Rank Score	716
(Converted into college level board scale rating)	
Mean Predicted GPA	2.83

The Mean Predicted Grade Point Average is based on a 4.0 scale; however, 3.3 is the highest GPA ever predicted.

There will be 30 girls in this freshman class, four more than the 26 who entered last year. This year 92 girls applied, compared with 81 the year before.

Miller said the number of women applicants has gradually been creeping up. But he added that many young women who are highly able still need some encouragement—because of peer or family pressures—to consider the career in science for which they are well qualified.

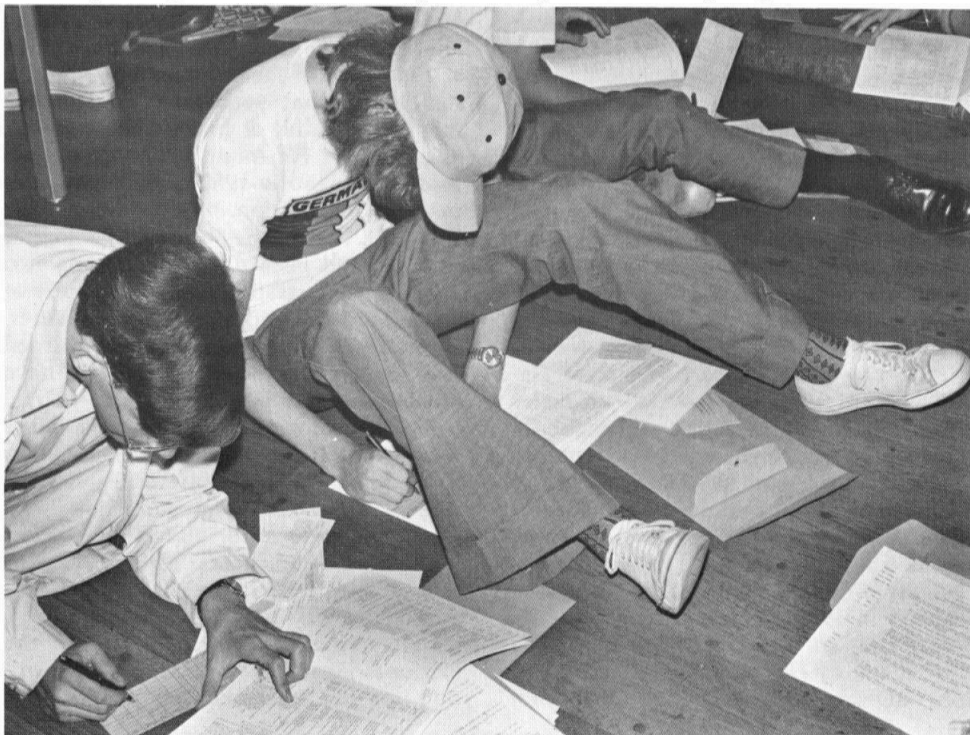
Miller said, "Our women applicants have consistently been of high quality—and we have always required those we admit to be as good as our men."

Although no separate records are kept on female achievement, Miller said that girls have performed well—and that a lower percentage of their total number has appeared before the Academic Standards Committee than has been true of men.

During the past year the efforts of the Admissions Office to attract top students from the Evanston-North Shore area of Chicago was assisted by a committee of five alumni headed by Philip E. Smith, BS '39. These alumni met with high school science and mathematics teachers and counselors in that area, talked with students interested in Caltech, and asked the Institute to send these students information. Those who were admitted received invitations to an informal get-together at Smith's home.

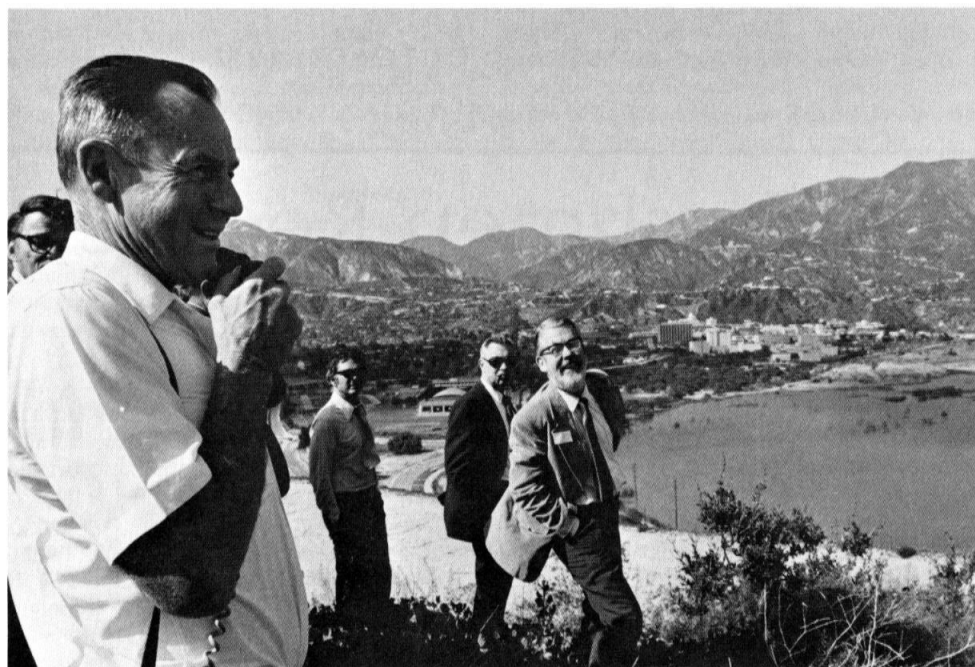
Miller said that next year the Institute hopes to expand this kind of alumni involvement to an additional city. Although it is too early to evaluate results, he believes that such alumni assistance will yield a greater return of good students from the areas in question.

