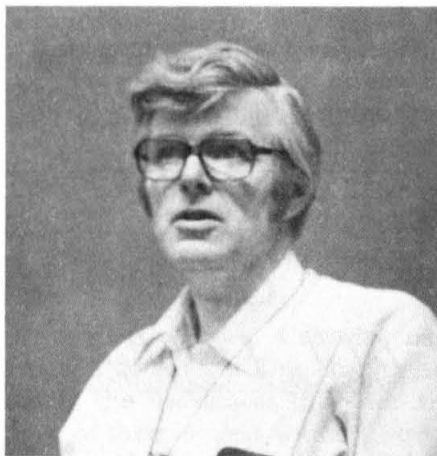


## Alumni Fund pace setters honored

Alumni Fund Area Chairman Sheldon C. Crane, BS '40, and Vern Edwards, BS '50, received top honors at the Alumni Leadership Conference. Crane won a Rookie-of-the-Year award for obtaining gifts from 77 percent of the Caltech graduates living in Hawaii—the highest percentage of participation. Vern Edwards, western Pasadena area chairman, netted his third straight Pro-of-the-Year award for best participation in an area headed by an experienced chairman. Of the alumni in Edwards' area, 68 percent contributed.

Thirteen other area chairmen were recognized for obtaining gifts from more than 50 percent of the alumni in their areas: Andrew B. Campbell, BS '46, San Marino, California, 62 percent; Harold B. Crockett, BS '40, La Cañada, California, 59 percent; Arne Kalm, BS '56, MS '57, Arcadia/Sierra Madre, California, 58 percent; David B. McCarroll, BS '66, El Monte/Covina, California, 57 percent; Paul L. Armstrong, Jr., BS '51, MS '55, Orinda/Moraga, California, 57 percent.



Norman Brooks tells area chairmen about work of the Environmental Quality Laboratory.

William J. Williamson, BS '48, MS '49, Eng '55, the central San Fernando Valley, 54 percent; Thomas V. Tabet, BS '31, MS '32, Marin County and the north coast, California, 54 percent; David L. Hanna, BS '52, Phoenix, 54 percent; Edward S. Peer, BS '31, Downey/Whittier, California, 53 percent; Don E. McFaddin, BS '28, Alhambra/South Pasadena, 52 percent; Harry J. Moore, Jr., BS '48, Westchester County, New York, 52 percent; Donald Stewart, Jr., BS '47, Pomona/Claremont, California, 51 percent.

Area chairmen recognized for high dollar contributions included: George J. Gleghorn, Jr., MS '48, PhD '55, TRW employees, \$57,929; Hanna, \$53,201; Lee T. Carleton, BS '33, Newport/Corona del Mar, California, \$47,594; Delano Brouillette, BS '55, MS '56, San Diego, \$46,045; Edwards,

*Continued on page 3*



Ready to be rolled away to 1144 Lura Street where they will be united, are these portions of the former public relations house. Moved from the site of the Braun Laboratories, the house will be used in its new location for offices of the Environmental Quality Laboratory.

## Construction boom on campus

The unmistakable signs of enterprise are upon us. All over the campus mustard-colored heavy equipment is rolling, giant sewer pipes are lined up on the sidewalks, streets are blocked off, parking lots are disrupted, and the stumps of felled trees and the ghosts of vanished houses are evidence of weeks of activity in preparing the sites for two new major buildings on campus. They are the Braun Laboratories of Cell Biology and Chemistry, and the Thomas J. Watson, Sr., Laboratories of Applied Physics.

Work will begin in November on these projects—the first large-scale construction on campus since 1974, when South Mudd and Beckman Labs were completed. Bids from contractors were received early in October, and the Caltech Board of Trustees is expected to make a final choice at their October 27 meeting in Palm Springs.

The Braun Laboratories, which will incorporate about 82,000 square feet to be used primarily for fundamental cancer and membrane research, will be located between Wilson Avenue on the west, Church Laboratory on the south, and Noyes on the east—overlapping by a few feet a section of what used to be San Pasqual Street.

In clearing this site for Braun—an undertaking that was begun in July—not only did the asphalt paving, curbs, and gutters have to be removed, so also did storm drains, a main city power transmission line, and three houses on campus. Prufrock (graduate student) House was rolled away—in three pieces—and put back together again at 353 S. Wilson. The public relations house went to 1144 Lura Street, for office use by the Environmental Quality Lab. (The public relations staff are in new quarters at 315 S. Hill.) The student coffee

house, alas, was pronounced unfit to be moved. Consequently it was bulldozed to the ground and carted away board-by-brick. The spirit of the coffee house, however, is still going strong at its new location—300 S. Holliston.

