

ENGINEERS and SCIENTISTS

at Convair-Astronautics pursue space projects at a most advanced state of the art, requiring the highest degree of professional skill. Keystone of these many programs is the mighty

ATLAS ICBM

In this young missile age, Atlas already lists many unique achievements. A proven weapon, it is our only large, tested booster and the only known vehicle to steer itself into orbit. It will lift the first manned capsule into space, and most exploration programs of the future include Atlas in their planning.

PROJECT CENTAUR

... design, construction and testing of a high energy, upper stage rocket ... is the newest Convair-Astronautics program released. Boosted by Atlas, Centaur will be able to place in orbit a satellite weighing several thousand pounds.

Positions are available now in design (electrical, electronic, mechanical, structural), systems design & analysis, propulsion, test laboratories, field test, engineering writing, computer programming, research engineering, and other specialties.

INTERVIEWS

are regularly conducted throughout the U.S. by our engineering representatives. So that advance interview arrangements may be made, please send your resume at once to Mr. G. N. McMillan, Engineering Personnel Administrator, Dept. 130-90

CONVAIR ASTRONAUTICS

Convair Division of

GENERAL DYNAMICS

5549 Kearny Villa Road,
San Diego, California



Personals

1925

Edgar E. Shafer, Jr., died of cancer on April 16, 1958. He had owned and operated his own chemical laboratory for petroleum products in Los Angeles. Ed was also an outstanding artist in both oil and water color and had exhibited for the past 20 years. He leaves his wife and four children—Margaret, David, Mrs. Jacqueline Loos, and Robert Eugene, a son by a previous marriage.

1930

Thomas T. Hiyama, head of the engineering department of Nippon Columbia, Ltd., in Japan, made a tour of U.S. electronic industries this spring. During a quick visit to Caltech, he explained that his company is one of Japan's leading producers of records, radios and television sets.

1932

Harry H. Bruderlin writes that "for several years I've been designing and building unusual houses in the \$50,000 to \$150,000 class, including one for a former Caltech inmate—*Millard Barton* '32. I have a number of patents, some of which are on the market. My hobbies are tennis, prospecting, and research on mental processes and physical basis of the mind. My wife and I have taken several trips to Mexico and toured some of the lesser known parts and have been doing Polynesian folk dances for fun and exercise. We still plan to go to the South Seas for a year or two someday. We have four children—two boys, 18 and 16, and two girls, 13 and 6."

1933

Col. Paul H. Kremmer, USAF (Ret.), MS, is executive advisor to the vice president of military relations at Ryan Aeronautical Company in San Diego.

E. Ray Lockhart, MS '34, vice president of the Stone & Webster Service Corporation in New York, has been elected a director of the firm. He has been with Stone & Webster since 1941. Ray is also vice president of the Sierra Pacific Power Company in Reno, of the Savannah Electric and Power Company in Georgia, and of the Iowa Water

Service Company in Iowa City. The Lockharts and their two children live in Garden City, L.I.

1934

Milton U. Clauser, MS '35, PhD '37, vice president and director of the Space Technology Laboratories in Los Angeles, is now serving on a research committee of the National Aeronautics and Space Administration. He is also a member of the Scientific Advisory Board for the United States Air Force.

1934

Raymond W. Traynor, physics and mathematics teacher at Burbank High School in Burbank, Calif., has been awarded a Shell Merit Fellowship to attend Stanford University this summer. He is one of 100 high school and science instructors in the U.S. and Canada selected to attend graduate-level seminars at Stanford and Cornell Universities. His training will include mathematics, chemistry, physics, educational techniques, and application of science and mathematics in industry.

1936

Louis N. Ridenour, Jr., PhD, vice president of Lockheed Aircraft Corporation, was found dead in his Washington, D.C., hotel room on May 21. Death was apparently due to natural causes.

Louis was the Air Force's first chief scientist and later served as chairman of the Scientific Advisory Board committee formed to survey Air Force research and development activity. His work led to the establishment of the Air Research and Development Command, an agency which now has a major share of responsibility for the nation's advanced weapons program.

He was at one time a consultant to the Secretary of War, and nine years ago he was appointed professor of physics and dean of the University of Illinois graduate college. He has been at Lockheed Aircraft since April 1955.

Louis leaves his wife Gretchen, and two daughters—Eleanor and Nancy—in Palo Alto.

continued on page 26

Engineering and Science



Douglas diversification affords broadened opportunities, combined with stability and security.

