Walker's project in the year 2000 was to build a fortepiano (an 18th-century forerunner of the modern piano). He took its design from a full-scale drawing in the Smithsonian Institution, believed to be of an instrument built about 1795 by Johan Ludewijk Dulcken. Walker's wife, Dottie, sits at the keyboard.

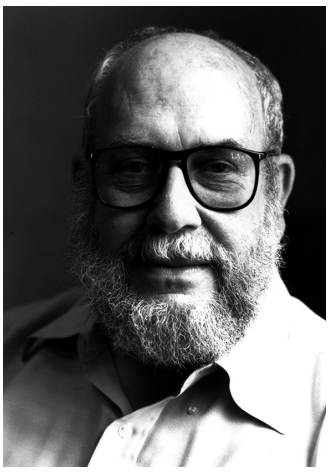
would have been successful in setting up a high energy physics program at Caltech. You made major contributions at every stage from the earliest ideas of what we would do to the present. These contributions were of wide variety from the initial plans of our synchrotron, to its construction and successful use for elucidating the first nucleon resonance, and to many subsequent photonucleon experiments." In listing Walker's "major contributions," Bacher wrote: "As I put them down I realize even more how impressive they are and how much we are in your debt."

In New Mexico, Walker turned to something completely different: he built harpsichords, which have been in great demand by professional musicians throughout the Southwest. Several years ago Walker tackled a fortepiano. It took him, he wrote, about 650 hours to build and another 200 hours "to cure its deficiencies." The "principal challenges were forming the bentside, taming the idiosyncrasies of the action, and figuring out how to convince the upper notes to make more musical sound and less clunk.

"Why would anyone want to make a fortepiano? Well, it's something different and it was fun."

Dorothy Walker died in 2003. They are survived by their two children, Robert Craig Walker and Jan Walker Roenisch. □—*JD*

Thomas K. Caughey
1927 – 2004



Thomas Kirk Caughey, the Hayman Professor of Mechanical Engineering, Emeritus, died Tuesday, December 7, in Pasadena. He was 77.

A native of Rutherglen, Scotland, Caughey earned bachelor of science degrees in mechanical and electrical engineering from Glasgow University, a master's degree from Cornell University, and a doctorate in engineering science from Caltech. He joined the faculty in 1953 as an instructor, and spent his entire career here. He was named the Hayman Professor in 1994, and in 1996 became the Hayman Professor Emeritus.

Caughey's research involved nonlinear differential equations, stability theory, stochastic processes, vibrations and acoustics dynamics, and classical physics. He was involved in a Sloan Foundation project on campus in the early 1970s to use the campus interactive computer facilities in teaching applied mathematics and engineering systems analysis.

He is survived by his wife, Jane; four children, Penelope, William, Catherine, and Christine; four grandchildren; and six great-grandchildren.

A memorial service is planned and will be covered in a subsequent issue of *E&S*. □

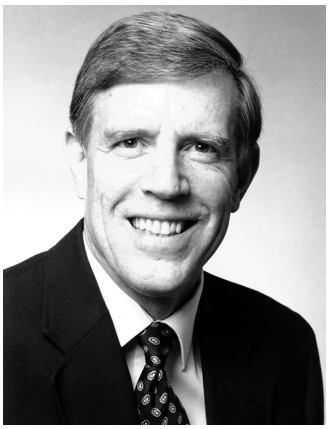
Iwan to Coordinate Tsunami, Quake Investigations

Wilfred Iwan, professor of applied mechanics, emeritus, and director of the Earthquake Engineering Laboratory, has been appointed by the Earthquake Engineering Research Institute to coordinate the tsunami and earthquake investigations that the EERI is conducting as part of its Learning from Earthquakes program. This effort includes more than three dozen investigators from universities, government agencies, and private firms carrying out field studies in the countries devastated by the December earthquake and tsunami in South Asia.

"There are many lessons to be learned from this extraordinary event," said Iwan. "These range from science and engineering to societal impact and public policy. We must improve our understanding of such events so that we can prevent such catastrophes from happening in the future."

Iwan will be working with leading seismologists, tsunami experts, civil and structural engineers, lifeline engineers, and social scientists to compile a comprehensive picture of the events and to extract lessons for research and practice in other countries at risk.