Getting right down to the heart of a thorny situation, entering freshmen doggedly work their way through the maze of forms they must complete before being assigned to their classes.





# Robert Sharp: Ardent Geologist (or why all those Techers picked a Ge option)



Sharing his knowledge—and his love—of the outdoors is one of Bob Sharp's favorite activities. Here, above the Jet Propulsion Laboratory, his listeners are Earthquake Research Affiliates. Avid listener in audience foreground is Thomas V. Davis, BS '38, MS '47, AE '48.

by Winifred K. Veronda

Robert P. Sharp, professor of geology, will tell you it was partly by accident that he came to Caltech in the first place. But the relationship that began when he enrolled as a freshman has lasted 43 years. During those years he evolved into a professor, division chairman, alumni leader, and friend to countless students and staff. He also gained a reputation for turning scores of unsuspecting undergraduates toward careers in geology.

It isn't that he has deliberately set out to make geology majors of students while teaching them Ge 1. Actually he has always felt that elementary geology was just as much a cultural course as art or history—or most of the other courses for which humanities credit is given. He used to argue this point with Hallett D. Smith, professor of English, but Smith had his own definition of a cultural offering.

But Sharp made his point, nevertheless—if properly taught, geology should awaken a student's awareness of the land around him so he will be stimulated by what he sees because he understands how it got that way. Sharp says many students have told him that Ge 1 opened their eyes to the landscapes they had been looking at all their lives and made travel exciting because of their new insight.

Sharp actually didn't plan to choose geology as his own option when he enrolled at Caltech in 1930. He had come to the Institute with a friend and fellow resident of Oxnard who had wanted his companionship and persuaded him to enroll. At that point he anticipated becoming a civil engineer.

Sharp combined the academic bruises of his undergraduate years with the physical abrasions of football. He went on to become captain of the team and a three-year letterman. In explaining how he evolved into a geologist from a state of total ignorance of the discipline he said, "When I was a freshman we'd laugh at a fellow on the football team who said he was going to major in geology. 'What's that?' we'd ask him."

But Sharp's awakening was coming. During his sophomore year he took a required course in the subject, and he soon realized that he had found his career.

"I saw that I had an innate appreciation for this material," he said. "I'd spent a lot of time in the mountains as a kid. Often I'd climbed over ridge after ridge to get to Walker Creek for fishing and suddenly I realized—from the content of the lectures—that those ridges were glacial moraines. That was one of many times I listened to a lecture and suddenly said to myself, 'Hey! Now I understand!'"

"The more I studied geology the more I liked it. The opportunity to learn about it and eventually follow it as a career was one of the most fortunate of my life."

Sharp went on to get his BS degree at Caltech in 1934. After a year of graduate work and an MS at the Institute he moved on to Harvard where he earned his PhD in 1938. He found the atmo-

sphere there intellectually exciting. As for the course work: "After I'd walked through the valley of fire at Caltech, the courses at Harvard just weren't that tough," he said. "I had a tremendous advantage over most of the other students there—not just in terms of my basic training but in terms of the discipline I'd acquired. Getting an under-



From the vantage point of a 43-year association, Robert Sharp discusses "What is Caltech?" at dinner meeting of Alumni Leadership Conference in the Athenaeum.

graduate degree at the Institute is wonderful preparation for any graduate school in the country."

From Harvard, Sharp went on to a teaching position at a midwestern university that involved a 48-hour work week with no time for research.

"The year was 1938 and that was the only academic position available," he said. "I worked harder at that job than I'd ever worked in my life because I wanted out of there."

That opportunity came with the advent of World War II when Sharp joined the Army Air Force and served in its Arctic, Desert, and Tropic Information Center. As the war was ending he accepted an offer to join the faculty at the University of Minnesota. Two years later, in 1947, he returned to Caltech as a professor of geomorphology, despite some fears that people on the campus might still think of him as he had been as a student. He found those fears to be unfounded, and in 1952 he became chairman of the division.

