

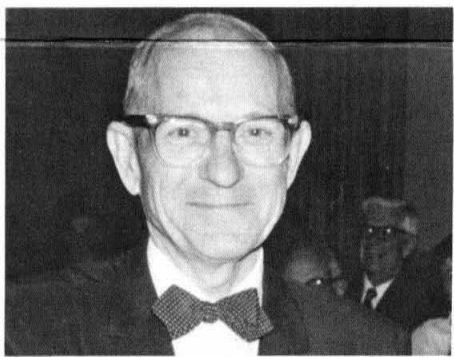
PUBLISHED FOR ALUMNI AND FRIENDS OF THE CALIFORNIA INSTITUTE OF TECHNOLOGY

## Donald Clark's death closes a 50-year commitment

Donald S. Clark, BS '29, MS '30, PhD '34, professor of physical metallurgy, emeritus, and secretary emeritus of the Caltech Alumni Association, died October 2. He had been ill with vascular disease.

An internationally known metallurgist, Clark had been associated with Caltech for more than half a century. In addition to his teaching and research and his activities on many faculty committees, he was at various times director of placements, resident associate in Dabney House, secretary of the Caltech Alumni Association, vice chairman of the faculty and faculty board, faculty secretary in applied mechanics, materials science, and mechanical engineering, and *Engineering & Science* magazine editor.

According to a story — perhaps apocryphal — a visitor once noted the many positions held on campus by persons named Donald Clark and concluded that the Institute employed several staff members of that name. He expressed sympathy for the confusion that must result from such a coin-



Donald S. Clark

cidence. But there was only one Donald Clark; efficient, organized, and able to handle staggering amounts of work, he attracted duties like a magnet.

Clark once calculated that before his retirement in 1975 he had taught 3,577 undergraduates and 798 graduate students. Many of them remember him as a personal friend and counselor.

After joining the faculty in 1934, Clark quickly earned a reputation as a demanding instructor. His materials and processes class, required of all engineers for many years, was dubbed "Memory 3" because of the volume of knowledge necessary to survive it. But later his students forgave him for the rigorous demands he had imposed.

"In our careers we found ourselves repeatedly using what he had taught us and increasingly we appreciated his contribution," said David S. Wood, BS '41, MS '46, PhD '49, Caltech professor of materials science, a former student of Clark's.

His unflinching interest in Caltech students — both in the quality of their educations and in them as individuals — was one of his trademarks. Many times he offered personal assistance to students — through loans or direct appeals to the Institute for help with a problem.

"His death is a tremendous loss to Caltech, for he was an inspiration to generations of students — both through his teaching and as a person who genuinely cared about them," said Wood. "He kept in touch with many alumni throughout their lives and his willingness to give assistance never lessened."

His concern for the quality of Caltech graduates' work was as deep rooted as was his interest in them as people. "Clark strongly believed that Caltech graduates should be able to apply their knowledge in making practical contributions to the society they entered," said Alfred Schaff, Jr., BS '41, assistant to the president, AMETEC, Inc., and a close friend of Clark's for many years. "He didn't believe that any Caltech alumnus should live in an ivory tower."

Schaff also recalls Clark's willingness to help those he trusted — a willingness infused with the practicality that was a Clark characteristic. "Many times he lent money to an alumnus on the basis of a phone call, providing the loan was for a good cause," Schaff said. "He wouldn't lend 10 cents for something that wasn't sensible."

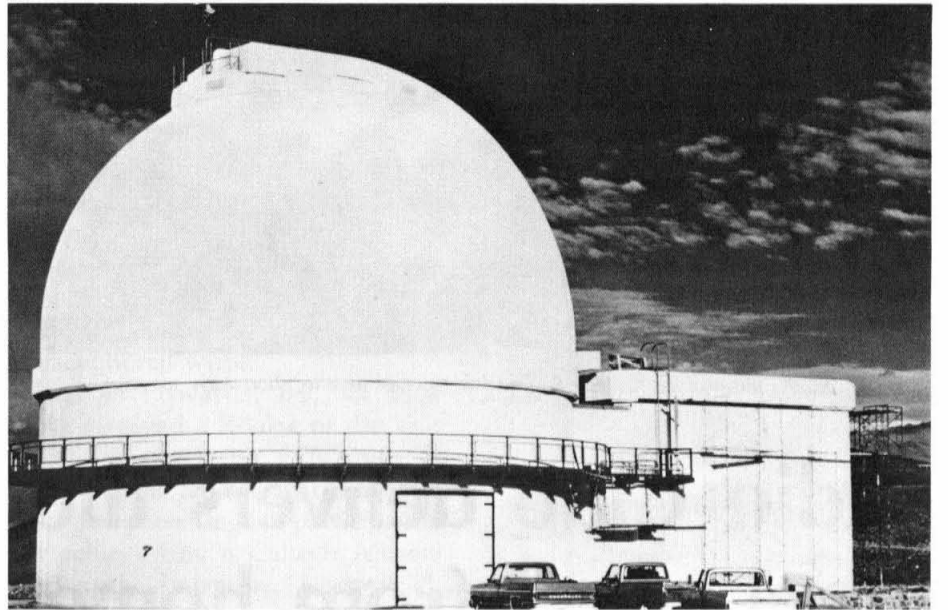
William H. Corcoran, BS '41, MS '42, PhD '48, vice president for Institute relations and professor of chemical engineering, knew Clark when he was a resident associate in Dabney House and Corcoran was a Caltech student. "He made us aware of our responsibilities to ourselves and other people and in this way he made us proud to be ourselves," Corcoran said. "He didn't need to say anything in order to accomplish this. He simply conducted himself as a thoughtful, useful, concerned human being."

