

WE HEAR THAT

APS Bestows Accolades at Fall Meetings

The American Physical Society is presenting several prizes and awards this fall.

At the APS Division of Fluid Dynamics meeting this month in Syracuse, New York, the Fluid Dynamics Prize will be given to **Parviz Moin**, the Franklin P. and Caroline M. Johnson Professor of Mechanical Engineering at Stanford University. Moin is being cited for "his pioneering work of direct numerical simulation and large-eddy simulation of turbulent flows in the study of turbulence physics, modeling and control; for developing novel approaches in turbulence research using a computer-generated database as the primary resource; and for his leadership in the international turbulence research community as the founding director of the Center for Turbulence Research."

Also at the fluid dynamics meeting, the Otto Laporte Award will be given to **Donald E. Coles** for "his contributions to fluid dynamics through exquisite experiments on turbulent boundary layers, Taylor-Couette flow, vortex rings and turbulent wakes, and his insightful analysis of turbulence data. His research and teaching have inspired several generations of students and researchers throughout the world." Coles is a professor of aeronautics emeritus at Caltech.

Four individuals will be recognized during the APS Division of Plasma Physics meeting in Denver this month. The James Clerk Maxwell Prize will go to **Thomas Michael O'Neil**, a professor of physics at the University of California, San Diego. O'Neil is being cited for his "seminal contributions to plasma theory, including the effect of trapping on Landau damping, the plasma-wave echo, and the confinement, transport and thermal equilibria of non-neutral plasmas, liquids and crystals."

This year's Award for Excellence in Plasma Physics Research will be shared by **Christopher E. Clayton** and **Chandrasekhar Joshi** for "their pioneering experiments in plasma-based accelerator concepts; particularly for their unambiguous experimental demonstration that electrons can be accelerated to relativistic energies by the beating of two laser beams in a plasma with their frequency

difference equal to the plasma frequency." Joshi is a professor of electrical engineering at the University of California, Los Angeles, and director of UCLA's Center for High Frequency Electronics. Clayton is the project manager for the Neptune Laboratory at UCLA.

The winner of the 1996 Simon Ramo Award, which recognizes outstanding doctoral thesis work in plasma physics, is **Michael Alan Beer**, who is being recognized for his "fundamental contributions to the development of simulations of gyrofluid equations for studying tokamak plasma turbulence, including a novel fluid model of trapped electrons that led to realistic comparisons with experiments." Beer received his PhD in 1994 from Princeton University, where his thesis adviser was Greg Hammett, and he is now a post-doctoral fellow at the Princeton Plasma Physics Laboratory.

At the Interdisciplinary Laser Science Conference in October, the Arthur Schawlow Prize in Laser Science was given to **Theodor W. Hänsch** in recognition of "his many outstanding contributions to laser spectroscopy including his extraordinary measurement of the spectrum of atomic hydrogen." Hänsch is the executive director of the Max Planck Institute for Quantum Optics in Garching, Germany.

AGU Honors Three in Baltimore

At the American Geophysical Union's meeting in Baltimore last May, three individuals were recognized by AGU for their contributions to geophysics. **Dara Entekhabi** and **David R. Hanson** were each presented with the James B. Macelwane Medal, and **Neil D. Opdyke** received the Fleming Medal.

AGU cited Hanson for "placing [stratospheric] heterogeneous processes on a quantitative footing, discovering new heterogeneous processes, making it possible to include heterogeneous reactions realistically in atmospheric models, discovering mechanisms of some heterogeneous reactions and defining how laboratory measurements need to be made for atmospheric purposes." Hanson is a research associate with the Cooperative Institute for Research in Environmental Science, which is run jointly by the University of Colorado, Boulder, and the National Oceanic and Atmospheric Administration's Aeronomy Laboratory.

Entekhabi was recognized for "representing subgrid-scale hydrologic processes in climate models, identifying land-atmosphere feedback mechanisms and climate intransitivity, and solving the inverse problem for soil moisture remote sensing." Entekhabi is an associate professor of civil and environmental engineering at MIT.

Opdyke, a professor of geology at the University of Florida, was chosen for "pioneering work in the use of marine sediments to study the Earth's magnetic field, especially with regard to polarity reversals, and the development of magnetic stratigraphy."

IN BRIEF

Andrew J. Millis has moved from Bell Laboratories, Lucent Technologies, in Murray Hill, New Jersey, where he was a member of the technical staff, to Johns Hopkins University, where he is an associate professor in the physics and astronomy department.

Mal Teich has moved to Boston University, where he is a professor of electrical and computer engineering, biomedical engineering and physics. Formerly, he was a professor of engineering sciences at Columbia University.

The 1996 recipient of the Japan Prize is **Charles Kuen Kao**, vice-chancellor and president of the Chinese University of Hong Kong. He was cited for "his prediction on the potential capability of optical fiber for low loss, broadband information transmission." The prize is given by the Science and Technology Foundation of Japan.

On 1 September, **Ray Goldstein** became an associate professor in the physics department at the University of Arizona. He had been an assistant professor of physics at Princeton University.

The 1995-96 recipient of the award given every five years by the Lord Corporation of Erie, Pennsylvania, is **Gregory Benford**, a professor of physics at the University of California, Irvine. Benford was cited for "contributions to astrophysics and the general public understanding of science."