In the meantime, Sharp's geological research had been developing along two seemingly contrasting lines—the study of glacial processes and of desert features, especially sand dunes. But he explained that these fields of study actually have much in common.

"Most geological processes take place so slowly that the scientist can only learn about them through inference—not by studying an active phenomenon," he said. "But a glacier or a sand dune offers its observer the chance to study a current process and to measure movement and change. To me, this is satisfying."

Last spring Sharp was elected to the National Academy of Sciences, recognition for his researches on glaciers and

the natural processes at work in the desert—and other areas of geology to which he has made contributions.

The ability to communicate a sense of discovery to students is one of the traits that has made Sharp a successful teacher—so successful that he was one of eight men featured by LIFE magazine as "great teachers" in the United States. Clarence R. Allen, professor of geology and geophysics and a close friend of Sharp's for many years, puts it this way:

"Bob is tremendously enthusiastic about his field. He radiates this enthusiasm when he talks with people. Beyond that, he makes no attempt to snow them. Whether they're students, staff, members of the public, or other geologists, he talks to them on a level they can understand. The material he presents may seem simple and the delivery casual and effortless, but both are based on more hard work than the majority of people would be willing to invest."

"Students—and people in general—are attracted to Bob because he's a generous person, and he genuinely cares about them. He gives abundantly of his time and effort to help someone with a problem. Personally, I believe he's established contacts with more undergraduates than anyone else at the Institute ever has. If you ask alumni of all divisions what professors they knew reasonably well, I'm sure Bob Sharp would rank high on the list."

Along with his enthusiasm and his generosity, Sharp has been known to generations of students for his punctuality. This trait is a symptom of the tremendous inner organization that has enabled him to move forward on many fronts at the Institute. A former student observed: "When he says a caravan will leave the campus for a field trip at 8 a.m. he means 8 and not 8:05. He's been known to drive out of the parking lot and leave stragglers standing on the steps."

That capacity for organization is closely related to a sense of responsibility that has made Sharp a staunch ally of

the Institute and its programs.

"The administration has always found that Bob Sharp can be counted on for advice or help," one colleague remarked. Sharp was chairman of the search committee that advised the Caltech trustees on their selection of Harold Brown as Institute president, and he has been active in alumni affairs. In addition to several other offices he has been president of the board of directors of the Alumni Association. This year he is chairman of the communications committee for the Alumni Fund.

In 1967 Sharp stepped down as chairman of the geology division. He did so in part because he wanted more time for other activities, but also because of a conviction he holds that there should be a turnover in administrative posts as older men gradually phase themselves out. He has recently turned over the teaching of Ge 1 to another faculty member for the same reason.

Sharp's capacity for organization—and his sense of responsibility—create a need for relaxation. Allen said, "Underneath his affable exterior Bob is a very intense person. He finds that spending a lot of time outdoors lets him relax."

Some of this time is spent on the Caltech campus where he jogs three or four miles around the track every day. He frequently gardens on weekends, and he sometimes climbs Mount Wilson on Sunday mornings with his two dogs, Rusty and Fleck. Mount Wilson is just behind his Altadena home where he lives with his wife, Jean, whom he met when she was a geology student at Radcliffe.

Sharp was about 55 when he discovered a new outdoor pastime—skiing.

"I love to ski, and I wish I'd started earlier," he said. "Skiing is as close as man can come to flying while he's still on the ground."

His favorite outdoor sport is back packing to a mountain stream where he can fly-fish for trout. Fishing is an activity he says he's not going to give up for a long time—even if he eventually has to go into the mountains on a horse.

## New Track, Swim Coaches Join Athletic Department

Two new coaches—one in swimming and water polo and the other in track and cross-country—were hired this summer by athletic director Warren G. Emery.

Leroy Neal, 32, who has had experience in coaching and as an exercise physiologist, is the new head coach of track and cross-country.

Ed Spencer, 31, whose water polo team at Temple City High School was league champion in 1972, is the new head coach of swimming and water polo.

Neal, who completed his master's degree in physical education at California State University at San Diego last year, has coached at Pater Noster High School in Los Angeles and at South Pasadena High School. He also coached the San Diego Track Club and served as a graduate assistant at California State University, San Diego.

He was an exercise physiologist for Los Angeles County for two years and in the exercise laboratory at CSUSD, also for two years. He served in the Marine Corps, advancing to the rank of captain.

While an undergraduate at Occidental College, Neal set a school and Southern California Intercollegiate Athletics Competition (SCIAC) mark of 4:05.4 in the mile in 1963. He ran the half mile in 1:49.8 and was SCIAC titlist with a mark of 9:18.2 in the two mile.