"He devoted himself fully to the Institute. He focused totally on its welfare. His influence and his concern over 50 years have pervaded its structure."

Well remembered professionally for his work in physical metallurgy, Clark won an international reputation for his research on the dynamic behavior of metals and alloys. He was the author of two textbooks, *Engineering Materials and Processes* and *Physical Metallurgy for Engineers*, in addition to many scientific papers.

He won several awards, including the Richard L. Templin Award of the American Society of Testing and Materials and the Charles B. Dudley Medal of ASTM. He was president of the American Society for Metals, president of the executive council and the association of Tau Beta Pi (the national engineering honor society), and active in other professional societies.

On October 12 members of the Caltech community gathered for a memorial service to Clark in Dabney Lounge. There they reminisced a bit and expressed quiet gratitude for an extraordinary individual — and for his commitment to the Institute that spanned half a century.



The du Pont telescope building at the Hale Observatories' newly dedicated Las Campanas Observatory on the central Chilean coast.

To probe southern skies

## Hale Observatories dedicate new Chilean observation site

The Hale Observatories' facilities at Palomar and Mount Wilson have been joined by a third observatory offering superb access to the skies of the Southern hemisphere: the Las Campanas Observatory in the rugged mountains near the coast of central Chile.

The new observatory is one of the two largest in the Southern hemisphere to be owned and administered by institutions in the United States. It offers access to the stars through two major telescopes: the 100-inch Irénée du Pont telescope completed in 1976 and a 40-inch telescope in operation since 1971.

The du Pont telescope was made possible through a \$1,500,000 gift from Mr. and Mrs. Crawford H. Greenewalt and was named for Mrs. Greenewalt's father. The 40-inch telescope was made possible by a substantial gift from Miss Henrietta H. Swope, a member of the scientific staff of the Hale Observatories for many years. By her wish, the gift remained anonymous for several years.

Dedication ceremonies for the new observatory and its facilities were held on October 6; representatives of the Carnegie Institution of Washington and of Caltech flew south to join representatives of the Chilean government and educational community for the dedication.

The three observatories — Palomar, Mt. Wilson, and Las Campanas — will be operated as a group with a combined scientific staff, under the joint sponsorship of Caltech and the Carnegie Institution of Washington.

The dedication ceremonies were the culmination of an interest in Southern hemisphere astronomy on the part of the Carnegie Institution of Washington that dates back to 1903. In that year trustees of the Institution seriously considered establishing a major observatory south of the equator, but they set the project aside in favor of an observatory at Mt. Wilson. Later, their interest was resumed and serious planning was begun in

1961 with the search for a suitable southern site.

After they studied possible locations in Chile, New Zealand, Australia, and South Africa, the site seekers concluded in 1968 that the Chilean coastal mountains offered unsurpassed observing conditions: clear skies, freedom from dust and artificial lights, a good water supply, stable atmospheric conditions, and prospects for a good relationship with the Chilean government.

The government of Chile has recognized the Institution as an international organization and has cooperated fully in the development of the observatory, according to Horace W. Babcock, director of the Hale Observatories. Dr. Babcock said a portion of observing time at the site is being reserved for Chilean astronomers.

The late Ira Bowen of the Hale Observatories was largely responsible for the optical design of both the 40- and the 100-inch telescopes. On the Irénée du Pont telescope he worked in collaboration with Hale Observatories staff member Arthur Vaughan.

The new facility has come into being at an exciting time in the history of astronomy, according to Dr. Babcock.

"Observational astronomy is a growing field," he said. "The Mt. Wilson telescope initiated tremendous advances in the 1920's. This period of growth accelerated in the 1940's with the completion of Palomar. The subject is continuing to expand and to attract talented investigators, including many physicists who have moved into astrophysics and astronomy. Exciting discoveries are being made about quasars, galaxies, and the nature of the universe."

"The Hale Observatories have been centrally involved in these discoveries. With its modern instruments and its fine access to the southern skies, Las Campanas will make it possible for us to expand our contributions in the future."



Morris Jones of the Caltech Radio Club receives another short-wave message.

## Radio Club delivers the latest news from home

About 30 times a month, members of the local community receive calls from Caltech students, conveying messages relayed via short-wave radio: "Happy birthday from your family in Oswego, New York," or, on a less happy note, "Your father is ill. Please call us at once."

These messages are relayed as a public service by Station W6UE — the Caltech Amateur Radio Club, which is one of the oldest groups of its kind in southern California. The club was organized in 1919 when the U.S. Navy lifted its ban on amateur transmission, and it has been active ever since.

"We believe that relaying messages from other amateur operators creates goodwill for Caltech," said club president Morris Jones, a junior from Ruddock House, "and brings us satisfaction, as well."

But delivering the messages sometimes causes confusion. Jones recalls the time he telephoned a woman, introduced himself, and tried to give her a message from a member of her family in the East. She responded crisply, "I don't want any," and hung up. Jones finally sent her the information by mail.