The site cleared for the 40,000-square-foot Watson building is immediately north of Steele Laboratory (the two buildings will be connected by a 30-foot enclosed passageway) and about 200 feet east of Beckman Auditorium, straddling what was, until recently, part of Chester Avenue. That onetime thoroughfare into campus has been closed and will soon be absorbed into landscaping and parking lots.

Landscaping and site development have received particular attention in the planning for the two new laboratories, according to Caltech's director of facilities planning, Fred Johnson. Open areas around and between buildings have been designed with an eye to the kind of outdoor charm that has characterized the Caltech campus—patios, interior courts, and parklike areas for strolling, studying, chatting, walking the dog, or just sitting and relaxing.

Almost all steps and stairs between and into buildings have been eliminated. Instead, people-traffic will be able to move between buildings on sloping ramps—"via bicycle, roller skates, by cart or by foot," Johnson says.

An outdoor, multi-level, landscaped bowl between Braun, Noyes, and Church laboratories has also been designed for beauty and pleasure. It could double as a mini-amphitheater for meetings or drama presentations, if not more than 100 people took part.

Parking lots immediately adjacent

*Continued on page 2*

## New Institute relations head: Eugene Wilson

Eugene R. Wilson has been appointed vice president for Institute relations at Caltech. He assumes the post vacated by William H. Corcoran, Institute Professor of Chemical Engineering, who has resumed full-time teaching and research.

In accepting the post Wilson is returning to Caltech, where he served as associate director of development and director of special projects from 1971 to 1977. From that time until his new Caltech appointment, he was associate director of the Atlantic Richfield Foundation.



Eugene R. Wilson

Wilson's new responsibilities encompass managing development activities; government, community, and public relations; publications; alumni relations; and placement.

In naming him to the post, President Marvin L. Goldberger said, "We are delighted to have Gene Wilson back with us at Caltech. Not only will the Institute benefit from his knowledge and expertise, but so will the public sectors that Caltech serves."

Wilson received his BA degree from Bowling Green State University in Ohio and, in 1961, his MS from Syracuse University. He worked in radio and television production and advertising until 1967, when he became director of development and assistant to the president of Bowling Green. He also served as president of the board of directors of the university's alumni association. While at Bowling Green, he was named "Outstanding Young Man" of 1969.

Wilson's recent activities include working with the Southern California Association for Philanthropy, and serving on the organizing committee of the Southern California Center for Non-Profit Management, the Council for Financial Aid to Education, and the Council for the Advancement and Support of Education, District VII.



## For young scientists

## Independent research: the best teacher

By Winifred Veronda

It's SURF Seminar Day and 18 young scientists are describing the results of their research. Their colleagues listen attentively to papers on topics ranging from British constituency politics to the crustal structure under the San Bernardino Mountains to laser doppler velocimetry.

A typical scene at a scientific research center, except that the scientists are undergraduates who range in age from 19 to 22. They've just completed ten weeks of independent work in the Caltech laboratories as participants in the Summer Undergraduate Research Fellowship Program and now they're sharing their findings.

The SURF Program was launched this year with money from the Caltech Prize Scholarship Fund, a fund established in 1976 by an anonymous donor. In diverting a portion of the fund's income away from the traditional scholarships to SURF, the Faculty Committee on Scholarships and Financial Aid was attempting to encourage achievement in independent research. Fredrick H. Shair, professor of chemical engineering, and William P. Schaefer, research associate in chemistry, were the primary architects in SURF's creation. Committee Chairman Forrest D. Nelson, assistant professor of economics, and Jean-Bernard H. Minster, assistant professor of geophysics, completed plans and administered the program.

The applicants were asked to find faculty sponsors willing to provide laboratory space, computer time, supplies, and logistical support, and then to submit proposals for ten-week projects. Eighteen applicants were chosen for this year's pilot program. SURF offered research experience and a stipend; no academic credit was given.

Minster points out that the program was designed to contain all the elements of a professional research project. "The applicants devised their own projects and their proposals were reviewed for funding, just like proposals to the President's Fund or the National Science Foundation," he explains. "The students worked independently in the day-to-day business of doing science, and afterward they described their results at a scientific meeting. And in a number of cases, they'll be publishing papers on their results."

Schaefer believes the program is one of the most exciting educational endeavors at Caltech in recent years. "This is a super program and we want to see it grow," he says. "It holds tremendous potential for distinguishing Caltech as a place where undergraduates can become involved in creative research at an early age. I'd like to see it quadruple in size; I believe 80 to 100 of our undergraduates could profit from it."

He hopes that funding for the program will expand substantially next year so that "we can get the best undergraduates on campus involved in it." These students, he adds, may not necessarily be those with the best GPA's, but rather those with the greatest talent for re-

search and the most creativity in science.