At Fullerton Junior College he was state junior college champion in the 880, setting a national J.C. mark of 1:51.7. The following year he was California state champion in the mile. He won several middle distance titles while at Fullerton High School.

Spencer, who attended Nether Providence High School in Wallingford, Pa., graduated from North Carolina State

University in 1964. While there he was NCAA All-American in swimming for three years, NCAA champion in the 100-meter butterfly in 1962, and AAU national champion in the 100-meter butterfly the same year.

In his five years at Temple City High School as swimming and water polo coach, his teams were league contenders every year. Last summer, one of his swimmers qualified for the AAU national championships in the 1,500-meter freestyle.

## ALUMNI EVENTS

### October 13

Reunion—Caltech meteorology students of 1943. Campus tour leaving from the Athenaeum lobby, 4 p.m.; social hour, 5:30 p.m.; dinner, 6:30 p.m.; the Athenaeum.

### October 15

Alumni Dinner—Earnest C. Watson Caltech Lecture Series. No-host cocktail hour at 6 p.m.; dinner at 6:45 p.m. in the Athenaeum; lecture at 8 p.m. in Beckman Auditorium. Speaker—William A. Fowler, Institute Professor of Physics, "Explosive Nucleosynthesis: The Violent Birth of Chemical Elements."

### October 19

Reunion—Class of 1948. Campus tour leaving from the Athenaeum lobby at about 4 p.m.; social hour, 5:30 p.m.; dinner, 7:30 p.m., the Athenaeum.

### October 20

Homecoming. Soccer, water polo, football, band music, and free beer and soft drinks. Tournament Park, beginning at 10 a.m.



## Landscaping Of Throop Site To Begin Soon

Landscaping of the old Throop Hall site and the area between Guggenheim and Thomas Laboratories should be completed by March or April 1974, barring bad weather.

James E. Westphall, campus architect, said the final drawings should be ready for bids by October 1 and construction may begin on November 1.

In preparation, workmen this summer have been putting in new, and replacing old, subterranean utility lines. These include electrical conduits, sewer lines, and chilled water lines to the air conditioning units of the surrounding buildings.

Three pools will be built on the Throop Hall site, with cascades from the Millikan pool level down to Throop Drive. Several paths and new landscaping will complement the cascading pools.

The trees between Guggenheim and Thomas Laboratories will remain, but the ivy will be replaced by turf and new ground cover. New walkways and lighting fixtures will be added.

The service drive between the Winnett Student Center and the Spalding-Thomas complex is to be taken out and replaced by a pedestrian walkway and grass.

## Owen Named To Cancer Panel

Ray D. Owen, professor of biology and former chairman of the biology division, has been appointed to President Nixon's Cancer Panel. Established by the National Cancer Act, the group monitors the National Cancer Program and reports directly to the President.

Distinguished for his work in immunogenetics and serology, Owen has been active in several capacities with the American Cancer Society and National Institutes of Health. He was chairman of the National Science Foundation advisory committee for biological and medical sciences, a member of Governor Reagan's Cancer Advisory Council, and chairman of the National Academy of Sciences' Genetics Section.

## Lea Sterrett Returns As Assistant Provost

Lea Sterrett, who worked as senior administrative aide to George S. Hammond, former chairman of the division of chemistry and chemical engineering, has returned to campus after a year's absence.

She is now assistant provost, working for Robert Christy, vice president and provost. Her duties include administering the Sherman Fairchild Distinguished Scholars Program and assisting Dr. Christy in some of his other duties.

Mrs. Sterrett came to Caltech in 1965 as an executive secretary. She worked for the late J. Holmes Sturdivant, then executive officer for chemistry, and later as divisional secretary to John D. Roberts, Institute Professor of Chemistry and division chairman from 1963 to 1968.

When Hammond, former Arthur Amos Noyes Professor of Chemistry at Caltech, became chairman in 1968, she was his senior administrative aide until he left the Institute in August 1972, to become vice chancellor of natural sciences at the University of California at Santa Cruz.

Mrs. Sterrett worked with Hammond at UC Santa Cruz for a year before returning to Caltech.

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#### EDITORIAL STAFF

Executive editor: Winifred Veronda  
Associate editors: Bernard Cole, Joy Hays, Kathleen Marcum, and Kay Walker.  
Photographer: Floyd Clark.

### FROM SCIENCE TO POLITICS:

# Land Interns in Legislature

Summer is usually the time Caltech students get away from it all—the books, the lectures, the grind, and the tension.

But while many of his classmates relaxed the summer away, Caltech junior John Land got away from it all in a very different manner. He was an assistant to State Assemblyman Bob Wilson (D-La Mesa) at the state capitol in Sacramento.

The 20-year-old electrical engineering major was the winner of Caltech's first Arnold O. Beckman internship. Named after the chairman of the board of trustees, the internship provides students with opportunities to spend a summer exposed to, and contributing to, the legislative branch of government.