Although most of the club's 15 members are freshmen and sophomores, some of them already are old hands at the radio game. Kevin Berasley, a sophomore, is manager for the Southern California Network of the National Traffic System for Emergency Preparedness. Jones was an active amateur radio enthusiast for four years in Memphis, Tennessee, and was manager of the Tennessee section of the NTS.

"As a matter of fact," said Jones, "I wouldn't be at Caltech if it hadn't been for amateur radio. I was interested in majoring in drama until I got into the radio field as a hobby, and it turned me on to electrical engineering and electronics. Many other radio buffs have had similar experiences."

Relaying radio messages to people in the community is just one aspect of the club's activities. Currently, one of its priorities is to move to larger and more adequate quarters. The club's cramped radio shack with its transmitting and receiving equipment is in Winnett Student Center, but its antenna is on the roof of the

Spalding Laboratory of Engineering. And recently some occupants of Spalding have suggested that the antenna has been interfering with some of their experiments that are sensitive to radio waves.

A happy solution to this problem has been found by the club's adviser, James R. Campbell, head of the instrument services center in electrical engineering, who can accommodate the club in the Synchrotron Laboratory.

Once in their new location, the members hope to finance an expansion of their activities, which are now funded solely by their yearly five-dollar dues. They want to launch fund-raising activities, primarily to pay for the repair of an old teletype machine and to adapt some equipment for communication with amateur radio satellites.

The members also want to explore the possibility of setting up a network of Caltech alumni all over the country to communicate with the group on campus. Jones has suggested that alumni interested in participating in such a project should contact the club station, W6UE, in Pasadena.

However many other activities they may become involved in, the club members intend to keep their public service work in relaying messages to members of the community as a priority.

But, Jones also points out that, in terms of reliability, a letter might be better. "We do our best," he said, "but since our messages are handled by busy volunteers, we always offer a disclaimer to the effect that neither speedy delivery nor accuracy of content can be fully guaranteed."

### ALUMNI ACTIVITIES

#### November 13

Cocktail party in connection with *Interhouse festivities*. Cocktails, 8 to 10 p.m., the Athenaeum.

#### December 8

Alumni dinner — *Earnest C. Watson Caltech Lecture*. Cocktails, 6 p.m.; dinner, 6:30 p.m., the Athenaeum. Lecture, 8 p.m., Beckman Auditorium. Speaker, Bruce Murray, director, Jet Propulsion Laboratory: "Are We Going to Rule, or Be Ruled, by Our Own Technology?"

Norman Horowitz

## An extraterrestrial sleuth searches for Martian life

When a detective is trying to pick up the trail of a missing suspect, one of the first things he does is to mentally put himself in the suspect's place.

In essence, that's what Norman Horowitz, Caltech professor of biology, tried to do when he designed the pyrolytic release experiment for Viking 1 and 2 landers. He wanted to create an environment in the Viking landers' soil sample chambers where possible Martian microorganisms would feel at home — an environment where they would ingest, or grow, carbon and produce organic products that could be detected by lander instruments and relayed 200 million miles to Earth. In the design of this project he worked with Jerry S. Hubbard, associate professor of biology at Georgia Tech, and George L. Hobb, senior biologist at Caltech.

"Being a member of the first group to search for life on Mars has been an exciting experience," said Horowitz, a principal investigator in the three-part biology experiment on the Viking landers. He added that he hopes Viking 2 will find evidence to clarify the results of Viking 1 experiments which have reflected biological or chemical activity.

"Based on the evidence from these experiments, I believe there's about a 50-50 chance of life on Mars," Horowitz said in September. "But I won't be traumatically disappointed if we conclude that no life exists there because I've been resigned to this probability for several years."

To be sure, the confirmation of extraterrestrial life — even microorganisms — would be a "dazzling discovery," Horowitz said. But he added that the Viking missions will be certain to result in important knowledge in several areas, including the meteorology of the origin and evolution of the solar system.

His involvement in the Viking project has led the Caltech scientist into new biological investigations on Earth. The Martian environment contains virtually none of the water so intimately associated with earth life. The effect of Mars' dryness on possible organisms there has caused Horowitz to ask new questions about the role of water here.

He is now studying the water requirements of an Earth fungus, *Neurospora crassa*. "We've found that spores of the fungus fail to germinate unless sufficient water is present in their environment," he explained. "Under these conditions they lose a germination factor, a substance involved in the transport of iron from the medium surrounding the cell. We've been trying to identify this factor. Tracking it down has been a lot of fun, and in the process, we're learning a great deal about the way the cells of the fungus are organized."

Investigation of this terrestrial mystery is more central to Horowitz's original research than is extraterrestrial biology, for he had no idea of working in outer space biology when he began his scientific career. But he's an experienced space scientist now, with an involvement beginning early

in the space age and including his participation on experiments for the Mariner 6 and 7 imaging team as well as Viking.

Horowitz feels strongly that ventures such as the Viking missions are scientifically important and that they are not expensive in relation to benefits they bring us. He has a ready answer for critics of the space program who believe the money to finance Viking and other space projects should have been spent for projects at home.

"The Egyptians couldn't afford to build the pyramids nor the French to build the cathedral of Chartres," he said. "But now we look back at those achievements as monuments to the civilizations that created them."

"The exploration of our solar system will be regarded by future generations as a monument to our technological age. The critics of the space program show a lack of comprehension as to what civilization and human history are all about. Just the fact that we have demonstrated the technological capability — and the will — to go out and seek life on neighboring planets will be inspiration to the people who come after us."