EERI is a multidisciplinary, national, nonprofit, technical society. Its Learning from Earthquakes program is more than 30 years old and is funded by the National Science Foundation. □



Wilfred Iwan

Honors and Awards

Richard Andersen, the Boswell Professor of Neuroscience, has been selected by the McKnight Endowment Fund for Neuroscience to receive a 2005 Neuroscience of Brain Disorders Award. According to the fund, "Andersen's laboratory has made progress in developing a 'brain-machine interface' to help people with severe paralysis." The award of $300,000 over three years, beginning in February 2005, will help Andersen test this device—a "'cognitive cortical prosthetic' that would 'read' the intentions of people with severe paralysis, enabling them to direct their movements"—with human patients.

Frances Arnold, the Dickinson Professor of Chemical Engineering and Biochemistry, has been elected to the Institute of Medicine (IOM) of the National Academy of Sciences. Candidates for membership are "nominated for their professional achievement and commitment to service," according to the institute, and, "with their election, members make a commitment to devote a significant amount of volunteer time as members of IOM committees, which engage in a broad range of studies on health policy issues."

Paul Asimow, assistant professor of geology and geochemistry, has been selected as the 2004 James B. Macelwane Medalist of the American Geophyscial Union, awarded for significant contributions to the geophysical sciences by an outstanding young scientist.

David Baltimore, president of Caltech and Nobel laureate, has been named by California state treasurer Phil Angelides to the Independent Citizens Oversight Committee, which will oversee the spending of $3 billion in state bond money approved by Proposition 71 for stem-cell research. The committee is made up of representatives of the five University of California campuses with medical schools, and of members appointed by the governor, lieutenant governor, treasurer, controller, senate president pro tempore, and speaker of the assembly.

Kaushik Bhattacharya, professor of mechanics and materials science, has received two honors. Named the 2004 recipient of the Young Investigator Medal from the Society of Engineering Science "in recognition of his contributions to engineering science in the areas of thin films, active materials and continuum mechanics," he was awarded the medal during the society's annual meeting in October at the University of Nebraska, Lincoln. He was also presented by the Applied Mechanics Division of the American Society of Mechanical Engineers with the 2004 Special Achievement Award for Young Investigators in Applied Mechanics, this at the 2004 International Mechanical Engineering Congress and R&D Exposition in November in Anaheim, California, "in recognition of his seminal contributions in identifying the critical crystallographic features that govern shape memory behavior in solids and thin films."

Andrew Blain, assistant professor of astronomy, has been awarded the Newton Lacy Pierce Prize in Astronomy for 2005 by the American Astronomical Society. Blain was cited for his outstanding contributions to submillimeter and far-infrared astronomy.

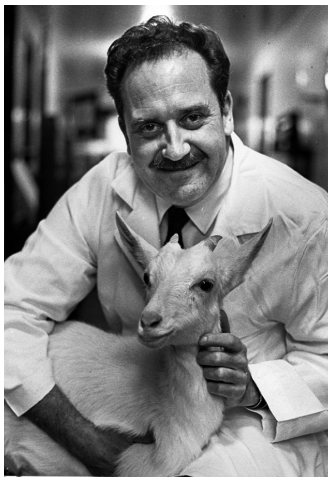
Yanbei Chen, postdoctoral scholar in theoretical astrophysics, has been selected to receive a Sofja Kovalevskaja Award, which is funded by Germany's Federal Ministry of Education and Research. The award sum of up to 1.2 million euros gives recipients "an opportunity to concentrate on high-level, innovative research work in Germany, virtually without administrative constraints, in order to promote the internationalization of research in Germany."

Charles Elachi, Caltech vice president, director of the Jet Propulsion Laboratory, and professor of electrical engineering and planetary science, "in recognition of outstanding dedication and service to the national security of the United States" has been chosen to receive the Bob Hope Distinguished Citizen Award for 2005. The award will be presented by the National Defense Industrial Association at a black-tie dinner scheduled to take place February 25. During his 30-year career at JPL, Elachi has "played the lead role in developing the field of spaceborne imaging radar from a small research area to a major field of scientific research and application."

