

THE MONTH AT CALTECH

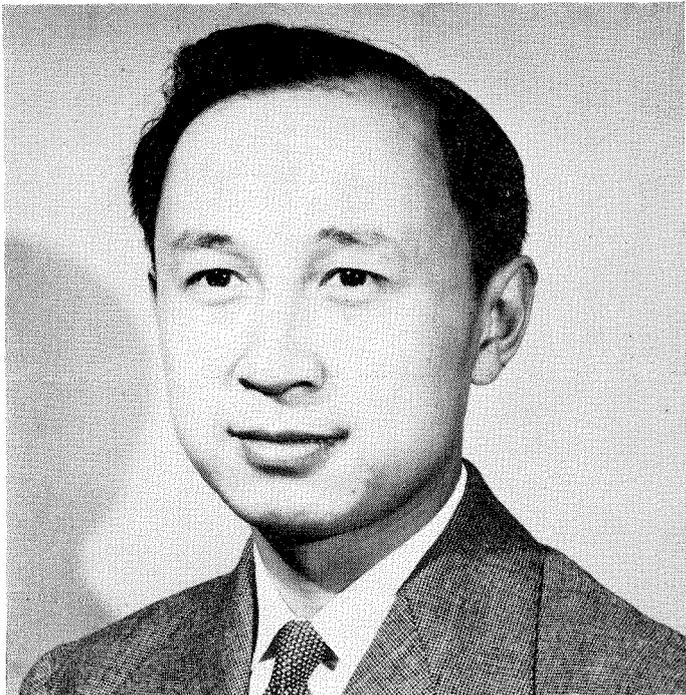
JET PROPULSION CENTER

A NATIONAL CENTER of rocket and jet propulsion study and research, to be known as the Daniel and Florence Guggenheim Jet Propulsion Center, will be established at Caltech. This is one of two such centers in the country; the other is being set up at Princeton University. The Guggenheim Foundation has appropriated \$500,000 to support the centers for a seven year period, which means that the Caltech center will operate on a budget of approximately \$30,000 a year.

Says Dr. DuBridges:

"Establishment of this center on the Caltech campus will not necessitate new buildings or new laboratories. The work of the Center will be primarily analytical, theoretical and educational, and will concern the basic problems in jet and rocket work. There will be no making and firing of experimental jet or rocket motors on the campus in connection with this activity. The analytical and theoretical research to be done on the campus will be complementary to experimental work carried out at the Jet Propulsion Laboratory in Arroyo Seco."

In announcing the establishment of the Jet Propulsion Centers, Mr. Guggenheim said: "The California Institute of Technology was chosen for this vital research work in the west because it was a center of rocket development prior to and throughout the war, and is the site of the Jet Propulsion Laboratory, at which it is carrying a major research load in connection with the Armed Forces' guided missile and jet propulsion program."



Dr. Hsue-Shen Tsien, Goddard Professor

"Jet propulsion has opened a new era in engineering and in human thought, and will affect the future of the world more profoundly than any one can foresee today.

"The Daniel Guggenheim Fund for the Promotion of Aeronautics contributed after the first World War to commercial aviation development in the United States. It was this commercial aviation development that was the basis for our supremacy in the air in World War II.

"In establishing these Jet Propulsion Centers, the Daniel and Florence Guggenheim Foundation is endeavoring to contribute in a similar way to the development of the peacetime applications of jet propulsion and the rocket."

The object of the centers is three-fold:

"They will serve as training centers for leaders of the future in the field of rocket technology. They will serve as centers of research and advanced thinking on rocket and jet propulsion problems. And they will be centers of leadership in the development of peace-time commercial and scientific uses of rockets and jet propulsion."

The principal post in each center will be a professorship, named in honor of the American rocket pioneer, Dr. Robert H. Goddard. A number of post-graduate fellowships will be associated with each Goddard Professorship, and at least three of these will be granted each year by the Foundation. They will be known as the Daniel and Florence Guggenheim Jet Propulsion Fellowships. They will carry stipends of up to \$2,000 a year each, and will be granted for two-year study leading to a Doctor's degree. They will be awarded to unusually promising graduate students in jet propulsion, following an annual nation-wide search for the best available candidates.

The Goddard Professorship at Caltech is to go to Dr. Hsue-Shen Tsien. Now a professor of aerodynamics at the Massachusetts Institute of Technology, Dr. Tsien received his Ph.D. in aeronautics, *magna cum laude*, from Caltech in 1939. He remained at the Institute as research fellow, assistant professor, and finally associate professor, until he left to accept a professorship at M.I.T. in 1947.