Norman Horowitz

## Caltech energy-saving device wins grand prize

Caltech has been awarded the first annual grand prize of \$10,000 in the Cost Reduction Incentive Awards Program of the United States Steel Foundation and the National Association of College and University Business Officers. The award was accepted by Robert B. Gilmore, Caltech vice president for business affairs; it is for the invention of a "phantom" fluorescent tube that cuts the cost and use of electrical energy while maintaining an even light pattern.

The phantom tube, invented by James A. Westphal, professor of planetary science, is an energy-saving device. It looks like an ordinary fluorescent tube and fits into the sockets of a two-tube fixture. While it produces no light itself, it permits the remaining tube in the fixture to light. Caltech expects to save more than \$100,000 a year when it completes installation of the 15,000 phantoms it has purchased.

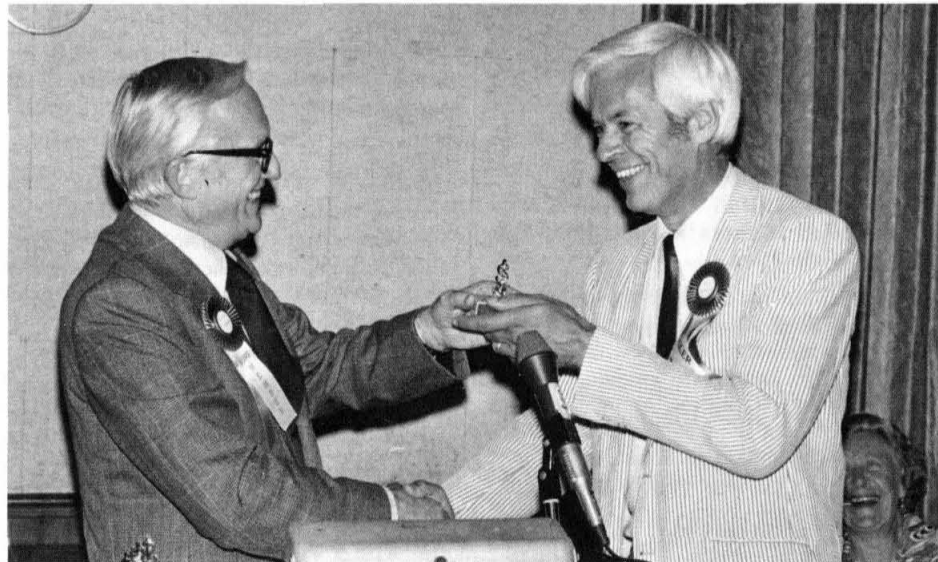
# Alumni leaders launch new Fund year

"The common man has received a lot of attention recently, but it would be fatal to neglect the uncommon man who has sparked most of the progress of the human race — and Caltech is the natural home of the uncommon man," Caltech Trustee Gilbert W. Fitzhugh told 100 Alumni Fund area leaders, speakers, and guests at the keynote session of the annual Alumni Leadership Conference on September 18. Fitzhugh is the retired chairman and chief executive officer of the Metropolitan Life Insurance Company.

Fitzhugh stressed the value of a Caltech education and praised the Ins-

administration staff and since that year we have eliminated 200 positions by transferring people and not filling openings. As a result, Caltech in 1975 spent \$3.80 on academic programs for each dollar that it spent on support services compared with \$3.10 in 1971.

In a morning session, C. J. Pings, BS '51, MS '52, PhD '55, professor of chemical engineering and chemical physics, vice provost and dean of graduate studies, also stressed the importance of alumni support — so necessary if Caltech is to hire the young faculty members who are essential for intellectual challenge.



1975-76 Alumni Fund Chairman Charles F. Thomas recognizes Vern Edwards, western Pasadena area chairman, for his efforts during the past year. Edwards received three awards for alumni participation in his area.

titute for its emphasis on quality and for the openness in the relationships between its faculty and students.

Emphasizing individual initiative, he said, "Self-discipline is the essence of the liberty that we speak of so frequently, and there is no better place than at Caltech to learn self-discipline. For students here soon realize that success requires them to set higher standards for themselves than anyone would dare to set for them. They learn that the principles of hard work, thrift, and integrity are hard to beat."

At the conference on the Caltech campus, Alumni Fund area chairmen were oriented concerning Caltech's needs and ways of presenting those needs to their fellow graduates. Robert E. Foss, BS '32, was in charge of arrangements for the one-day meeting which launched a new Alumni Fund year. Martin J. Poggi, BS '37, is chairman of the 1976-77 fund, which has a goal of \$600,000 from 4,200 donors.

At a luncheon meeting, David W. Morrisroe, Caltech's vice president for financial affairs and treasurer, stressed the importance of alumni gifts as he noted that most of the funds received by the Institute can only be used for a specifically designated purpose.

"Unrestricted gifts — like those of the Alumni Fund — are the only gifts we can use however we want," he said. "For general operating dollars we must look to people like our alumni, who know us best and trust us to use their money wisely. Without alumni gifts we would be in difficult straits."

Relating Caltech's efforts to economize during a period of financial strain, Morrisroe said, "The central administration looks first to itself when curtailments must be made. We began in 1972 to curtail the central

Pings pointed out that because of heavy growth in the 1950's and early 1960's, 84 percent of the Institute faculty is now tenured and the turnover rate is low.