A key advantage of this program over others that have offered summer research opportunities to Caltech students is the adequacy of its funding. "All of the others suffered because they didn't pay the students enough," he explains. "Students accepting financial aid are expected to save over \$800 for college expenses during the summer. By the time they've paid for their room and board, it's impossible for them to

presented by SURF. He believes that exposure to independent research often improves students' morale and gives them important insight into the reasons behind the heavy dose of theoretical material that their professors ladle out to them.

"We ask our undergraduates to do a lot of studying, and sometimes they don't see the point of all of it," he says. "But when they actually get involved in research, then they understand. Besides, doing research is exciting, and when they discover this

things Caltech does best is to offer this opportunity, and SURF is a good means to do so.

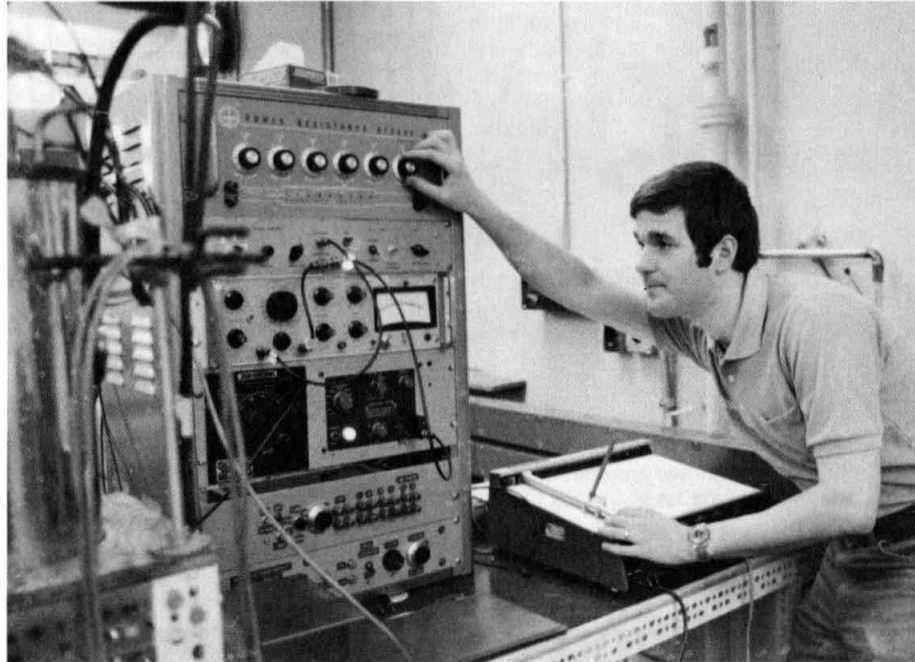
"My student's project this summer has been self-contained, but it's also complemented the work in my lab. It provided a piece of information that will be useful to me and my graduate students," he adds.

So that the participants would have the sense of being part of a group, they met once a week during the ten weeks of the program for a lunch where one of the students' faculty sponsors discussed his work. At the final luncheon, Peter Dervan, assistant professor of chemistry, talked about how a small molecule recognizes and binds itself to a large molecule. His lecture was punctuated by questions from students ready to debate his conclusions.

"Teachers at Caltech get used to being challenged by their students," one faculty member in the audience commented later. "That's one of the pleasures of working here. The students are very competent, and they often teach you."

After the talk the group dined on quiche, cold cuts, raw vegetables, and cookies supplied by the students. "Just as I begin to feel comfortable with my information, I walk into the lab and realize how little I know," one member remarked over her luncheon plate, while another SURF participant commented, "Research is fun but it's frustrating at times; it goes slower than you think it should. But this summer has really given me insight into what a professor's life is like, and a clearer idea about the kind of work I want to do in the future."

Then the luncheon concluded as 18 young scientists—their projects beckoning—headed back to busy afternoons in the laboratory.



Douglas Whiting, a senior majoring in applied physics, uses an AC bridge to measure the temperature at which the alloy he is studying reaches a superconducting state (the point at which it becomes a perfect conductor for electricity). Whiting's faculty sponsor in the SURF program was William L. Johnson, assistant professor of materials science.

save this much on the stipends that most of the other programs have offered, so many good students have been excluded. But the stipends from this program are high enough to meet the summer savings requirement."

Professor of Chemistry Norman Davidson agrees about the importance of the research opportunities

for themselves, they become more motivated in all of their work."