Land won the Beckman internship, which supported his stay in Sacramento and provided travel money, from among many applicants on the basis of a proposal describing his goals.

"I've always wanted to pursue a career that would somehow combine my interests in law and in science," he said. "I came to Caltech, rather than a liberal arts college, to prepare for law school because I wanted to be educated to cope with the increasingly complex and technical problems of society on whatever level they occur."

"The Beckman internship in Sacramento has been an educational experience I don't think I would have received otherwise—one that has been both rewarding and frustrating."

After arriving in Sacramento on June 15, Land was assigned by Wilson to do research on the effect on smog of a double daylight savings bill then being proposed by the La Mesa legislator. Under this measure clocks would have been moved ahead another hour to provide extra sunlight in the evening hours during June, July, August, and September.



Caltech junior John Land, right, with State Assemblyman Bob Wilson (D-La Mesa).

Land worked with the State Air Resources Board and did a considerable amount of research at the California State Library. He concluded that the proposed Wilson Sunshine Act would improve smog conditions, particularly in areas like the Los Angeles Basin, by shifting the peak traffic hours away from the periods when temperature inversions are most likely to aid in turning auto pollutants into photochemical smog.

It seemed to be a good idea. But he learned that didn't guarantee success. The Sunshine Act on which he had spent so many hours did make it through the Assembly, but it failed in the State Senate.

Not all his legislative experiences were quite so frustrating. He worked on sev-

eral other bills and was involved in preparing the combination newsletters and opinion polls that Wilson sends out to his constituents three times a year. Much of his time was spent answering the many questions a legislator receives by telephone and mail each day.

Land's work was so satisfactory that instead of leaving Sacramento when the internship was over on August 24, he was hired to remain the rest of the summer in Wilson's office.

He hopes to become a member of the legislative branch of government someday. The Beckman internship was useful, Land said, because it gave him a chance to observe the legislative process in action.

"By examining the methods—and the mistakes—of these men, I hope that eventually I can be a better representative," he said.

## Alumni Fund Launched



Absorbing ideas at Leadership Conference while using pencil as a contemplative aid is Everett T. Eiselen, BS '56, MS '57, PhD '62.

(Continued from page 1)

Toru Iura, MS '49, PhD '53, Los Angeles; Stephen H. Garrison, BS '65, MS '66, Hacienda Heights; Glen H. Mitchell, Jr., BS '48, Los Angeles; Jack R. McInturff, MS '62, Canoga Park; A. Allen Ray, BS '35, Arcadia; Francis M. Greenhalgh, BS '41, San Marino; Thomas Vrebalovich, BS '48, MS '49, PhD '54, La Crescenta.

Herbert D. Strong, Jr., BS '39, La Canada; Reuben B. Moulton, BS '57, South Pasadena; Robert P. Sharp, BS '34, MS '35, Altadena; Henrik G. Gronroos, MS '65, Altadena; Perry H. Brown, BS '39, Sierra Madre; Louis N. Bathish, MS '59, Claremont; Gordon McClure, BS '47, Redlands; Raymond G. Richards, BS '40, Glendale; G. Richard Morgan, BS '49; Charles B. Shaw, Jr., BS '47, Westlake Village; Robert G. Rinker, MS '55, PhD '59, Santa Barbara.

Everett T. Eiselen, BS '56, MS '57, PhD '62, Los Gatos; Joseph B. Franzini, BS '42, MS '43, CE '44, Palo Alto; Thomas A. Tisch, BS '61, Saratoga; Thomas M. Menzies, BS '65, Menlo Park; Dean E. Carberry, BS '30, MS '31, San Francisco; Charles E. Auerbach, MS '47, Belvedere; Arnold L. Grossberg, BS '42, Berkeley.

John S. Edwards, Jr., BS '37, Lafayette; Frederick J. Groat, BS '24, Carmichael; Gordon D. Long, BS '60, Portland, Oregon; Martin J. Poggi, BS '37, Bellevue, Washing-

ton; Joseph F. Rominger, BS '41, Scottsdale, Arizona; Harry M. Steele, Jr., BS '46, Tucson, Arizona.

Rolf Engleman, Jr., PhD '59, Los Alamos, New Mexico; David B. MacKenzie, BS '50, Littleton, Colorado; John B. Nelson, BS '44, Salt Lake City, Utah; Robert E. Foss, BS '32, Dallas, Texas; Frank W. Davis, BS '36, Fort Worth, Texas; Sidney Schafer, MS '36, Houston; Paul B. Harris, BS '49, MS '50, Tulsa, Oklahoma.