"We're in a steady state, and we're all getting older," he said. "This should bother an organization that depends on intellectual stimulation, for it is frequently the younger faculty members who break across new frontiers." He emphasized that the funds raised by alumni often make the difference in the ability of a division chairman to spend the \$25,000 to \$50,000 he needs to hire a new faculty member and equip a laboratory.

## Caltech Students

In a morning panel discussion, Ray D. Owen, vice president for student affairs, dean of students, and professor of biology, talked with an undergraduate and a member of the class of 1976 about Caltech students. Their conclusions: Undergraduates here are highly competent and uniquely talented, and they're eager to take advantage of Caltech's assets, including the accessibility of its professors.

Undergraduate Ryn Miake, a senior majoring in biology, and Philip Naecker, BS '76, emphasized the importance of opportunities at Caltech for personal contact with professors and graduate students.

Miake observed that Caltech women students, whose options were primarily biology and chemistry when they were first admitted, are now majoring in many different fields. Owen noted a change in the picture for students receiving financial aid; they generally now work part time. He said that aid is more limited than in the past.

James H. Whitcomb, PhD '73, senior research fellow in geophysics,

discussed research concerning earthquake prediction.

Leaders in an afternoon "How to Do It" session were Reuben B. Moulton, BS '57, former National Alumni Fund chairman; Douglas C. Strain, BS '48; Carl A. Price, BS '49; and Vern A. Edwards, BS '50.

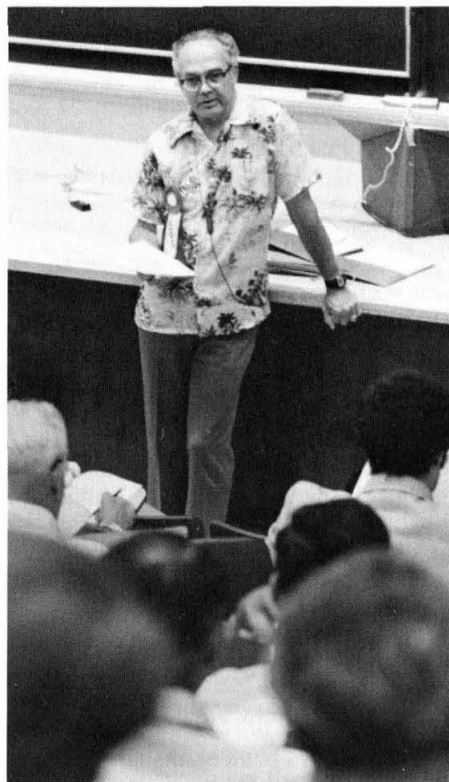
In an award ceremony on Saturday evening, Charles F. Thomas, BS '35, 1975-76 national Alumni Fund chairman, expressed his satisfaction in heading a fund effort that broke records for numbers of both dollars and donors, and he presented awards to those chairmen who were honored for exceptional work.

Vern A. Edwards, BS '50, Pasadena, received a Rookie of the Year Award for obtaining gifts from 71 percent of the alumni in his area — the largest percentage of participation ever achieved by a Caltech Alumni Fund area chairman. Andrew B. Campbell, BS '46, San Marino area chairman, was honored as the first runner-up in the competition for Rookie of the Year with 58 percent participation.

Frederick H. Allardt, BS '35, MS '36, MS '37, San Luis Obispo, was recognized for the best participation by an experienced chairman — 54 percent. Harry J. Moore, Jr., BS '48, Westchester County, New York, was first runner-up among the experienced chairmen with 50 percent participation in his area. Twenty other chairmen who had obtained 40 percent participation were honored.

Recognized for the highest increase in percentage of participation between 1974-75 and 1975-76 was Vern Edwards. Edwards achieved a 30 percent increase in his area — from 41 to 71 percent. Runners-up in this category were Ulrich Merten, BS '51, who increased the participation percentage in his western Pennsylvania area from 27 to 48 percent; and Carl A. Price, BS '49, of Princeton, New Jersey, whose area advanced in its participation from 24 to 43 percent. Twelve other chairmen whose area participation increased by 10 to 15 percentage points were also honored.

Two area chairmen who set records in recruiting workers last year were: Josiah E. Smith, BS '39, BS '40,



As part of the afternoon program, Douglas C. Strain, Oregon area chairman, conducts a session for other chairmen on presenting Caltech's needs to fellow alumni.

Eng '48, Washington, D.C., 55 workers; and C. M. Veronda, BS '42, Massachusetts, 29 workers. Ten other chairmen who recruited 10 or more workers were honored.

Three chairmen were recognized for raising more than \$25,000 in their areas: Raymond G. Richards, BS '40, the East San Fernando Valley, \$54,000; Douglas C. Strain, BS '48, Oregon, \$37,000; and Richard K. Smyth, BS '51, Newport Beach, California, \$26,000.

Vern Edwards also received a third award for his dual accomplishments: the percentage of alumni giving in his area and the improvement in alumni participation over the previous year.

## Area Chairmen

Alumni serving as area chairmen in their regions this year include: Frederick H. Allardt, '35, San Luis Obispo; Forrest S. Allinder, '49, Los Angeles-downtown; Walter J. Arabasz, Jr., '66, Utah; Michael R. Beaver, '69, Atherton-Menlo Park; Walter D. Biggers, '55, El Monte-Covina; C. James Blom, '50, Bakersfield; Robert D. Boche, '34, Riverside-San Bernardino; Delano A. Brouillette, '55, San Diego; Andrew B. Campbell, '46, San Marino.