At the end of August, **David Huse** assumed a new position as a professor in the physics department at Princeton University. Huse had been a distinguished member of the technical staff in the theoretical physics research department at Bell Laboratories, Lucent Technolo-

gies, in Murray Hill, New Jersey.

In July, **Chang C. Tsuei**, a scientist at IBM's T. J. Watson Research Center in Yorktown Heights, New York, was elected to Academia Sinica, the national science academy of Taiwan.

Gary W. Rubloff is the new director of the Institute for Systems Research at the University of Maryland at College Park. He has moved to Maryland from North Carolina State University in Raleigh, where he was associate director of the National Science Foundation Engineering Research Center for Advanced Electronic Materials Processing, and professor of electrical and computer engineering.

OBITUARIES

Shih-tung Tsai

Shih-tung Tsai, a longtime professor of plasma physics at the Institute of Physics in Beijing, died in Beijing from liver cancer on 20 June 1996.

Tsai was born in Shanghai on 1 May 1938. As a youth, he moved with his parents to Taiwan, where he graduated from Tunghai University in Taichung with a BSc in physics in 1960. He then studied at Dartmouth College, where he received a master's degree in physics in 1965. Finally, he went to Princeton University, where he studied under Thomas H. Stix at the plasma physics laboratory and was awarded a PhD in astrophysical sciences in 1969.

After completing his doctoral work, he served as assistant research physicist and lecturer for two years at the University of California, San Diego, where he worked on large-amplitude wave properties. He then spent two years as a fellow and a visiting research assistant professor at the University of Maryland at College Park, where he worked on nonlinear thermodynamic bounds.

Motivated by his deep love for China and his strong desire to help advance science in that country, he took a permanent position in 1973 as a research scientist at the Institute of Physics—a unit of the Chinese Academy of Sciences—in Beijing. There, he worked for the remaining 24 years of his scientific career, being promoted to the rank of professor in the 1980s. He served as the leader of the plasma theory group and also as the head of the plasma physics division. Concurrently, he held professorships at four other Chinese universities.

His research was in the areas of plasma physics, nuclear fusion and space plasmas. Especially well known

Among the ten individuals chosen to receive the first Presidential Awards for Excellence in Science, Mathematics and Engineering Mentoring were **Di-ola Bagayoko** of Southern University and A&M College in Baton Rouge, Louisiana, and **Janet S. Herman** of the University of Virginia at Charlottesville. President Clinton announced the awards in September.

Kenneth G. Purchase, a graduate student at the University of Illinois at Urbana-Champaign, has received the New Focus Research Award, given to doctoral candidates by New Focus Inc. The award will support his work on a distributed Bragg pulse shaper for ultrafast packet generation.



SHIH-TUNG TSAI

were his papers on the effects of energetic particles on tokamak stability; drift instabilities in general magnetically confined high-beta plasmas; and micro-instabilities and radiation in space plasmas.

He was very active in promoting the field of plasma physics and controlled nuclear fusion in China. In 1985, he founded the Association for Plasma Studies in China and served as its director. In that same year he established the China Summer School for Plasma Physics. He was also a member of the standing committee for the China Association of Nuclear Fusion and Plasma Physics, as well as a specially invited delegate of the China Association for Science and Technology. In 1987, he was appointed as a special member of the China Center of Advanced Science and Technology, headed by T. D. Lee and G. C. Zhou.

Tsai was also very active in promot-

ing international collaborations. In 1979, he participated in the Autumn College on Plasma Physics at the International Centre for Theoretical Physics in Trieste, Italy. He was again at the ICTP as a visiting member in the early 1990s. For purposes of collaborative research, he journeyed to the US a number of times for extended visits to the Princeton Plasma Physics Laboratory, the Institute for Fusion Studies at the University of Texas, the University of Maryland and the University of California, Irvine. He also spent extended periods of time at universities in Hong Kong and at Nanyang Technological University in Singapore. Last year, he participated in the creation of the Asia-Pacific Center for Theoretical Physics, and this year was a member of the executive committee for the 1996 Asia-Pacific Plasma Theory Conference.

In 1995, he was elected an Academician of the Chinese Academy of Sciences.

Shih-tung Tsai devoted his whole life to physics, to his family and to his motherland. He was an excellent plasma theorist with an international reputation, and will be fondly missed by many colleagues in several countries. In addition, he was noted for being kind and patient with his students and associates, a diligent learner and a tireless instructor. We have lost not only a true friend and an outstanding physicist, but also a genuinely sincere human being.

LIU CHEN

University of California, Irvine

CHUAN SHENG LIU

University of Maryland at College Park

JAMES W. VAN DAM

University of Texas at Austin

Michel M. Ter-Pogossian

Michel M. Ter-Pogossian, an internationally known pioneer in the use of cyclotron-produced radionuclides in biomedical research and an emeritus professor of radiology at Washington University's Mallinckrodt Institute of Radiology, died suddenly on 19 June 1996, while on a visit to Paris. He was 71 and the cause of death was a heart attack.

Ter-Pogossian was born in Berlin, Germany, but lived in France for most of his early years. He earned a BA degree in science from the University of Paris in 1943 and studied with Madame Jolie Curie at the Institute of Radium. Ter-Pogossian moved to St. Louis and became a graduate student at Washington University in the fall of 1946 and, while studying for a master's degree, worked in the physics department as a research assistant. He re-