David L. Douglas, BS '47, PhD '51, Edina, Minnesota; Robert J. Kieckhefer, BS '45, Barrington, Illinois; Cyrus G. Minkler, BS '28, Pleasant Ridge, Michigan; Edward M. Boughton, BS '55, Shaker Heights, Ohio; Charles F. Carstarphen, BS '39, MS '40, Cincinnati, Ohio; Thomas A. Cole, PhD '63, Crawfordsville, Indiana; Ernest B. Wright, PhD '45, Palm Beach, Florida; Merle G. Waugh, BS '45, Silver Springs, Maryland.

Richard A. Wallace, ID '49, Audubon, Pennsylvania; Ulrich Merten, BS '51, Pittsburgh, Pennsylvania; Warren E. Danielson, BS '49, MS '50, PhD '52, Fair Haven, New Jersey; Harry J. Moore, Jr., BS '48, Rye, New York; Garman Harbottle, BS '44, Setauket, New York; Robert H. Dalton, BS '25, MS '26, PhD '28, Corning, New York; Richard R. Dickinson, BS '52, Darien, Connecticut; L. Willard Richards, BS '54, Carlisle, Massachusetts.

## Division Has Three New Administrators

In his reorganization of the division of chemistry and chemical engineering this summer, chairman John D. Baldeschwiler announced the appointment of three men to executive positions:

Fred C. Anson, BS '54, professor of analytical chemistry, will be executive officer for chemistry; John H. Seinfeld, associate professor of chemical engineering, will be acting executive officer for chemical engineering; Raymond B. Starbuck, a former associate personnel director at Princeton University, will be divisional administrative officer.

Anson succeeds Norman Davidson, professor of chemistry, who has served as executive officer for chemistry since 1967 and is returning to full-time professorial duties.

Anson's research involves particular chemical substances which adsorb on the surfaces of metal electrodes where they facilitate the conversion of chemical energy into electrical energy.

In taking over the duties of executive officer for chemical engineering, Seinfeld occupies a position that had been held by C. J. Pings, BS '51, MS '52, PhD '55, vice provost and dean of graduate studies, and professor of chemical engineering and chemical physics.

Seinfeld's research interest is in the behavior of air pollutants in the atmosphere. A member of the faculty for six years, he is the author of more than 50 technical papers and three textbooks.

Starbuck, as administrative officer for the division, will be responsible for all nonacademic operations. From 1950 to 1973 he held a number of administrative and engineering positions with General Dynamics Corp. and Princeton University.

## Arthur Ogawa

Although it was reported that Arthur Ogawa had completed graduate studies at the University of California, Berkeley, he is still doing graduate work there. Meanwhile, he is now senior project engineer of the electronics division of MICON Industries in Oakland.



# PERSONALS

## 1927

GEORGE E. MOORE, professor of physics at the State University of New York, Binghamton, has been granted emeritus status. The establishment of a fund providing for "The George E. Moore Award for Meritorious Achievement in Physics, was announced at a recent retirement party honoring him.

EUGENE H. RIGGS writes, "I have recently retired from the position of senior engineer with the Metropolitan Water District of Southern California. This is my second retirement, as I retired in 1963 from the U.S. Air Force in grade of Colonel."

## 1929

THOMAS H. EVANS, MS '30, formerly dean of the School of Engineering at Fresno State University, retired effective June 1.

## 1931

ROBERT H. GRIFFIN retired from the Federal Power Commission on June 29, after completing 42 years of federal service. He was deputy regional engineer of the Regional Office of the Federal Power Commission in San Francisco from 1957 until his retirement.

## 1933

TRENT R. DAMES and WILLIAM W. MOORE, both MS '34, who head the Los Angeles headquartered soils and foundation engineering firm, Dames & Moore, are featured in the June issue of "Engineering News-Record." The article describes the firm's success in shifting from a traditional emphasis in soils and foundation engineering to handling an increasing amount of environment-oriented work. It states that the firm's business volume grew by about 50 percent as a result of this shift in studies, and that D & W has moved from 22nd to 9th in a list of the top 500 design firms.

## 1940

RANDLOW SMITH, MS '41, has been appointed as assistant general manager-process for Texaco, Inc., in Houston, Texas. He had formerly been an assistant chief engineer with Texaco.

## 1942

JOHN R. ALLAN writes, "Retired September 1972 at age 53 after 30 years with Todd Shipyards Corporation in various naval architecture and plant engineering capacities, including chief engineer, to pursue hobby interests in woodcarving and rare wood collecting. Still do occasional specialized consulting in naval architecture. Moved to country near Medford, Oregon, in June 1973. Became a grandfather on wife's birthday, July 10, 1973, through son Richard (21) in lumber industry, Susanville, California. Son Robert (25) is now farming at Cheshire, Oregon."

DONALD K. JEPHCOTT was installed as the new president of the Structural Engineers of Southern California for 1973-1974. He is the principal engineer of the Structural Safety Section for the southern California area.