Charles F. Carstarphen, '39, Cincinnati-Southern Ohio; Lowell E. Clark, '60, Phoenix; Thomas W. Cooper, '57, Torrance; Roy S. Cornwell, '55, Livermore; Paul H. Dane, '34, Marin County; William A. Drew, '48, Indiana; Vern Edwards, '50, Pasadena; Walter R. Fillipone, '44, Downey-Whittier; Ronald G. Findlay, '64, San Jose; Melbourne F. Giberson, '64, Delaware-Eastern Pennsylvania; George J. Gleghorn, '48, TRW Inc. California alumni; S. Kendall Gold, '42, Manhattan; Allan M. Goldberg, '57, Laguna Beach.

David R. V. Golding, '44, Hawaii; Thomas P. Gordon, '59, Western Pennsylvania; J. B. Graner, '43, Palos Verdes; Ronald C. Greene, '49, North Carolina; Thomas L. Gunn, '56, Atherton-Menlo Park; Paul B. Harris, '49, Oklahama; E. M. Holland, '36, Connecticut; Melvin E. Holland, '60, Sacramento; John R. Howell, '26, Long Beach; Peter A. Howell, '50, Minnesota; C. Warren Hunt, '45, Canada; Morton E. Jones, '53, Dallas; David Kauffman, '62, Houston.

Walter R. Larson, '40, Anaheim; Herbert A. Lassen, '43, Redondo Beach; Elvin B. Lien, '34, Orinda-Moraga; Neville S. Long, '44, San Francisco; Irwin L. Markowitz, '48, West San Fernando Valley; Edson R. McCord, '71, Northern Illinois-Wisconsin; Don E. McFaddin, '28, Alhambra-South Pasadena; Thomas R. McGetchin, '68, New Mexico; Richard G. Merritt, '51, Washington.

Jean C. Meuris, '60, Oakland-Berkeley; Harry J. Moore, Jr., '48, Westchester County, New York; Ira Mosketel, '72, Beverly Hills; Elliott R. Nagelberg, '64, Northern New Jersey; Philip M. Neches, '73, Los Angeles-Brentwood; Charles A. Norman, '56, Colorado; Charles R. Penquite, '58, Missouri-Southern Illinois; Alan L. Porter, '67, Georgia; Carl A. Price, '49, Princeton-Southern New Jersey; L. Willard Richards, '54, Thousand Oaks; Raymond G. Richards, '40, East San Fernando Valley; Robert G. Rinker, '55, Santa Barbara; Eugene S. Rose, Jr., '47, Louisiana.

Phillip E. Saurenman, '38, Pasadena; J. Robert Schreck, '34, Arcadia; Josiah E. Smith, '39, Metropolitan D. C.; Richard K. Smyth, '51, Newport Beach; Reuben P. Snodgrass, '41, Long Island; Walter A. Specht, Jr., '57, Los Altos; Robert R. Staley, '42, Stanford-Palo Alto; Leonard M. Stephenson, '68, Cleveland-Northern Ohio; Wilton A. Stewart, '41, Santa Monica; Donald Stewart, Jr., '47, Pomona-Clairemont; Donald C. Stinson, '49, Tucson; Douglas C. Strain, '48, Oregon; Pin Tong, '63, Massachusetts; Chauncey W. Watt, Jr., '36, Massachusetts; Robert W. Wayman, '40, Michigan.

Theodore S. Webb, Jr., '55, Fort Worth-West Texas; Gordon B. Weir, '40, Los Angeles-Hollywood; William M. Whitney, '51, Jet Propulsion Laboratory; Albert C. Whittlesey, '62, La Canada-Alhambra; Donald P. Wilkinson, '48, Hughes Aircraft Company California alumni; William J. Williamson, '48, Central San Fernando Valley; Stanley T. Wolfberg, '38, Caltech; Frank A. Woodward, '52, Washington; Ernest B. Wright, '45, Florida; James Wu, '59, Tennessee-Alabama; Susan Wu, '63, Tennessee-Alabama.

# PERSONALS

1933

AMMON S. ANDES, MS, professor of aerospace engineering and former chairman of his department at the University of Kansas, was honored for his 30 years of service to the college at a retirement dinner.

DEAN F. SAURENMAN writes that he has retired and has started a new business.

WILLIAM E. STONE retired in June from the department of physiology at the University of Wisconsin, Madison, and will continue his research there as a professor emeritus.

1935

FREDERIC C. KING, JR., writes, "Retired from the international division of Mobil Oil Corporation on January 1 this year. During most of the last ten years with Mobil I lived overseas: two years in Tokyo as project manager for a new grass-roots oil refinery in Singapore, and the remaining eight years in West Germany. Assignments in Germany were as venture manager of two new grass-roots refineries, one in southern Germany near Karlsruhe and the other on the North Sea at Wilhelmshaven. After returning to California for another look, we decided to settle down on the east coast in southern Florida."

1936

ARTHUR L. BISHOP retired in February as manager of Texaco's Lawrenceville plant. He plans to spend half of his time in Lawrenceville and the winter half in southern California.

