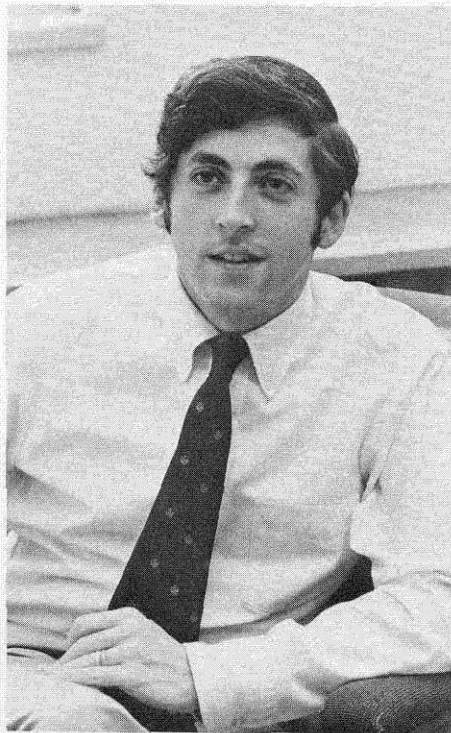


The Month at Caltech



John Seinfeld

Dreyfus Grant

John H. Seinfeld, associate professor of chemical engineering, is one of 17 young American scientists honored for achievements in teaching and research by the Camille and Henry Dreyfus Foundation of New York.

The Dreyfus grant program, which awards \$25,000 to each recipient, makes it possible for distinguished young chemists, chemical engineers, and biochemists in the academic world to develop themselves further, as teachers and researchers, early in their careers.

Seinfeld will use his award to expand research on the mathematical description of air pollutant behavior. The mathematical models he is developing will enable pollution control districts to predict more accurately the intensities and composition of smog under various meteorological conditions.

The 30-year-old chemical engineer is the third Caltech faculty member to be awarded a Dreyfus grant. The awards were initiated in 1970, when Robert Bergman, associate professor of chemistry, was a winner. Jesse L. Beauchamp, also an associate professor of chemistry, was honored last year.

Trustees

The month brought one loss and two additions to the Caltech board of trustees—and one of its long-time members received a humanitarian award.

Roy L. Ash has a new job because of the pressure of his appointment by President Nixon to head the office of Budget and Management. The president of Litton Industries has served on the Caltech board since 1967.

Richard P. Cooley and Gilbert W. Fitzhugh are new trustees. Cooley, a San Franciscan, is president and chief executive officer of the Wells Fargo Bank. Fitzhugh, a New York City resident, is chairman and chief executive officer of the Metropolitan Life Insurance Company, and president of the New York City Chamber of Commerce.

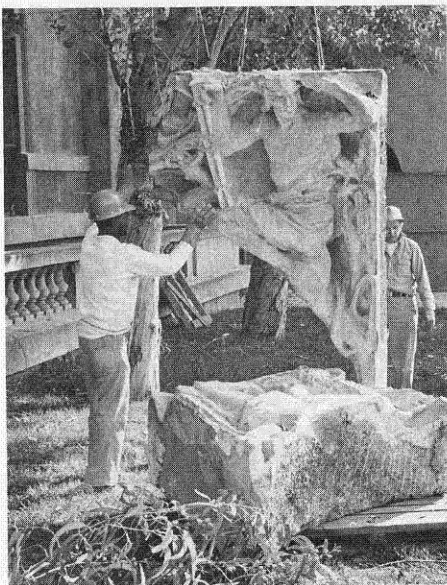
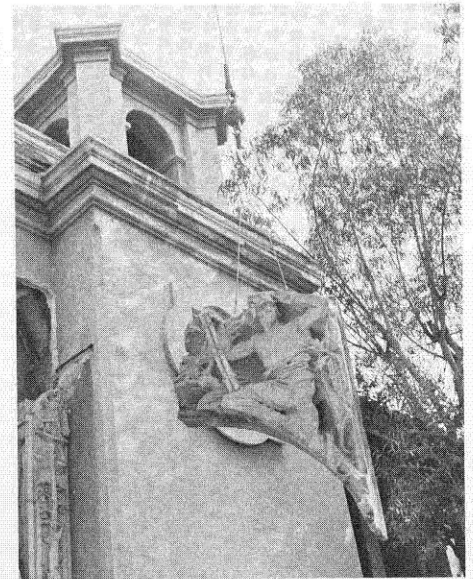
Harry J. Volk, a trustee since 1952, was given the Annual Human Relations Award of the Los Angeles chapter of the American Jewish Committee. Volk, chairman of the board of Unionamerica, Inc., was paid tribute by the speaker of the evening, Caltech President Harold Brown, and by business and civic leaders of the greater Los Angeles area.