## 1944

BARTON B. BEEK, a partner of the Los Angeles law firm of O'Melveny & Myers, has been elected to the board of directors of Lear Siegler, Inc.

IRVING S. REED, PhD '49, professor of electrical engineering and computer science at the University of Southern California, was elected a fellow of the Institute of Electrical and Electronic Engineers for contributions to automatic detection and processing of radar data, multiple error-correcting communication codes, and digital computer design. He had been a senior staff member of the Rand Corporation.

## 1946

TECK A. "TA" WILSON, a vice president of Teledyne, Inc., has moved to Brussels, Belgium, where he will be responsible for the firm's activities in the electronic field in Europe, the Near East, and Africa.

## 1947

JAMES A. LEWIS, senior associate of New World Systems, has co-authored a book entitled *The Systems Analysis Workbook: A Complete Guide To Project Implementation and Control*, along with the president of New World Systems, Inc., Robert Carlsen.

## 1948

CHARLES SUSSKIND, professor of engineering science at the University of California, Berkeley, has written a book entitled *Understanding Technology*, published by Johns Hopkins Press, in which he develops the theme that engineers increasingly must be guided by the highest moral principles.

## 1950

MAX V. MATHEWS, currently director of the Acoustical and Behavioral Research Center of the Bell Telephone Laboratories, was the 1973 recipient of the David Sarnoff Award. The award, established in 1959 through agreement between the RCA Corporation and the American Institute of Electrical Engineers, is presented for outstanding achievement in the field of electronics.



Beek '44



Gilinsky '61

## 1952

JOHN R. ABBOTT, MS, received the Legion of Merit upon his retirement as a U.S. Air Force colonel after more than 31 years' military service.

## 1955

GEORGE EPSTEIN has been appointed a professor at Indiana University, Bloomington. He had formerly been a senior staff scientist for International Telephone and Telegraph.

## 1958

STUART GOFF, MS '59, an assistant professor of mathematics at Keene State College, Keene, New Hampshire, has been named assistant to the college president. He will hold administrative responsibilities centered on coordination of KSC's student advisement program and will continue to teach on a part-time basis.

WILLIAM G. WAGNER, PhD '62, professor of physics and electrical engineering at the University of Southern California since 1966, became dean of the Division of Natural Sciences and Mathematics at USC on August 1.

## 1959

WILLIAM L. KO, MS, PhD '63, a senior research engineer at Southwest Research Institute in San Antonio, Texas, recently exhibited transparent watercolors at San Antonio's main library. Ko began painting at the age of five and received training from well known artists in Taiwan who are now professors at the National Taiwan Academy of Arts. He has won several important awards and has held several one-man shows in America.

## 1960

ALFRED W. HALES, PhD '62, was promoted to a full professorship in the department of mathematics at the University of California, Los Angeles, effective July 1.

## 1961

VICTOR GILINSKY, PhD, with The Rand Corporation since 1961, has become head of Rand's physical sciences department in Santa Monica.

## 1962

DAVID W. DRUMMOND writes, "This has been an eventful year for me. It began in August 1972 when I received my PhD in environmental health from the University of Minnesota. Then on February 12 our first child, David Allan, was born. He is doing beautifully; so is Joy, my wife.

"I am now completing two and a half years at Yale University where I have been a research associate in environmental health studying problems related to improving the urban environment.

"Finally, in September I will become an

assistant professor at Tufts University in Medford, Massachusetts. I'm taking over the coordination of a program of public health courses in the Department of Civil Engineering."

JACK R. McINTURFF, MS, writes, "After four years of computer marketing with IBM, I've become senior consultant with Stever Company, a management consulting firm."

CHARLES F. STEBBINS, AE '63, has graduated from the Armed Forces Staff College at Norfolk, Virginia. The U.S. Air Force major completed 12 months of combat duty in Viet Nam and holds the Meritorious Service Medal, the Bronze Star, and the U.S. Air Force Commendation Medal.

## 1963

ROBERT L. CAUSEY writes, "I have been promoted to associate professor of philosophy at the University of Texas at Austin, where I am primarily engaged in teaching and research in the philosophy of science. This year I have also been awarded an NSF research grant for my project, 'Unity of Science: Requirements and Prospects.' I will be on leave from teaching during the spring semester, 1974. My wife, Sandy, and I have two girls, Britt and Diane. We very much enjoy living in relatively smogless Austin, and we recently bought a new home here."

## 1964

JOHN C. SWONSON, JR., MS, a U.S. Air Force major, writes, "I have graduated from the U.S. Army Command and General Staff College and have been assigned as assistant executive secretary for the Air Force Scientific Advisory Board at the Pentagon."