Professor of Environmental Engineering Science James J. Morgan agrees. "Research offers the most meaningful contact, and the most natural kind of interaction, between students and faculty members because they work together on a common project," he says. "One of the

## Finally . . . a Fansome finale?

*The antics of Alluvial Fansome, an elusive Fleming House resident who receives mail and throws parties but is never seen, have been chronicled in previous Caltech News issues, but the mystery of his origins was never resolved, in spite of letters from numerous alumni who knew a part of his history. Now, at last, his creators have decided to step forward and confess:*

Editor:

We would definitely like to settle the matter of Alluvial O. Fansome's birth. In the fall term of 1957, the undersigned were living in Fleming House. We formed a Quadruple Alliance, slept four beds in one room in upper alley one, and used room 10 as a social room. One day during this period, Alluvial was born in room 10, as described in Gordon Hughes' letter. Gordon wanted to send for a *Secrets of Cosmic Consciousness* book, but was reluctant to use his own name. A topic in the sophomore Introduction to Geology course covered alluvial fans, hence his name.

Incidentally, it was originally Fansome, with an "n". The vagaries of mailing lists must have transmuted it.

We would like to propose a plaque for the door of room 10, commemorating his birth. It might say, "Birth Place of Alluvial O. Fansome. Fall 1957. Caltech's Eternal Undergraduate."

(Gordon Hughes, BS '59, MS '60, PhD '64, lives in Sherman Oaks and is a principal scientist with Xerox.)

(Bruce Allesina, BS '59, MS '60, is an engineering supervisor with Boeing in Bellevue, Washington.)

(Kirk Polson, BS '59, is a division staff manager with Pacific Telephone. He lives in Clayton, California.)

(Robert Pailthorp, BS '59, is a project engineer with Electro Scientific Industries in Portland.)

Anyone care to form a committee to raise money for a commemorative plaque?

## Construction boom

Continued from page 1

to the new building sites will be in various states of change during the two years of construction ahead. Eventually, however, parking space will be expanded, resurfaced, and newly lighted.

So, please to begin. Soon the first shovelfull of dirt will be dug, fences will go up, excavating will proceed, cement will be poured, the men in hard hats will climb out of their pickups, the cranes will turn, and the sidewalk superintendents will assign themselves to their posts. Once again the Caltech construction show will go on—this time a double feature.





Alumni Fund pace setters honored for special achievement, and Caltech's new vice president for Institute relations, at the Leadership Conference: Dick Smyth, Dave McCarroll, Paul Armstrong, Lee Carleton, Frank Fleck, Gene Wilson, Vern Edwards, Sheldon Crane, Delano Brouillette, Harry Moore, Harold Crockett, and Arne Kalm.

## Fund leaders lauded at alumni conference

Continued from page 1

\$37,170; Allan Goldberg, BS '57, MS '58, Laguna Beach, California, \$33,230; Joseph Dobrowolski, BS '49, Altadena, \$31,995; Frank Fleck, BS '42, east Pasadena, \$31,902; Campbell, \$29,241; Thor Hanson, BS '64, Houston, \$24,413; Rayman Y. Wong, BS '70, Oakland/Berkeley, \$24,038; Steven D. Hall, BS '65, MS '66, Connecticut, \$23,998; Armstrong, \$20,907; and the late Ernest Sechler, BS '28, MS '30, PhD '34, the Caltech faculty and staff, \$20,040. Richard K. Smyth, BS '51, national Alumni Fund chairman for 1978-79, presented the awards.

Arne Kalm, 1979-80 national Fund chairman, was master of ceremonies for a day-long session of the Leadership Conference with talks on Caltech research and activities, and advice on how to present Caltech's story and its needs to other alumni. At lunch, the area chairmen saw a slide presentation by Albert R. Hibbs, BS '45, PhD '55, manager for program and planning coordination at JPL, on the laboratory's role in exploration of the solar system via unmanned space probes. Hibbs said a portion of the Alumni Fund helps in these efforts because the Caltech President's Fund may provide seed money for space-oriented research at JPL.

The alumni heard ASCIT President Ray Beausoleil and Graduate Student Council President Patrick Frantz on student life, and senior Lynn Hildemann about women in the student body. Alluding to the ratio of "one girl for every eight guys," Hildemann said this experience provides a good orientation for future women scientists and engineers because "there are many more men than women in science and engineering today. At Caltech you get used to interacting with a lot of fellows and to the kind of men-women ratio that you'll encounter in your careers."

Vice President for Student Affairs Ray D. Owen noted that there will be

104 women in the Caltech student body this year. He said that the retention rate and grade point average for women students at the Institute has been a little better than that for men. Contributions to the Alumni Fund are absolutely essential to student activities, he also stressed.

In other presentations, EQL Director Norman Brooks talked about environmental and energy management research at the Environmental Quality Laboratory and Caltech's assistant treasurer, Henry Tanner, described some of the Alumni Fund's uses. Jiin-Jen Lee, PhD '70, said Caltech alumni in Taiwan have been successful in raising \$100,000 for the Institute.

