

# The Month at Caltech

## NSF Grants

Two Caltech men have received senior postdoctoral fellowships from the National Science Foundation to do research in Europe

Albert Ellis, associate professor of applied mechanics, will go to Cambridge University in England for a year to study with colleagues there the basic mechanism for drag reduction of a group of long, thin molecular chains called non-Newtonian additives. When very small quantities (about 10 parts per million) of these additives are added to a liquid, objects move through it with substantially less frictional resistance. Dr. Ellis will study their properties with the aid of the very high speed laser photographic system he developed at Caltech with the support of the Office of Naval Research.

Julian Miklowitz, professor of applied mechanics, will work, for three months each, in Rome and Israel, on the solution of mathematical problems arising from the propagation of waves in solids. These involve waves generated by earthquakes, nuclear detonations and other explosions, and the effects of such waves on the dynamics of basic structures. Early in September Dr. Miklowitz will address the 11th International Congress of Theoretical and Applied Mechanics in Munich, Germany, on the subject of wave-scattering from objects and cavities in solids. This work is important in the design of underground shelters to enable them to withstand the effects of nuclear blasts.

## Caltech in India

Six Caltech men leave for India this month, with their families, to carry on research, to teach, and to develop curricula at the new Indian Institute of Technology at Kanpur for one year. Four are faculty members: Peter Fay, associate professor of history; Peter Mason, assistant professor of electrical engineering; Jon Mathews, associate professor of theoretical physics; and David Welch, associate professor of engineering design. The others are John B. Trenholme, graduate student in materials science; and Richard Carrouche, instrument specialist in electrical engineering.

The men are participating in a program to develop two of five institutes for advanced science and technology in India, supported by the U.S. State Department's Agency for International Develop-

ment. Russia, West Germany, and Great Britain are developing the three other institutes.

Caltech is one of nine universities in the U.S. participating in the program with the State Department through the International Cooperation Administration's Educational Services, Inc. Donald E. Hudson, professor of mechanical engineering, is the Caltech representative on the program's steering committee.

## ACS Award

Bruce H. Sage, professor of chemical engineering, has received the \$1000 American Chemical Society Award in Industrial and Engineering Chemistry for 1964. The award, sponsored by the Esso Research & Engineering Company, was given to Dr. Sage for "distinguished service to his country in the design and development of solid-propellant rockets," and for his research contributions to basic chemistry.

*Distinguished visitor to the campus - Dr. Robert Oppenheimer, here on May 14 to deliver a lecture to faculty and students in Beckman Auditorium on "Hope and Foreknowledge."*

