

A CALL FOR PAPERS

COMPUTERS IN PHYSICS

*A new periodical
from the
American Institute
of Physics*

Computers in Physics, a combination magazine and peer-reviewed journal published bimonthly by the American Institute of Physics, is soliciting papers on computer use in physics and astronomy.

We are interested in papers which describe novel ways physicists have applied computers to their work in the lab or the classroom, as well as details of original research about computer applications in related fields such as optics, acoustics, geophysics, rheology, crystallography, vacuum science, and medical physics.

Please address all papers for this new publication to Robert R. Borchers, Editor, **Computers in Physics**, PO Box 5512, Livermore, CA 94550. Papers should be organized according to the American Institute of Physics Style Manual.

COMPUTERS IN PHYSICS

Dick Christian was an extremely modest, kind and gentle man. While at Los Alamos he developed a deep affection for the local residents and soon married Marie Roybal of the San Ildefonso Pueblo. His outstanding scientific achievements were complemented by equally outstanding personal qualities, among these his generosity and kindness to friends, family and colleagues and his devotion to his children. He and Marie entertained often in their home, and he was perhaps happiest when his guests mingled with congeniality and collegiality. We will remember him with fondness and admiration.

FRANCIS T. COLE

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New York, New York

William A. Steyert

At the age of 55, after a lengthy illness, William A. Steyert died on 2 May 1988 in Allentown, Pennsylvania. He was well known in the physics community for his work at very low temperatures and in the cryogenic refrigerator community for his contributions in that field.

He was raised in Allentown and obtained his BS (1954) at MIT and his MS (1956) and PhD (1960) at Caltech in physics and mathematics. As a postdoctoral student at the University of Illinois he helped John Wheatley set up the present low-temperature research laboratory. He also helped in the development of a new double demagnetization cryostat for cooling liquid He³ to 2 mK, and he measured the specific heat of He³.

Steyert spent the next 21 years at Los Alamos, where he worked with Edward Hammell and William Keller and pursued fundamental research at very low temperatures by means of one of the early helium dilution refrigerators that he built. His physics research focused on several crucial reciprocal relationships between nuclear physics and solid-state physics. His early studies of the Mössbauer effect led to successful searches for new resonances, to studies of the broad fundamentals and ramifications of the Mössbauer effect, and to its use as a powerful probe of magnetic interactions in the solid state. These last studies were then extended to a detailed and definitive examina-

tion of the Kondo state. Similarly, he led a collaboration in a series of studies of the gamma-ray angular distribution from oriented or polarized nuclei. He first developed the appropriate experimental methods at ultralow temperatures, then explored the basic phenomena in a number of nuclei, and finally applied the techniques to other basic problems. These included accurate measurements of temperatures in the millikelvin region; determinations of nuclear structure—decay schemes, nuclear magnetic moments, parity mixings and so on—of gamma emitters; and, as a crowning achievement, the development of enhanced sensitivity in detecting violation of parity conservation and time-reversal invariance in gamma decays.

In the mid-1970s his interest shifted from low-temperature physics to producing low temperatures. He did much of the pioneering work in exploring magnetic refrigeration at temperatures from the mK range up to 300 K. He also explored metal hydride compressors and an elastomer diaphragm Joule-Thompson compressor.

In 1982 Steyert joined APD Cryogenics (then a division of Air Products and Chemicals) to pursue his interest in refrigeration. He worked with Ralph Longworth on a "solid state" J-T compressor and a new heat exchanger for small 4-K refrigerators. His last accomplishment was the development of a new miniature heat exchanger for very-fast-cooldown J-T coolers.

Steyert was one of that rare breed of physicists who excel at experimental physics while hiding their expertise behind a wall of genuine humility and friendliness. He cultivated many interests outside his work, among them fishing, skiing and cycling. He cherished the time he spent with his family. Steyert was a physicist's physicist—an instant friend, a trustworthy colleague, a winning grin, a patient answer, a critical comment and an interspersed joke.

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