## Track, fields sport new look

Caltech athletes are enjoying the benefits this fall of a major rehabilitation of the football and baseball fields and the track.

Warren G. Emery, director of physical education and athletics, explained that the football field has been recontoured and resurfaced for better drainage, and is getting a new turf. While the turf is getting established this year, alternate fields will be sought for the games.

Meanwhile, the baseball infield has been resurfaced with a blend of crushed brick and clay, and infield grass replaced with sod. A new automatic drip watering system will allow the grass to be better maintained.

The track also sports a new look with a surface of crushed brick and clay for better running and more efficient drainage. A curb has been installed along the south side and the east and west ends to prevent erosion.

Robert Davies

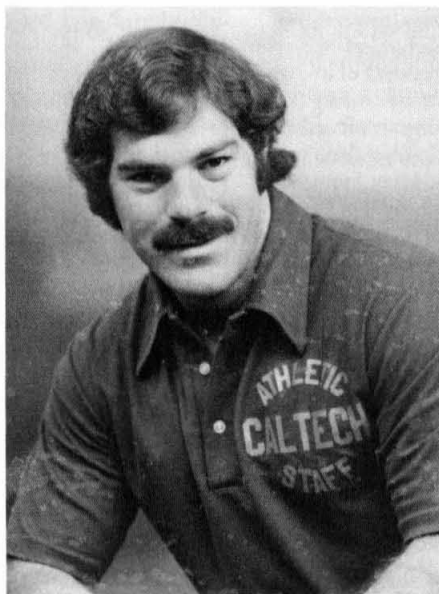
## Thinking men's coach tackles Tech football

Robert B. Davies, Caltech's new football and wrestling coach, has joined the Beavers as they ride the crest of their longest winning streak in several years: three games. Davies wants to extend that streak, and he's going for a winning season. He's also philosophical about the long-term prospects at a school where football players' IQs often surpass their weights.

"I agree with Caltech's attitude about athletics," he says. "As a coach, you win when you bring team members up to their potential. The football field is as much a laboratory as any other lab on campus—a laboratory of human performance. So we'll be looking for individual improvement—and for our players to have some fun. We'll also play to win."

Davies coached varsity football and wrestling at Springfield College, Massachusetts, before coming to Caltech this summer. In a pre-season interview, he said he expects about 26 players to come out for practice. "We'll have two experienced quarterbacks and some good returning linemen," he says. "But we lost a lot of our experienced players last spring.

Overall, our team will be young and inexperienced."



Robert B. Davies

Davies said he plans to run a multiple offensive and a multiple defensive scheme. "We'll try to gain blocking angles with our multiple formations and defensively we'll stunt to try and confuse our opponents' blocking," he said. In this effort he'll work with Dean Bond, a veteran of

the Caltech athletic department for 14 years who will coach offensive backs.

Although Caltech doesn't recruit specifically for athletic ability, Davies believes it may be possible to attract some students who have the intellectual capacity that Caltech requires—and football skills as well. To this end he's writing a number of high school coaches, asking them to be on the lookout for athletes who are strong in science and math. "There may be some capable players out there who meet our academic requirements but hadn't thought about coming here," he says, "And if there are, I'd like them to know about us."

Warren Emery, Caltech's director of physical education and athletics, describes Davies as "an enthusiastic, well-organized young man. If the Caltech students put the same enthusiasm into their efforts that he does, then we'll have a winning team."

And that will suit Davies just fine. Familiar with the tradition of a bonfire on the local streets after a football victory, he says, "We hope there'll be a lot of smoke in the Pasadena skies this fall."

## Goldberger on energy goals

The United States will have to develop every potential major energy source to come to grips with the energy crisis; otherwise, the burden on the remaining sources will become too great to balance our needs, President Marvin L. Goldberger said in his address at the Alumni Leadership Conference. Speaking on "Expanding Our Technological Options in Energy," Goldberger said that the United States should focus on these objectives:

- Conservation of energy and improvements in energy efficiency.
- Aggressive development of our coal and oil shale resources.
- Increased reliance on nuclear power for electricity.
- Continued commitment to fusion as an energy resource for the 21st century.
- Accelerated research in solar, biomass, and geothermal energy.
- Aggressive domestic oil and gas exploration and production.
- Development and use of enhanced petroleum recovery techniques.

Goldberger noted that in the coming decades the United States will have to meet a growing need for energy—and one that can only partially be curbed through conservation. It has been estimated that by the year 2000 we will need about 45 percent more energy than we are using now, he pointed out.

"We have the capacity and the resources to meet this challenge—for our own good and that of the world," he said. "I feel optimistic; I believe we will expend the effort—and make the sacrifices—to do so."