Chemistry Chairman

John D. Baldeschwieler has accepted the chairmanship of the Division of Chemistry and Chemical Engineering, effective July 1—or possibly earlier. He will leave his White House post as Deputy Director of Science and Technology to join the Caltech faculty.

The 39-year-old physical chemist, one of the youngest men elected to the National Academy of Sciences two years ago, is widely known for his work on problems involving both chemistry and biology—an increasingly important area of research at Caltech.

Before going to Washington, Baldeschwieler was a professor of chemistry at Stanford. He received a bachelor's degree in chemical engineering from Cornell University in 1956, and a PhD in physical chemistry at the University of California at Berkeley in 1959. Before joining the Stanford faculty in 1965 he was an assistant professor of chemistry at Harvard University.



How Do You Know Till You Try?

When it was finally decided to tear down old Throop Hall (*E&S*, November-December 1972), it didn't look as if it would be possible to save the famous Calder sculptures over the front arches. But at the last minute the administration and the campus architect decided to give it a try.

To start with, a workman gingerly removed the big cement ball, representing the sun, in the heart of the center arch. At the first touch, the ball rolled out into the workman's hands.

The rest of the project was also relatively easy, although not quite so free-wheeling as the beginning. It was estimated that the work would take three days, but it was done in less than a day. All but one of the 46 pieces were down by mid-afternoon.

The pieces were then stacked on a truck and delivered to the City of Pasadena, which had agreed to preserve these relics of the community's past. The sculptures are in storage now, waiting for the city design commission to decide where, in or around the City Hall, they will be permanently installed.

The Month at Caltech . . . *continued*

NASA Medal

Gerry Neugebauer, professor of physics and staff member of the Hale Observatories, has been cited by the National Aeronautics and Space Administration for his contributions to infrared investigations of the planets. He was responsible for the infrared experiments on the Mariner 2 Venus exploration in 1962, the Mariners 6 and 8 Mars probes of 1969, and the Mariner 9 Mars exploration of 1971-72.

Neugebauer was awarded NASA's Exceptional Scientific Achievement Medal.

Leader of America

Those who knew Arthur Galston when he was on the biology faculty at Caltech from 1943 to 1955 were not surprised last year when they learned he was the first American scientist to visit the People's Republic of China. Galston's multi-directed and lively curiosity brightened the Caltech campus when he was a part of it, and does so again on January 18 and 19.

A professor of biology at Yale, where he has been since 1955, Galston reactivates the Caltech Y's "Leaders of America" series this month, speaking at an Athenaeum luncheon on "Education and Science in China" on the 18th, and that evening giving a public lecture in Beckman Auditorium on "Life in a Chinese Commune." Between speeches he is presenting a biology seminar on "Rhythmic and Photo Control of Leaf Movement."

Besides drawing a few deep breaths on the 19th, he meets for lunch with members of the Chinese Students Association and talks informally to student groups the rest of the day.



Front Yard Field Work

When Professor Dan McMahon recently assigned an ecology project to his class in Organismic Biology (Bi 7), some of the students headed for the ocean, others for the desert—and a few stayed right on campus. This team is studying the distribution of oxygen in the fishpond outside Ramo Auditorium.

Energy Conference

The way the reservations sailed in, the Environmental Quality Laboratory knew early in November that its December 9 conference on "Energy as a Scarce Resource" was going to outgrow the 415-seat Ramo Auditorium. And, as it turned out, 800 people gathered in Beckman Auditorium for the event, which was co-sponsored by EQL, the League of Women Voters, and the Sierra Club.

In the morning they heard from Lester Lees, EQL director; Hollis M. Dole, assistant secretary of the Department of the Interior; Michael McCloskey, executive director of the Sierra Club; and David Fogarty, vice president of the Southern California Edison Company.

At noon John Tunney, U.S. Senator from California, spoke to a capacity Athenaeum crowd on "Energy Policy: An

Agenda for the 93rd Congress."

Five afternoon panels brought together a representation of academic, governmental, and industry people, and members of public interest groups to tackle such critical topics as electric power and fossil fuel conservation, energy uses in transportation, and public policy and economic factors in the conservation.

In assessing the conference, EQL staff members agreed that it brought together "disparate and sometimes hostile viewpoints in a dispassionate, factual, and environmentally sensitive discussion." Two overall conclusions emerged: first, that the idea of cheap and unlimited energy is a myth; and second, that more people than you might think are dedicated to finding new ways to conserve the energy sources we still have.