Tom Hou, the Powell Professor of Applied and Computational Mathematics and executive officer for applied and computational mathematics, is the first recipient of the Morningside Gold Medal in Applied Mathematics. Awarded to outstanding mathematicians of Chinese descent under the age of 45, the Morningside Medals are intended to encourage the pursuit of mathematical truth. Hou was honored at the Third International Congress of Chinese Mathematicians "for his seminal research on applied partial differential equations, scientific computation and numerical analysis."

Shri Kulkarni, the MacArthur Professor of Astronomy and Planetary Science, has been chosen as this year's Marker Lecturer at Pennsylvania State University. He will give three lectures: on cosmic explosions ("Gamma-Ray Bursts and More"), space interferometry ("Planets and Parallaxes and More"), and millisecond pulsars ("Extreme Physics, Extreme Matter, and More").

Harald Pfeiffer, Sherman



The University of Wisconsin–Madison has endowed the Ray Owen Chair in Transplantation in its Surgery Department. Owen, a Caltech faculty member since 1947 and now a professor emeritus of biology, grew up on a Wisconsin dairy farm and took his PhD in genetics at UW in 1941. He stayed on as a faculty member, studying the inheritance patterns of blood groups in cattle. In the mid-1940s, he noticed that blood samples from non-identical twin cows contained cells of the other twin's type as well as its own. But in transfusions, mixing blood types can be fatal. Owen realized that by exchanging blood in the womb, each twin had somehow learned to live with the other's cells. This discovery of "immune tolerance" helped make organ transplants without tissue rejection possible.
At left, Owen and one of his "research assistants" pose for the camera in 1968.

Fairchild Postdoctoral Scholar in Caltech's numerical relativity group, has been selected to receive the American Physical Society's 2005 Nicholas Metropolis Award for Outstanding Doctoral Thesis Work in Computational Physics. "Established to recognize doctoral thesis research of outstanding quality and achievement in computational physics and to encourage effective written and oral presentation of research results," the award consists of $1,500 and a certificate, which will cite Pfeiffer for "his outstanding research on determining initial data for the dynamics of black holes."

John Preskill, the MacArthur Professor of Theoretical Physics, has been invited to deliver the prestigious Rouse Ball Lecture for 2005 at the University of Cambridge. He will speak on "Quantum Information."

Anneila Sargent, the Rosen Professor of Astronomy and director of the Owens Valley Radio Observatory, has been invited to be the 2005 Oort Professor at Leiden University, the Netherlands; she will give the Oort Lecture in April and then will visit for approximately a month in the summer.

Tapio Schneider, assistant professor of environmental science and engineering, has been honored with the first annual James R. Holton Award for Junior Atmospheric Scientists, receiving the prize on December 14 at the annual meeting of the American Geophysical Union in San Francisco. He was honored for "outstanding research contributions by a junior atmospheric scientist within three years of his PhD."

Kip Thorne, the Feynman Professor of Theoretical Physics, has been chosen to receive the 2005 Common Wealth Award in Science on April 23 in Wilmington, Delaware. According to the award letter, the selection committee was impressed not only by Thorne's reputation as an outstanding scientist, but also by his mentoring of younger colleagues. The committee, the letter continues, "speaks highly of your ability to take a very esoteric subject and make it understandable to even non-scientists. Your reputation as a professor is inspiring to see at a time when university students need encouragement to help further interest in scientific research for the sake of pure sciences." The award carries a cash prize of $50,000 and a sculptured metal trophy symbolic of the honor.

Nai-Chang Yeh, professor of physics, has been elected a fellow of the American Physical Society, with her citation reading: "For her contributions to the understanding of cuprate superconductors, vortex dynamics and phase transitions of extreme type-II superconductors, and physical properties of ferromagnetic perovskite oxides."

Kai Zinn, professor of biology, has been selected by the McKnight Endowment Fund for Neuroscience to receive a 2005 Neuroscience of Brain Disorders Award. The award will enable Zinn's research group to further evaluate Pumilio—an RNA-binding protein that represses protein translation—in yeast and fly systems. This work may have implications for studies of human brain function and dysfunction, since humans have a close relative of Pumilio that is expressed in the brain. The award will comprise $300,000 over three years, beginning in February 2005. □