## ALUMNI ACTIVITIES

### December 7

San Diego chapter meeting, the Riviera Room, Little America Westgate Hotel. No-host cocktails, 6:00 p.m.; dinner, 7:00 p.m. President Marvin L. Goldberger will be the speaker. For reservations, contact Dee Brouillette, BS 55, MS '56, at 714-277-8900.

### January 1

Rose Parade Special. 7:30-9:30 a.m. Continental breakfast in the Athenaeum; 9-11:15 a.m., walk to Colorado Boulevard to view the 91st Annual Tournament of Roses from reserved grandstand seats; 12 noon, buffet lunch in the Athenaeum. For those with tickets to the game, a box lunch and bus transportation to the Rose Bowl will be provided.

## CALTECH NEWS

Vol. 13 No. 7

October, 1979

Issued nine times a year (Sept., Oct., Nov., Dec., Feb., Mar., April, June, and July) and published by the California Institute of Technology and the Alumni Association, 1201 East California Blvd., Pasadena, California 91125.

Second class postage paid at Pasadena, California.

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Photographer: Richard Kee.

USPC 085-640



# PERSONALS

1929

EMERSON M. PUGH, PhD, professor of physics, emeritus, at Carnegie-Mellon University in Pittsburgh, has published his autobiography, *Wyoming Scientist—Horses to Space Ships*, through Exposition Press.

1930

WARREN ARNQUIST, PhD, and his wife, Grace, spent a week at Whitman College, Walla Walla, to observe the February eclipse (his eighth solar eclipse "expedition"). Although clouds prevented a look at the eclipse, Arnquist gave four lectures, based on his previous eclipse experiences, as part of a public awareness program at the college. Arnquist is a visiting research associate in the UCLA astronomy department.

1931

MARVIN W. HALL, who lives in San Marcos, California, is a volunteer assistant to the area IX field coordinator of a driver improvement pilot program developed for the U.S. Department of Transportation for persons 55 and older in Southern California.

1936

ARTHUR E. ISHAM II has retired from Hughes Aircraft Co., where he was a member of the technical staff, and has purchased 23.5 acres in west central Arkansas, near the Arkansas River. He writes that he and his wife "have built a small house and plan to raise a few cattle, hunt and fish, and do a little traveling. There is never a dull moment."

1937

ALAN GROBECKER, MS '41, writes, "After five years as director of the climatic impact assessment program (CIAP) of the Department of Transportation, and a three-year term as director of the Division of Atmospheric Sciences of the National Science Foundation, I expect now to devote my full attention to the development of atmospheric science." Grobecker is a visiting scholar at UCLA's Institute of Geophysics and Planetary Physics.

1939

E. E. "GULLY" GULLEKSON, MS, president of Gullekson Associates in Foster City, California, received the Sioux Award from the University of North Dakota in Grand Forks. The award is the highest award the school's alumni association presents to former students for outstanding career and public service accomplishments. Gullekson's award was in recognition of his contributions to the petroleum industry. He retired from Standard Oil Company of California in 1977, after 38 years with the firm.

1941

JAYSON LOAM (Stanley Sohler), executive director of Aqua Thermal Association in Van Nuys, California, writes that he has written a book, *Hot Springs and Pools of the Southwest*.

RICHARD S. SHEVELL, MS, Eng '42, reports that "after 28 years at Douglas, serving as chief of aerodynamics and director of advanced design, I became a professor of aeronautics at Stanford University, starting in 1971. I am still at Stanford and am enjoying my second career."

CLIFFORD TRUESDELL, MS '42, professor in the department of rational mechanics at Johns Hopkins, received an honorary doctorate in physics from the University of Uppsala, Sweden, on June 6. On November 30 he will receive an honorary doctorate in mathematics and natural science from the University of Basel, Switzerland. He also holds honorary doctorates from Milan Polytechnic, Italy, and Tulane, New Orleans.

1942

JACK C. HOAGLAND, of Santa Ana, California, has been elected chairman of the 12,000-member Los Angeles Council of the Institute of Electrical and Electronic Engineers. Hoagland is responsible for digital communication and data systems for the space orbiter and satellite programs at Rockwell International, where he recently received the engineer of the month award.

ENVER M. MURADOGLU (Enver M. Muratzade), Eng, has moved from Istanbul, Turkey, to Scottsdale, Arizona, where he is executive vice president of Conduccion Corporation.

1943

ALVIN R. EATON, MS, has been appointed assistant director of the applied physics lab at The Johns Hopkins University.

JAMES H. LEONARD, MS, has been elected vice president of refining by Beacon Oil Company in Hanford, California.

1944

ROBERT G. HALLWACHS, MS, retired as dean of the College of Humanities and Social Sciences at Drexel University in Philadelphia on September 1.