IVAR E. HIGHBERG, PhD, retired in June as deputy director for air combat systems at the Naval Weapons Center in China Lake, California, and is building a house on Puget Sound.

WALFRED E. SWANSON is a consultant to the assistant secretary of the Army for civil works on special assignment at the Pentagon, and also to A. O. Reed & Company, contractors, in San Diego, California.

1938

RICHARD B. FORWARD writes, "I am retiring again this June. We plan to take up residence on our mountaintop near Julian, California, where we will try to see how self-sufficient we can be with the wind and the sun for energy and a garden for food."

1939

RONALD B. CONNELLY of McLean, Virginia, has retired from the naval ships engineering center in Hyattsville, Maryland.

HERMAN S. ENGLANDER writes that he retired from a consulting job with the volunteer tutoring program at Naval Electronics Laboratory Center in San Diego on July 31. He is continuing his work with gifted children and also his lecturing, writing, and consulting.

1940

A. FINLEY FRANCE was promoted to vice president for procurement with responsibility for the worldwide purchasing activities of the Burroughs Corporation.

JAMES E. LU VALLE, PhD, is a scientific coordinator in the chemistry department at Stanford University.

1941

JAMES R. GARRETT, MS '52, has been appointed chairman of the department of mathematics at Lenoir-Rhyne College in Hickory, North Carolina.

H. GUYFORD STEVER, PhD, director of the National Science Foundation, has been appointed by President Ford to head the recreated Office of Science and Technology Policy. He will advise the President on all aspects of research and development, including energy, agriculture, medicine, the economy, the environment, and the use of resources. He will also advise the National Security Council on military research and development.

1942

JOHN W. MILES, MS '43, PhD '44, and his wife are enjoying their life in La Jolla, California, where he is a consulting engineer.

1949

DAVID BARON has shifted from civil engineering to real estate and is associated with Tobin Realty, Inc., in Huntington Beach, California, which specializes in residential and income investment properties.

STANLEY C. PACE, MS, has been named to the chief executive office of TRW, with the new title of executive vice president and assistant president, effective October 1.

1950

PHILLIP G. COOK, MS, petroleum drilling engineer with the State of California, has been elected chairman of Los Angeles Basin section of the Society of Petroleum Engineers of AIME and reelected president of the U.S. Finn Association.

DUANE H. COOPER, PhD '55, is associate professor of electrical engineering and physics at the University of Illinois.

JOHN T. SHEPHERD, a retired captain in the U.S. Navy, has accepted a position as a trial attorney in the admiralty section of the U.S. Department of Justice.

1952

EVAN E. ROBERTS, JR., MS, received the Distinguished Engineer Award from Texas Technological College in April. He is a partner in the architectural and engineering firm of Stiles, Roberts, Messersmith, & Johnson, in Lubbock, Texas.

1953

KENNETH D. LUNAN was recently named program manager of environmental biochemistry at the Stanford Research Institute. He writes, "In our spare time Barbara and I enjoy sailing in San Francisco Bay and camping with our daughters Suzanne, 16, and Heather, 11. We also take full advantage of our proximity to San Francisco and the Napa-Sonoma valleys."

1962

FRED J. HAMEETMAN, general partner of Cal-American Income Property Fund I-V, has been elected to membership in the Young Presidents' Organization, Inc., a worldwide educational association of successful young executives who have become presidents of sizable companies before the age of forty. Hameetman is also president and board chairman of California Growth Real Estate, Inc., and the 1901 Century Financial Corporation.

1963

DAVID L. BARKER, assistant professor of biology at the University of Oregon, and his family announce their adoption of a baby girl, Sonja Meka Barker.

GERALD D. CHANDLER is associate professor of informatics at the School of Planning and Computer Applications in Tehran, Iran. He says this is a rapidly expanding three-year-old college with a thousand undergrads. It specializes in informatics, operations research, applied math, planning, and economics. There will be numerous faculty openings in 1976, 1977, and 1978, and he invites those who are interested to write to him at P.O. Box 44-1362, Tehran.

MALCOLM L. HEIMER, MS, received his PhD degree in electrical engineering from Pennsylvania State University in May.

ALAN F. HUBER graduated with honors from Loma Linda School of Dentistry in December 1975. He and his family have moved to Palm Springs, California, where Huber is "hanging out his DDS shingle (still with wet paint)."

WENDELL W. MENDELL received his PhD degree from Rice University in May.

PAUL J. NAHIN, MS, is on the electrical engineering faculty of the University of New Hampshire.

ROBERT C. NEUMAN, JR., PhD, has been appointed acting chairman of the chemistry department at UC Riverside for the 1976-77 academic year.

MICHAEL D. PERLMAN, professor and chairman of the department of statistics at the University of Chicago, reports that his wife, Dorothy, recently gave birth to a daughter, Rachel, and their son David, 4, is "leaning toward a career in mechanical engineering."

ROBERT J. SCHMULIAN, PhD '68, and his wife, Jacki, announce the birth of their first child, Suzanne Marie, on June 21. Schmulian is manager of the mathematical analysis and simulation department at IBM in San Jose, California.

1964

BRUCE R. BEEGLY, vice president and chief engineer of the Economy Engine Company in Youngstown, Ohio, was appointed to the board of trustees of the Methodist Theological School in Ohio.