Letters

Kitt Peak National Observatory
Tucson, Arizona

London

The Valkyries Ride Again

Maybe the rest of the world didn't know why the Houston Control Center played "The Ride of the Valkyries"—at full volume—to wake up the Apollo 17 crew on December 11, but no one at Caltech had any doubt. It's the traditional way to wake a student during final exam week at Caltech, and that was certainly the week it was, for Tech students and for astronaut and alumnus Jack Schmitt (BS '57).

It all came about after Mission Control at NASA's Manned Spacecraft Center in Houston tried to wake the Apollo crew on December 9 with the University of Kansas fight song, "I'm a Jay, Jay, Jayhawk." (Astronaut Ron Evans is a Kansas alumnus.) It got no rise from Evans or his somnolent fellow travelers, Schmitt and Eugene Cernan. Two Caltech undergraduates easily convinced Albert Hibbs, a JPL senior scientist and alumnus (BS '45, PhD '55), that Caltech could do better than that. Hibbs relayed the idea to NASA's Administrator James Fletcher (PhD '48). Fletcher carried through to a bravura Wagnerian finish.

Science for Mankind

Caltech's five-year Science for Mankind fund-raising campaign, launched in November 1967, has now been successfully concluded—exceeding its \$70.4 million goal by over half a million dollars.

The drive was instigated to provide additional support for endowing faculty salaries, for new buildings and renovations, and to cover increased operating costs of academic programs and the physical plant. During the campaign, seven new buildings were added and two more were started. Seven named professorships were established, most of them supported by endowments.

More than half of the campaign funds came from individual gifts, including \$12 million in bequests. More than a quarter of the total came from corporations. Caltech alumni contributed more than \$2 million, and the remainder came from foundations, societies, and other organizations.

EDITOR:

On Pages 17-18 of the October 1972 issue of *E&S* you reported to your readers that Drs. Chapman and Ingersoll [Andrew Ingersoll, associate professor of planetary science at Caltech] published evidence in *The Astrophysical Journal* (v. 175, pp. 819-835) to indicate that the Dicke-Goldenberg measurements of solar oblateness can be explained in terms of bright faculae in the sun's equatorial region and do not leave evidence for a rapidly rotating core. You did not mention that the Chapman-Ingersoll paper was followed in the same issue of the *Journal* by a rebuttal by Dr. Dicke who said that neither the original Dicke measurements of faculae nor those of Chapman and Ingersoll show a significant enough contribution to cast doubt on the original interpretation of solar oblateness given by Dicke. The referee and editor of the *Journal* felt that the problem had not yet been resolved and that both statistical analyses should be published side by side.

Helmut A. Abt, PhD '52
Managing Editor
The Astrophysical Journal

Dr. Ingersoll replies:

An obvious controversy does exist and the issue is still far from settled. This fact should have been much clearer in my remarks in the *E&S* article. In view of this controversy the last sentence was misleading in stating that the sun "must be oblate by a much smaller amount than Dicke originally claimed." However, in his rebuttal Dicke presented a statistical analysis indicating that faculae contribute only a small part (10 percent) of the excess solar oblateness measured at Princeton in 1966. Chapman and I argue that the facular contribution may be much larger and have submitted a paper replying to Dr. Dicke.

EDITOR:

I was more than usually interested in the neat explanation of the application of scientific theory and principles to the nature of the universe in James Gunn's "The Shape of Space" in your issue back in May. I have often wondered why scientists seem collectively to accept the expanding universe proposition which depends so heavily on the observed "red shift." I wonder why we can be sure there is not some tendency for light waves to slow down in frequency, or to straighten out, when they travel over enormous distances? How do we know they don't suffer from some slight diminution of energy on their long curved path through space that would explain the relationship between distance and "redshift" as readily as the convenient analogy with the Doppler observations?

R. S. MacAlister, '47
Managing Director
Occidental Petroleum (U.K.) Limited

Dr. Gunn replies:

The acceptance of the expansion of the universe as an explanation of the redshift is not done lightly, or indeed, without much dissension among workers in the field. The whole aim of cosmology is to understand the universe in the large in terms of known physical theory. The various "tired light" ideas for the redshift are not consistent with present physical theory. This does not say, of course, that next year someone will not invent a theory that is consistent with all known laboratory data and which predicts a spontaneous degradation of the frequency of light over large distances, but no such framework exists today. One could simply postulate, out of any context, that the phenomenon occurs, but one in so doing removes any possibility of understanding the universe in terms of known and verified physical laws.