FRED MORRIS reports: "After spending fourteen years on the 'polluted Potomac' in Washington, D.C., my wife (Nancy) and I have returned to our native California. I am enjoying picking up my professional life here and am emphasizing technical assistance and technology transfer efforts in areas of telecommunications and electronics with Asian and Pacific Basin nations. I serve as president and chief executive of Amherst Systems Ltd. (Menlo Park, California) and president and chairman of Tele-Sciences Corporation (Portola Valley, California)."

1950

GIBSON OAKES, MS '51, sends us this update: "Another relocation by the Oakes family is nearing completion. My wife, Mary Louise, and I just bought the ideal home, on over two acres, in Seaview on the Long Beach (Washington) peninsula. This, we insist, will be our final move. Word just reached me from Olympia, Washington, that I passed the professional engineer's exam in mechanical engineering. So I'm now registered in ME and CE in Washington State, as well as in California, and can hang out my shingle for both disciplines, legally."

1953

WILLIAM T. BEALE, MS, writes from Athens, Ohio, "After 15 years of effort am finally putting in production my own free piston Stirling Engines for water pumping, electricity generation and cooling. They will be sold by my company, Sunpower, Inc."

1954

EDWARD J. GAUSS informs us that "Becky and I just finished a 10,000 mile trip in my little airplane. Stops included the 25th class reunion at Caltech. JOHN GOETTEN ('54) briefed us on Mexico flying and we spent several days flying in Baja." The Gausses live in Fairbanks, Alaska, where he is the president of the Fat Moose Flight School.

1955

FRANCESCO BEUF is finishing his residency in pediatrics this year at Children's Hospital of Philadelphia and will enter private practice in Bryn Mawr, Pennsylvania, this summer. He will also become the director of neonatology at Bryn Mawr Hospital.

1959

JOEL GREENBERG reports from Santa Monica, California, that he is a registered investment adviser and publishes a stock market advisory letter called "The Phenomenist," soon to be changed to "Indicator Research."

1961

RICHARD T. BROCKMEIER, MS, PhD '66, of Holland, Michigan, has been elected chairman of the board of directors of the American Diabetes Association, Michigan Affiliate.

1964

RICHARD R. BURGESS reports the birth of his son, Andreas, in June. Burgess is an associate professor of oncology at the McArdle Laboratory for Cancer Research at the University of Wisconsin and is working on the molecular biology of RNA synthesis, studying RNA polymerases from *E. coli* and wheat germ.

CARTER G. NAYLOR and his wife, Heidi, of Austin, Texas, participate in the host family program of the University of Texas' International Hospitality Committee, an organization that extends friendship to foreign visitors. Naylor is a research chemist with Jefferson Chemical (part of Texaco).

1966

RODNEY K. BERGMAN has joined Marcus & Millichap, Inc., an investment and real estate brokerage in Palo Alto, after working for 11 years for the Watkins-Johnson Company. Bergman and his wife live in Los Altos, California, with their six children.

LEONARD A. FISHER announces the formation of LAFCO, an energy systems engineering company in San Francisco.

1970

LEONARD DOBERNE, a postdoctoral endocrine and metabolism fellow at the Stanford University Medical Center, is doing research on adult onset diabetes and obesity in particular reference to insulin sensitivity, resistance and the relationships with triglyceride (fat) metabolism—as well as general endocrinology.

REUBEN EPSTEIN reports that he and his wife, Jody, and two-year-old son, Aaron, live in Rochester, New York, where he is a research associate at the Laboratory for Laser Energetics of the University of Rochester.

1971

STEVEN M. MENKUS reports, "After six years with the South Coast Air Quality Management District (L. A. County APCD) I left to take a position explaining what the SCAQMD had been doing with its new rules, etc. Last February I married Royce, another L. A. native, and expect to receive an MBA degree in December from the California State University, Los Angeles." Menkus is manager of health, safety and environment, for ARCO Transportation Co. (Atlantic Richfield Co.).

1972

ROBERT DULLIEN received his MBA from Harvard in June "after a brief career in earthquake engineering and another one in energy economics." He works for a company that uses computers in fundraising work for not-for-profit organizations and for other organiza-

tions' recordkeeping. He says that he hopes to meet people interested in co-founding a company that will use mini- and micro-computers to satisfy the needs of specific market segments. Dullien and his wife, Vivian, live in Cambridge, Massachusetts.

JEFF HURN writes that "after being a hippie, attempting to eke out a living writing and photographing for several years, I've rebounded to the other end of the spectrum and am now running the art, advertising, and technical writing department of an electronics firm. I'm working with friends, doing the stuff I've played with for years—filmmaking, slide shows and so on." Hurn works for Megatest, Inc., a company in Mountain View, California, that was founded three years ago by STEVE BISSET, '73, and HOWARD MARSHALL, '70. Hurn says that the company employs about 12 Techers (out of 85 total employees) including ROBIN ADLER, '70, JOHN HELM, '74, DAVE STANDAGE, '73, and STEVE WATKINS, '73.