## 1965

KENNETH L. SERVIS, PhD, an associate professor of chemistry at the University of Southern California, is the recipient of a Fulbright-Hays fellowship to the University of Zagreb in Yugoslavia. He will be in residence at the university from March until June 1974, conducting research on liquid crystals. Servis will begin work in September at the Bell Telephone Laboratories in Murray Hill, New Jersey, on a John Simon Guggenheim Memorial Foundation fellowship. He will be on sabbatical leave from USC for the year.

JOHN J. TURECHEK, a former graduate student at the University of Maryland, writes, "I am presently employed as a 'postdoc' in the Engineering and Electrical Sciences Department at the University of California in Los Angeles and am pursuing an experimental study of high-power laser interaction with a plasma with particular relevance to CTR purposes."

## 1969

JERRY MAR, PhD, has been awarded the Browder J. Thompson Memorial Prize, presented to an author under 30 for the best paper in a publication of the Institute of Electrical and Electronic Engineers. Mar is employed with the bipolar engineering group of Intel Corporation, Santa Clara, California.

## 1970

THOMAS H. DUNNING, JR., PhD, has joined the staff of the Los Alamos Scientific Laboratory of the University of California in Los Alamos, New Mexico. He had been an instructor and research fellow at Caltech.

## 1971

STEVEN C. OFFEN, a first lieutenant in the U.S. Air Force, has been inducted into the "Order of Typhoon Chasers," denoting his first journey into the eye of a typhoon. Offen, a pilot with the 54th Weather Reconnaissance Squadron at Andersen Air Force Base, Guam, flew into his first typhoon in a weather reconnaissance aircraft.

AARON J. OWENS, MS, PhD '73, has been appointed assistant professor of physics at Lake Forest College, Lake Forest, Illinois, effective September 1.

## 1972

NELSON E. BRESTOFF, MS, an associate at Contemporary Research, Inc., in Los Angeles, has been appointed by State Parks Director

William Penn Mott, Jr., to a citizen advisory committee to help plan the development of the Santa Monica Mountains State Park. Brestoff specializes in environmental impact studies at Contemporary Research and is a second-year law student at the University of Southern California Law Center.

GARY W. McLEOD, MS, is a researcher for R & D Associates in Santa Monica. He served a short tour of active duty as a base data automation officer at March Air Force Base in fulfillment of his reserve commitment.

## OBITUARIES

### 1916

MAX H. CARSON on July 2 after a long illness. Retired in 1957, he was a district engineer for the U.S. Geological Survey.

### 1927

FRANK T. GUCKER on March 6. Gucker was a National Research Council Fellow at Caltech from 1925-1927. He was dean of the College of Arts and Sciences at Indiana University for 14 years. He is survived by his wife, Eleanor.

### 1931

HERBERT S. INGHAM on July 26 in New York. He was vice president-engineering of METCO, Inc., until his retirement in 1972. He is survived by his wife, Mary Lou, two sons and a daughter. A talented mathematician, Ingham was the author of *The Theory of Space*, published in 1955, and *Discretus Calculus—A Variable Metric Approach to Physical Theory*, published in 1964.

### 1933

WALTER SCHOLTZ, MS '35, of a heart attack on June 12 in Ventura. He was chairman of the board of directors of the Walter Scholtz Building Corporation prior to his retirement in 1971. He is survived by his wife, Sylvia, a daughter and two sons, including KENNETH P. SCHOLTZ, BS '60. Scholtz was active in community affairs, devoting much of his time in the last few years to studies of air pollution in Ventura County. He served as a Ventura Port District Commissioner from 1961 to 1966.

### 1935

CLAUDE T. SCOTT in 1972. He was the owner of the Oak Knoll Land Company in Oakland.

### 1944

DAVID F. WALKER on May 24. He was an engineer with the Roscoe Moss Company in Los Angeles.

### 1963

MICHAEL J. A. HANNON, MS, in January in Cork, Ireland, where he was employed at the Gas Works House.

## Janet Lansburgh

Janet Lansburgh, a member of the Public Relations and Publications staff at Caltech, died on September 4 of cancer. Following a successful career with RKO and the Walt Disney Studios, Janet joined the Institute staff in 1965, and she contributed immeasurably to the success of the Caltech alumni publications, employee publications, and the news bureau. Most recently she served as the editor of *Inside Caltech* and the *Campus Newsletter*, and she was also an associate editor for *Engineering and Science* and *Caltech News*. She was a member of the Board of Directors of the Caltech Y and of the Pasadena Mental Health Association.

In the course of her activities at the Institute, Janet made many friends among the students and alumni. Caltech will miss not only her contributions to the efforts of the Alumni Association, Public Relations and Publications, and the Caltech Y but also her good humor, charm, and friendliness.

Janet was a native of Ontario, California, and a graduate of UCLA. She is survived by her mother, Mrs. Leota Martin, and two sons, Larry and Brian. At her own request no services were held, and her family has asked that gifts in her memory be made to the Caltech Y.

—James B. Black