

# Random Walk

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## *Honors and Awards*

Arnold Beckman, chairman emeritus of Caltech's Board of Trustees, has received the Bower Award for Business Leadership from the Franklin Institute in Philadelphia. He was honored for his inventiveness and philanthropic activities in the areas of research and development.

Chris Brennen, professor of mechanical engineering, was awarded the Fluids Engineering Award of the American Society of Mechanical Engineers "for exceptional contributions to fluids engineering through outstanding research, teaching, and service to ASME."

Peter Dervan, the Bren Professor of Chemistry, will receive the \$75,000 Arthur C. Cope Award at the 1993 meeting of the American Chemical Society for his work in DNA site recognition. Dervan has also won the Gibbs Medal of the Chicago Section of the ACS for his "creative ability" in the field of chemistry.

Samuel Epstein, the Leonhard Professor of Geology, Emeritus, has won the Wollaston Prize of the Geological Society. This prize was established in Great Britain in 1831 to "promote researches concerning the mineral structure of the Earth."

Peter Goldreich, the DuBridge Professor of Astrophysics and Planetary Physics, has been awarded the gold medal of the Royal Astronomical Society, its highest award, to recognize "his outstanding achievements, especially in planetary science."

Harry Gray, the Arnold O. Beckman

Professor of Chemistry and director of the Beckman Institute, received the \$6,000 Kaj Linderstrøm-Lang Prize in Copenhagen, for his "pioneering contributions to the study of the electron transport mechanism in proteins."

Philip Hoffman, associate professor of history and social science, has won the Arthur H. Cole Prize for his article "Land Rents and Agricultural Productivity: The Paris Basin, 1450-1789." The prize recognizes the outstanding article published in *The Journal of Economic History* in 1992.

Barbara Imperiali, assistant professor of chemistry, and Tomasz Mrowka, associate professor of mathematics, have been named Alfred P. Sloan Research Fellows.

Hiroo Kanamori, the Smits Professor of Geophysics and Director of the Seismological Laboratory, was awarded the \$20,000 Arthur L. Day Prize and Lectureship, presented every three years by the National Academy of Sciences to "a distinguished scientist and renowned lecturer on the physics of the earth."

Mark Konishi, the Bing Professor of Behavioral Biology, will share the \$50,000 Charles A. Dana Award for Pioneering Achievement in Health for his studies of nerve-cell death in song-bird development.

Manfred Morari, the McCollum-Corcoran Professor of Chemical Engineering, and Fredric Raichlen, professor of civil engineering, have been elected to the National Academy of Engineering. Caltech faculty members in the NAE now number 28.

Ares Rosakis, associate professor of aeronautics and applied mechanics, has received the Hetényi Award from the Society for Experimental Mechanics for the best paper in its field in 1991. Rosakis coauthored the paper, entitled "Quasi-static and Dynamic Crack Growth Along Bimaterial Interfaces: A Note on Crack-tip Field Measurements Using Coherent Gradient Sensing."

David Rutledge, professor of electrical engineering, earned the \$1,000 IEEE Microwave Prize for his paper "A 100-MESFET Planar Grid Oscillator," judged to be "the most significant contribution" to that field published in an IEEE journal.

Thayer Scudder, professor of anthro-

pology, whose work concerns the social consequences of forced resettlement, has won the American Anthropological Association's Edward J. Lehman Award for his "creative and valuable application of anthropology in the public sector."

Paul Sternberg, associate professor of biology and assistant investigator at the Howard Hughes Medical Institute, and Rochus Vogt, the Avery Distinguished Service Professor and Professor of Physics and Director of LIGO, have been elected fellows of the American Association for the Advancement of Science.

Nai-Chang Yeh, assistant professor of physics, has received a five-year Packard Fellowship in Science and Engineering to further her research in high-temperature superconducting materials. The award, which provides \$100,000 per year, recognizes the most promising young scientists in the nation.

Ahmed Zewail, the Linus Pauling Professor of Chemical Physics, has won the Wolf Prize in Chemistry for 1993 for his pioneering work in the new field of laser femtochemistry. The \$100,000 prize is awarded by the Jerusalem-based Wolf Foundation. Zewail has also been awarded the Earle K. Plyler Prize of the American Physical Society.