1974

RONALD I. TRUST, PhD, sends an update of his activities. After five years in medicinal chemistry research with Lederle Laboratories, he joined the Medical Product and Process Development Section, International, and is now coordinating clinical materials worldwide for Cyanamid's Medical Research Division. He, his wife Arlene, daughter Phyllis, and son Paul, live in Monsey, New York.

## OBITUARIES

1917

J. PAUL YOUTZ, on August 8 in Orinda, California, of a heart attack. Before his retirement in 1965, Youtz had been a patent officer and business manager for Caltech's Research Foundation. He is survived by his wife, Elsie, a daughter, Dorothy, a son, John, and six grandchildren.

1925

ROBERT W. FULWIDER, on July 25. He was a patent lawyer and partner in the Los Angeles firm of Fulwider, Patton, Rieber, Lee & Utecht.

1928

ALBERT C. HODGES, PhD, on August 9, in Media, Pennsylvania. His daughter, Elizabeth, writes, "He had always enjoyed his association with Caltech and spoke admiringly about it."

1930

S. ERIC HOWSE, MS '33, on June 9 in Glendale, California. He was associated with the Technicolor Motion Picture Corporation from 1933 and was chief engineer when he retired in 1966. He is survived by his wife, Louise, and a son, J. Stephen.

1935

WALLACE J. S. JOHNSON, on August 12. He was the founder, in 1946, of Up-Right Scaffolds, a company that pioneered in the manufacture of portable aluminum scaffolds and radio towers. He also developed and built mechanical harvesters for vineyards. He was president of Redwood Ranch and Vineyard, an 800-acre family farm in Healdsburg, California. Johnson served as mayor of Berkeley, California, from 1963 to 1971. He was active in other Berkeley community activities—he was past president of the Rotary Club and of the Berkeley Boy Scouts, and, in 1967, received an award as Berkeley's Most Useful Citizen. Johnson was a member of The Caltech Associates. He is survived by his wife, Marion, a son, Steven, two daughters, Patricia Staten and Lindy Johnson, and nine grandchildren.

1936

LOUIS G. DUNN, MS '37, MS '38, PhD '40, on August 1 in San Andreas, California. He was a key figure in the development of the Jet Propulsion Laboratory during its first dozen years and was its director from 1947 to 1954. He joined TRW in 1954, first as executive vice president and later president of the firm's Space Technology Laboratories. Dunn helped pioneer much of the nation's early space technology and played an important role in formulating the Air Force's ballistic missile program, which included the Thor, Atlas, Titan, and Minuteman missiles. In 1974 he was presented Caltech's Distinguished Alumnus Award. He is survived by his wife, Ruth, three daughters, and two sons.

ROBERT A. McINTYRE, MS '38, on August 11 of a heart attack, at his home in Los Angeles. He was vice president of Ametek, Inc.

1940

W. DAWKINS ESPY. He was a self-employed consulting engineer and lived in Beverly Hills.

BERNARD K. HAFFNER, on August 1 of an aneurysm. Haffner was an industrial specialist in the office of business policy analysis for the Department of Commerce in Washington, D.C. An expert on minerals, mining, and metal processing, he received the Commerce Department's Silver Medal in 1976 in recognition of his contributions in the field of environmental policy and analysis. Survivors include his wife, Ann, a son, John, two daughters, Julie Renard and Jeanette Turnbull, and two grandchildren.

1959

WILLIAM Y. WONG, MS '60, on July 15 of cancer. He was a research engineer at Northrop Corporation in Hawthorne, California. He is survived by his wife, Lily, and one son, Bennett. Donations may be sent to the Surgical Oncology Fund, UCLA Foundation, 924 Westwood Blvd., Los Angeles, CA 90024.

## Wanted: Caltech legends

Caltech is unique in many ways—among them, in the ingenuity manifested in undergraduate pranks. The Rose Bowl card stunt, a Model T assembled in room 16 of Ricketts House, the David R. Smith Memorial Ramp . . . these and hundreds of others make up the legends of Caltech, handed down by word of mouth to succeeding generations.

But oral history has its limitations and now three alumni—Willard A.

Dodge, Jr., BS '44, MS '47; Harrison W. Sigworth, BS '44; and Adrian C. Smith, Jr., BS '70—are preparing to collect these accounts and publish them in a book, *Legends of Caltech*. Alumni are invited to contribute to this volume by sending written accounts, tapes, clippings, or photos to: Willard A. Dodge, Jr., P.O. Box 207, San Rafael, California, 94902. Contributors will receive a free volume of the book.