

the college of engineering at the University of Utah in Salt Lake City.

Felix J. Weinberg, professor emeritus of combustion physics at Imperial College, London.

Marvin H. White, Sherman Fairchild Professor of Electrical Engineering at Lehigh University.

IN BRIEF

The Foundation for Research and Technology-Hellas in Greece has named **Raymond E. Goldstein**, an associate professor of physics and of applied mathematics at the University of Arizona, as the winner of the Pnevmatikos Award in Nonlinear Science for 2000. The foundation recognized "his contributions to the understanding of pattern formation involving the dynamics of filaments, interfaces and surfaces, combining powerful mathematical methods with penetrating physical arguments, numerical computations, and experiments to clarify nonlinear phenomena in a wide variety of physical and biological systems." The award will be presented next month at an international conference on Crete.

At the American Physical Society March meeting in Seattle, **Taekjip Ha**, an assistant professor of physics at the University of Illinois at Urbana-Champaign, received the 2001 Outstanding Young Researcher Award from the Association of Korean Physicists in America. The association acknowledged Ha for "his truly outstanding scholarly and pioneering research on the biological physics in the field of single-molecule fluorescence."

Dirk Rischke joined the University of Frankfurt in Germany earlier this year as the chair for theoretical heavy-ion physics. He previously was a RIKEN-BNL Research Fellow with the Brookhaven National Laboratory theory group. Rischke succeeds **Walter Greiner**, who will retire in three years. Until that time, Rischke and Greiner will be working together to ensure a smooth transition.

At the annual Institute of Electrical and Electronics Engineers honors ceremony next month in Jersey City, New Jersey, **Herwig Kogelnik** will receive the IEEE's highest award, the 2001 IEEE Medal of Honor. Kogelnik is adjunct photonics systems research vice president at Lucent Technologies' Bell Labs in Holmdel, New Jersey.

According to the citation, he is being acknowledged for "fundamental contributions to the science and technology of lasers and optoelectronics, and for leadership in research and development of photonics and lightwave communication systems."

On the occasion of his retirement in March from MIT's Plasma Science and Fusion Center, **Dieter J. Sigmar**, senior research scientist, received the US Department of Energy's Distinguished Associate Award. He was honored, in part, for his "con-

tributions to our understanding of plasma confinement, the physics of burning plasmas, and the role of the plasma edge," according to the citation, which also noted that his "commitment to international fusion collaboration and stimulation of theory programs around the world has been critical to our progress in fusion science research." Sigmar plans to continue working on transport theory in tokamak plasmas with his MIT colleagues and following developments worldwide in the physics of burning plasmas.

OBITUARIES

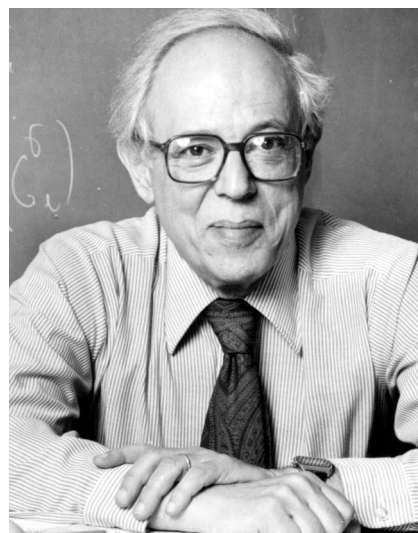
Abraham 'Bram' Pais

Abraham "Bram" Pais had two remarkable careers. As a particle physicist, he was a leader in the tumultuous quarter century after World War II. As a chronicler of physics and biographer of physicists, he has left a rich legacy of firsthand information and insight for the readers of today and the science historians of the future. He died of heart failure on 28 July 2000 in Copenhagen.

Bram was born on 19 May 1918 in Amsterdam, where he spent his childhood and school years. He earned BSc degrees in physics and mathematics at the University of Amsterdam in 1938 and an MS in physics at the University of Utrecht in 1940. In 1941, during the early years of the German occupation of the Netherlands, he obtained his PhD in theoretical physics, the last PhD from Utrecht awarded to a Dutch Jew during the occupation. His thesis adviser was George Uhlenbeck.

The horrors of the later stages of the occupation claimed his sister Annie, but Bram survived by hiding with the help of a friend, Tina Strobos. This remarkable story appears in *To Save a Life: Stories of Holocaust Rescue*, by Ellen Land-Weber (University of Illinois Press, 2000); for an excerpt, see "Bram Pais Tells His Story" at <http://sorrel.humboldt.edu/~rescuers/book/Strobos/BramPais/BramPaisStory1.html>. His harrowing wartime experience stayed with him throughout his life. But so did his friendship with Tina. Attendees will not forget her emotional participation in his 70th birthday symposium at Rockefeller University.

When the war ended, after a brief but exciting time in Denmark where he worked with Niels Bohr (and



ABRAHAM "BRAM" PAIS

invented the term "lepton" for particles like the electron and muon), Bram came to the US in 1946 and joined the Institute for Advanced Study in Princeton, New Jersey.

In the next 25 years, he made many important contributions to elementary particle theory. His work centered on quantum field theory and symmetry, but was always motivated and informed by the unfolding drama of experimental particle physics. He made many solid technical contributions, such as his precise definition of G -parity with Res Jost and his treatment of $SU(6)$ symmetry breaking. But he is primarily associated with two sweeping and beautiful ideas.

The first of Bram's grand breakthroughs was the general idea of "associated production" as an explanation for the puzzling properties of strange particles. Bram's notion was that the strong interactions might somehow have selection rules that constrained them to produce the new