## Check Your Local Listings

Laszlo Keszthelyi, a graduate student in geology and planetary sciences, is coming soon to a TV set near you. He joins Jaime Escalante, America's best-known math teacher; Kathy Bates, winner of an Academy Award for *Misery*; Pat Morita, of *Karate Kid* fame; professional-wrestler-turned-actor Jesse "The Body" Ventura; rock 'n' roll parodist "Weird Al" Yankovic, and a cast of dozens of celebrities, scientists, and engineers in *Living and Working in Space: The Countdown Has Begun*, an hour-long special

airing Wednesday, March 31, at 8:00 p.m. on PBS.

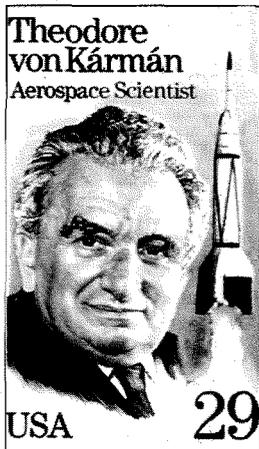
The program, set about 25 years in the future, revolves around Escalante's reading a letter from a former student (Raymond Cruz), now a mining engineer en route to the moon for his first job. Intercut with the letter are interviews with space professionals on subjects ranging from space medicine to micro-gravity agriculture.

Keszthelyi has been helping to test Russia's Mars Rover, part of their Mars '96 mission, here in the United States. He got involved in the Rover project through his advisor, Professor of Planetary Science and Geology Bruce Murray, and the Planetary Society. "As a geologist and planetary scientist, my primary mission was to locate test sites in the Mojave Desert that are both Mars-like and logistically accessible. And, as with any major field test, there was a lot of grunt work involved, for which grad students seem to be uniquely qualified."

The message is twofold: humanity will be living and working in space sooner than most people realize; and that just as dexterity with a rope and a gun was essential in the old west, facility with math and science will be the survival skills of the new frontier. And space is not just for astronauts—the celebrities appear in vignettes depicting such down-to-Earth careers as raising children, playing baseball, and working for the Department of Moon Vehicles.

The program was produced by the Foundation for Advancements in Science and Education, with support from ARCO and the Department of Energy. NASA underwrote the package of educational materials that accompany it.

# Random Walk continued



## Postage Due

Victor Wouk, MS '40, PhD '42, of New York City, who has previously appeared in these pages promoting hybrid and electric vehicles (*E&S*, May–June 1980) now offers a contribution wearing a different hat—that of “Ardent Advanced Amateur Philatelist.” He figures stamps are a legitimate subject for *E&S* ever since, as he puts it, “Richard Feynman came out of the closet with respect to Tannu-Tuva” (Summer 1991).

The recent issue of a 29-cent stamp in honor of Theodore von Kármán inspired Wouk’s recent letter in which he states his belief that there have been “more stamps issued featuring scientists and engineers closely affiliated or associated with Caltech than with any other institute of learning in the USA.” He hastens to add that he doesn’t mean “just people; Harvard probably wins this hands down, with US presidents.”

Besides von Kármán, Wouk notes stamps honoring Caltech’s former leader Robert A. Millikan (37 cents) and Chester Carlson (21 cents), BS '30, inventor of the photocopying machine. He’s even willing to stretch a bit to include Einstein (“he did spend some time at Tech”) and other “Caltech-related items” such as Palomar Observatory and an assortment of spacecraft, including Pioneers I and II, Mariner, and Viking, in his campaign to carve a philatelic niche for Caltech.

Wouk adds: “I think that someday, if the US Postal Service continues to issue commemoratives at the rate associated with former colonies of Britain that use

stamps as a major source of revenue, Richard Feynman will be so honored. However, it cannot be done until after the year 2000. Why? Because a person must be dead for at least 10 years before a commemorative can be issued, presidents excepted.”

Perhaps alumni and members of the Caltech community will get to vote on whether to depict a young Richard Feynman or an old Richard Feynman.

## So Much for Linear Equations

Hockey archrivals Caltech and MIT did battle in Beaver Cup VII on February 14. The Cup is named for the mascot of both teams (and of practically every other engineering school in the country, for that matter), and originally pitted Caltech’s club team—which consists of graduate students, faculty, staff, and JPL employees as well as undergrads—against the MIT varsity. Caltech lost the first Cup, 3-11, and the second, 0-13, due in part to a ten-to-one advantage in student-body size at That Other Technical Institute, and to a scarcity of sub-zero days in Pasadena that limits the opportunities to practice. At that point, Caltech redefined its goal to beating a team of MIT alumni. Since then, the scores have been 0-2, 1-6, 0-2, and 1-2. The trend is intuitively obvious, and this was the year the lines should cross. Caltech lost, 0-4.