Dr. Tsien was born in Shanghai, China, in 1910, received his B.S. in Mechanical Engineering at Chiao-Tung University in Shanghai in 1934. As an outstanding student he qualified with his government for additional education in the United States, and in 1935 entered M.I.T. for graduate study. He received his M.S. in Aeronautical Engineering in 1936.

Under the guidance of Dr. Theodore von Karman, Director of Caltech's Guggenheim Laboratory of Aeronautics, Dr. Tsien contributed much in both theory and research to the problems of supersonic flight and jet propulsion. He served with Dr. von Karman during and after the war as a member of the Scientific Advisory Board of the Air Forces.

He returns to Caltech next summer.

TUITION UP

THE INSTITUTE Board of Trustees this month announced an increase in tuition, from \$500 to \$600 a year, for all students, effective September, 1949.

The action of the board was taken after a long study of the problem of seeking additional income to meet rising costs in all categories of education, research and maintenance. Even though this increase in tuition fees will bring an estimated \$120,000 in additional funds, it will provide only a little over one-third of the estimated \$400,000 deficit for next year.

The increase is in line with that of other privately endowed colleges and universities, which have been forced to make similar or even larger tuition increases. M.I.T., the nearest comparable institution to Caltech, has had a \$700 tuition fee in recent years, and is raising it to \$800 this year.

"The type of education offered at the California Institute of Technology is unusually costly," said President DuBridge. "A tuition fee that would cover costs of providing a highly personalized education for a small group of carefully selected students by our staff of leading scholars in science, engineering and the humanities would have to be so high that it would be prohibitive for all but a very few. The policy of the Institute is opposed to charging a fee of this nature. The present costs of operating the Institute are almost three times as great as before the war and tuition rates have not gone up in this proportion. Only the generosity of individuals and foundations in making gifts for current operations or endowment has made it possible to maintain and improve the education and research program.

"The Institute is not unaware of the hardship that the \$100 increase in tuition rate will cause many students and their families. Every effort, however, will be made to provide scholarship or loan funds for the most needy and worthy cases. On the other hand, during these times of rapidly rising national income there are certainly many families which can afford this increased cost and we are confident that those families will be quite willing to have the tuition rate adjusted to cover more nearly actual educational costs at the Institute."

At the same time an energetic attempt to increase the Institute endowment and to secure gifts for annual expenses is being undertaken in order to avoid further tuition increases. Funds are also being sought to provide additional buildings now urgently needed for educational, recreational and health purposes. Even with the tuition increase, additional endowment of at least \$5,000,000 is required to provide the income necessary to cover the deficit anticipated for the current year's operations.

PRESIDENT STERLING

DR. J. E. WALLACE STERLING, director of the Huntington Library in San Marino, and professor of history at Caltech until last July, has been elected president of Stanford University. He will be Stanford's fifth and youngest (42) president.

Dr. Sterling came to Caltech in 1937 as a history instructor, and became a full professor in 1942. He served as chairman of the faculty, as well as a mem-

ber of the executive committee, and he was occupying the Edward S. Harkness chair of history when he was appointed director of the Huntington Library in July, 1948.

Dr. Sterling was born in Linwood, Ontario, Canada, received his B.A. at the University of Toronto in 1927, and his M.A. at the University of Alberta in 1930. He played football and basketball as an undergraduate, and doubled as athletic coach and history lecturer at Regina College in Saskatchewan from 1928 to 1930. From 1932 to 1937, at Stanford, he doubled as research assistant in the Hoover Library on War, Revolution and Peace, and as instructor in history. He received his Ph.D. at Stanford in 1938.

Dr. Sterling was on leave from Caltech in 1939-40 as a Fellow of the Social Science Research Council, and again in the autumn of 1947 as a member of the resident civilian faculty of the National War College in Washington. A popular lecturer, he has also been a radio news analyst, and covered the United Nations Conference in San Francisco for CBS. Co-author of a history textbook published in 1939, Dr. Sterling is now preparing two books for publication—one on Canada and the refugee problem, another on British foreign policy since 1783.

He takes over his new post on July 1.

IN SHORT

DR. LINUS PAULING, Chairman of the Division of Chemistry and Chemical Engineering, flew to France this month to receive an Honorary Doctor's Degree from the University of Paris.

Dr. Edwin Powell Hubble, Astronomer and Research Associate, was selected "Man of the Year" by the Kappa Sigma Fraternity, and received a plaque memorializing the award at a banquet at the Hotel Huntington on Dec. 10.



Dr. J. E. Wallace Sterling, Stanford's President