AUGUSTINE H. GRAY, JR., professor of electrical engineering and computer science at UC Santa Barbara, has coauthored a book, *Linear*

*Prediction of Speech*, and is doing research in digital signal processing and speech analysis.

JAMES C. WHITNEY has been appointed director of advanced development at Dicotaphone Corporation's research and development center in Norwalk, Connecticut.

FRANK P. WINKLER, JR., received an Alfred P. Sloan Research Fellowship for 1976-78 and is continuing teaching and research in astrophysics at Middlebury College, Vermont.

1965

JAMES J. DUDERSTADT, MS, PhD '68, associate professor of nuclear engineering at the University of Michigan, has coauthored a book, *Nuclear Reactor Analysis*, recently published by Wiley & Sons.

AMOS LEVIN, formerly assistant controller at Eastern Gas and Fuel Associates, has been promoted to controller. In this capacity, he will direct Eastern's management information services and operations analysis functions.

DEWITT A. PAYNE and his wife announce the birth of their second daughter, Anne Harrell, on June 1.

1966

STEPHEN D. CLAMAGE is a member of the technical staff of Ocean Technology, Inc., in Burbank, California.

E. WILLIAM COLGLAZIER, JR., PhD '71, received a Congressional Science Fellowship from the American Association for the Advancement of Science to spend a year as energy advisor to Congress. At the end of that year he will join the physics faculty at the University of Montana.

1967

ARTHUR T. HUBBARD, PhD, after nine years at the University of Hawaii, has accepted a position as professor of chemistry at UC Santa Barbara.

JAMES E. PEARSON, MS '68, PhD '72, was promoted to senior staff physicist at Hughes Research Laboratories.

CONSTANTINE G. SEVASTOPOULOS, MS, received his PhD degree in biophysics from UC Berkeley in June and has accepted a full-time research and administrative position there in the department of molecular biology.

1968

SAMUEL E. LOGAN, MS '69, PhD '72, received his MD degree from UCLA in June. He is a resident in surgery there and is interested in cardiovascular research and practice. While on a three-month medical missions tour of hospitals in the Ivory Coast, Bangladesh, and Indonesia, he met an American missionary nurse, Karen Carder. They plan to marry this fall and will live in Los Angeles while Logan completes his residency at UCLA.

MICHAEL MAJTELES, MS, is president and owner of MySun Company in Palo Alto, California, which deals in solar energy.

ROBERT M. MATTHEYSES, MS '69, received his PhD degree in engineering science from Clarkson College in May.

WALLY E. RIPPEL left his position at Autronics Corporation of Pasadena to join Applied Materials of Santa Clara, California, as senior electronics engineer.

1969

JOSEPH W. BLUM, PhD, received his MD degree from the University of Miami Medical School in June and is a resident at the Wadsworth V.A. Hospital.

JOSEPH B. DENCE, PhD, accepted a two-year professorship in the department of chemistry at Abadan Institute of Technology in Iran starting September 1976.

GEORGE FOX, MS '74, and his wife, Karen, are the parents of a baby boy, Michael Albert, born on May 2. Fox is a graduate student in applied physics at Caltech.

LAWRENCE SHIRLEY and his wife announce the birth of their first child, Jefferson, on June 7.

1970

BRUCE S. AULT is an assistant professor of chemistry at the University of Cincinnati.

SEYMOUR E. GOODMAN, PhD, was named a Danforth Associate and is associate professor of applied mathematics and computer science at the University of Virginia, in Charlottesville.

LEO G. LOMELI is an intern at Los Angeles County-USC Medical Center in Los Angeles. He plans to go into general practice.

FRED PETE ROULLARD III received his doctorate in physics from USC in August 1975, and is a senior engineering physicist at Spectra-Physics in Mountain View, California.

STEVEN L. SALEM, MS '71, received his PhD degree in nuclear engineering from UCLA and is working with Atomics International in reactor safety and licensing.

## OBITUARIES

1937

HARRY H. CARRICK, JR., MS '39, on November 7, 1975, in Bakersfield, California, where he had been area superintendent for the Mobil Oil Corporation.

KENNETH C. CRUMRINE, PhD, on May 1, after a long illness. He was a retired geophysicist. Surviving are a daughter, two sisters, and a grandson.

1940

CLAUDE E. DAVIES, on March 21, while scuba diving in Puget Sound, Washington. He was a retired appliance distributor for the Admiral Corporation and had recently begun his own salmon fishing charter service across the Columbia River. He is survived by his wife, Charlotte, two sons, and a daughter.

HAROLD F. KLECKNER on April 20. He was a project engineer for the McDonnell-Douglas Aircraft Company in Long Beach, California. Surviving is Mrs. Kleckner.

1944

THOMAS A. CARTER, JR., of cancer, on May 5. He was senior vice president of Airco in Irvine, California.

ROBERT J. KIECKHEFER, BS '45, on August 9 in a canoeing accident in Saskatchewan.

1946

DOUGLAS S. ELLIS on June 5. He was department manager of product effectiveness for the missile systems group of Hughes Aircraft Company. Surviving are his wife, Winifred, a son, and four daughters.

1965

J. NILES PUCKETT, JR., MS '66, on May 13. He was director of engineering at the Lexitron Corporation in Burbank, California.

### Placement Assistance To Caltech Alumni

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 A form indicating a desire to keep watch for opportunities although I am not contemplating a change.

Name .....

Degree(s) ..... Year(s) .....

Address .....

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