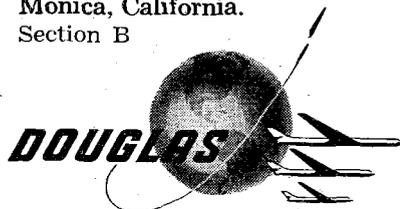
Engineering at Douglas is divided into three basic areas . . . missile and space systems, transport aircraft and combat aircraft. In these military and commercial categories, each advancing beyond present frontiers of achievement, engineers and scientists can progress to the limit of their capabilities.

In addition, supervisory and executive openings are filled from within the company. Many of the top executive officers at Douglas are engineers who have moved right up to assume wide responsibility.

We are interested in engineers with backgrounds in other fields as well as avionics, aircraft and missiles.

For further information write to Mr. C. C. LaVene, Douglas Aircraft Company, Inc., Santa Monica, California.

Section B



the most respected name in aircraft,
missile and space technology

Personals . . . continued

1940

A. M. Zarem, MS, PhD '44, president of Electro-Optical Systems, Inc., has been elected chairman of the American Rocket Society's 23-member technical committee on non-pulsive power. The committee presented a report on auxiliary power at the semi-annual meeting of the Rocket Society in San Diego.

George J. Todd, MS '41, has been appointed test supervisor on the Space Technology Laboratories' Minuteman Program at the Air Force Flight Test Center at Edwards Air Force Base in Lancaster, Calif. He will also continue as manager of STL's Edwards Field Office. George has been with the company since 1956. The Todds have five children.

1941

Col. Charles H. Terhune, Jr., AE, is now vice commander of the Air Force Ballistic Missile Division in Los Angeles. He has had 21 years of military experience, and has been deputy commander for ballistic missiles at the L.A. base since June 1954. The Terhunes, who live in Santa Monica, have three children—Donna, Terry and Charles III.

1943

David E. Shonerd, MS, '48, AE '49, is now assistant program director for the Minuteman intercontinental ballistic missile program of the Space Technology Laboratories in Los Angeles. He has been on the senior staff there since July 1958. The Shonerds and their three children live in Rolling Hills.

Abraham Fiul has been appointed associate manager of the systems design and analysis department of Space Technology Laboratories. He has been with STL since last April and before that was manager of preliminary design at Radioplane, a division of the Northrop Corporation. Abe and his wife have two daughters, live in Northridge.

John E. Cushing, PhD, professor of bacteriology at the University of California in Santa Barbara, has been appointed chairman of the department of biological sciences there. He is now at the University of Tokyo on a Guggenheim Fellowship, serving as a visiting lecturer and conducting research on blood groups of fish, whales and seals.

1944

George M. Wood, BS '44, MS '44, is now assistant branch manager of the Glendale sales office of the International Business Machines Corporation. He has been with IBM since 1955.

1947

Charoen Vadhanapanich, MS '48, writes that "after I received my PhD at the Florida State University in February 1958, I returned to my job at the Royal Thai Meteorological Department of the Thai Navy in Bangkok, and have been promoted to full commander. I was one of the delegates from Thailand to attend the International Civil Aviation Organization in Rome from January 4 to February 3 this year."

1949

Carl Price will be leaving Harvard this fall to become associate professor of plant physiology at Rutgers University.

David Hogness, PhD '53, and A. Dale Kaiser, PhD '55, are joining the biochemistry department of the medical school at Stanford University this month.

1950

James C. Goodwyn, formerly chief of systems analysis in the engineering division of the Martin Company in Denver, is now on the staff of the advance research projects agency division of the Institute for Defense Analyses in Washington, D. C. Jim had been with Martin for nine years.

Richard D. De Lauer, AE, PhD '53, has been appointed director of the vehicle development laboratory of the research and development division of Space Technology Laboratories in Los Angeles. Dick is co-author of *Nuclear Rocket Propulsion*, published last year by McGraw-Hill.

1953

Lt. Comdr. Herbert Poorman, AE, writes that "I've been at McDonnell Aircraft Corporation in St. Louis for almost three years. My primary effort is directed toward helping make the F101 and FYH weapons systems reliable and operationally maintainable. Flying a lot. The fishing in nearby lakes has provided fine family recreation throughout our tour here. The family is fine and growing fast (in size, not numbers)."