

Rochester in New York, as vice president of OSA for 2003. Beginning her term on 2 January, she succeeds **Peter Knight** and will become president-elect in 2004 and president in 2005. **Michael Morris** will take the helm as OSA president in 2003.

Houde-Walter received her undergraduate degree in liberal arts from Sarah Lawrence College in Bronxville, New York, in 1976 and then her MS and PhD in optics from the University of Rochester in 1983 and 1987, respectively. She joined the faculty of the Institute of Optics at Rochester in



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1987 as an assistant professor. In 1989, she cofounded LaserMax, a manufacturer of diode-laser-based products for law enforcement and industry. Houde-Walter served as president of the company from 2000 to 2002. She has since returned to teaching, but still plays an active role at LaserMax. Her research interests include novel optical materials, optical and x-ray spectroscopy, and optoelectronic design.

"OSA exists to promote discoveries in optical physics and advances in optical technology," says Houde-Walter. "There are plenty of these, as evidenced by recent Nobel prizes for work in optics . . . and contemporary experience. . . . Our organization is healthy, both financially and intellectually, and our members are willing to experiment with new ways to advance the field." She adds, "We are increasingly an international organization, which brings challenges as well as opportunities. We are up for the challenge, and, all said, it is a very good time to be part of the OSA."

In other OSA election results, also taking office on 2 January will be three new directors at large: **Ursula J. Gibson** (Dartmouth College), **James R. Leger** (University of Minnesota), and **Alexander A. "Sandy" Sawchuk** (University of Southern California).

IN BRIEF

After 20 years in Bell Labs research in Murray Hill, New Jersey, most recently as a distinguished member of the technical staff, **R. Bruce van**

Dover joined Cornell University in October as a professor of materials science and engineering.

In October, the National Academy of Engineering presented its 2002 NAE Founders Award to **Stuart W. Churchill** at the academy's annual meeting in Washington, DC, for his "outstanding leadership in research, education, and professional service, and for continuing contributions in combustion, heat transfer, and fluid dynamics for over half a century." He is the Carl V. S. Patterson Professor Emeritus of Chemical and Biomolecular Engineering at the University of Pennsylvania. The award included a \$2500 cash prize and a gold medal.

At its annual conference in Lisbon, Portugal, in October, the Academia Europaea, located in London, awarded its 2002 ERASMUS Medal to **Harold W. Kroto**, cowinner of the 1996 Nobel Prize in Chemistry. A research professor at the UK's University of Sussex at Brighton and president of the Royal Society of Chemistry, Kroto was honored for his "significant contributions to European scholarship, both through his discoveries of 'Buckminsterfullerene' [buckyballs] and through his major efforts in the fields of scientific literacy, education, and public awareness of the value of science."

The South African Institute of Physics gave its highest award, the De Beers Gold Medal, this year to **Walter Dieter Heiss** at its 47th annual conference in Potchefstroom, South Africa, in September. Heiss, professor of physics at the University of Stellenbosch in South Africa, was recognized for his "contributions to quantum theory and the potential of his latest work to greatly influence ideas and thinking which are fundamental to our understanding of chi-

ality and how left-right symmetry might be broken."

The London-based World Technology Network has announced the individual and corporate winners of its World Technology Awards for 2002. Of the individual winners, four work in physics-related fields. **Angela Belcher**, associate professor of materials science and engineering and of biological engineering at MIT, was named the winner in the materials category. **Roger-Maurice Bonnet** collected an award in the space category. He is the deputy director general for science at the French Space Agency (CNES) and former director of the science program at the European Space Agency. The winner in the energy category is **Ashok Gadgil**, senior staff scientist at Lawrence Berkeley National Laboratory. In the information technology-hardware category, the winner is **Shuji Nakamura**, professor of materials and director of the Center for Solid State Lighting and Displays at the University of California, Santa Barbara. The awards honor both individuals and companies that contribute significantly to the advancement of promising technologies for the benefit of business and society.

Fusion Power Associates presented its Special Awards for Education and Outreach last June. The two award winners were **Paul Rivenberg** and **Paul Thomas**, both of whom work at MIT's Plasma Science and Fusion Center. Rivenberg is the communications and educational outreach coordinator. Thomas, a technical supervisor, is also known by his colleagues and the public as "Mr. Magnet"—for bringing hands-on electromagnetism demonstrations to elementary and middle schools in New England.

OBITUARIES

Franco Rasetti

Franco Rasetti, the last survivor of Enrico Fermi's "the boys of Via Panisperna," died of natural causes on 5 December 2001 in Waremmé, Belgium, where he lived from 1977 until a few months after his 100th birthday.

Rasetti was born on 10 August

1901 in Pozzuolo Umbro, a small village not far from Perugia in central Italy. As a young boy, he developed a particular inclination toward the natural sciences, thanks to a family background in which scientific interests were widely represented and cultivated. Rasetti's uncle, Gino Galeotti, a distinguished professor of pathology in Turin, was instrumental in devel-



FRANCO RASETTI

oping those interests.

In 1918, Rasetti enrolled in engineering at the University of Pisa, where he met Enrico Fermi. Primarily because of the influence of his new friend, he decided to switch his major to physics. As Rasetti once said, "I learned from him far more physics than I did from the professors." He received his PhD in physics in 1922. His doctoral thesis, prepared under the supervision of Luigi Puccianti, a prominent figure of Italian physics in the field of spectroscopy, was on the anomalous dispersion in alkali-metal vapors.

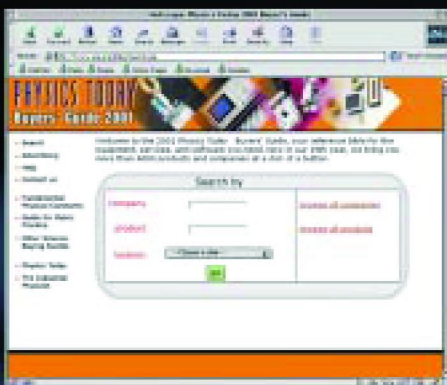
In 1927, after spending a few years as an assistant to director Antonio Garbasso at the physics institute of the University of Florence, Rasetti was invited by Orso Mario Corbino to join the physics institute on the Via Panisperna in Rome, where Corbino was director. Fermi had just been named as the Rome institute's chair of theoretical physics—the first-ever chair of theoretical physics at any Italian university. Rasetti spent the 1928–29 academic year at Caltech under a Rockefeller Foundation grant. There, he completed his first important work: studying the newly discovered Raman effect in gases. In particular, his results on the nitrogen spectrum showed that the ^{14}N nucleus was a boson and forced a revision of the prevailing nucleus model that was based on the existence of nuclear electrons. The solution to the problem came later (in 1932) with the discovery of the neutron. While Rasetti was at Caltech, Corbino had managed to create a chair for spectroscopy at the institute in Rome; Rasetti won the competition for that chair in 1930.

By the early 1930s, Fermi's Rome group was moving from spectroscopy

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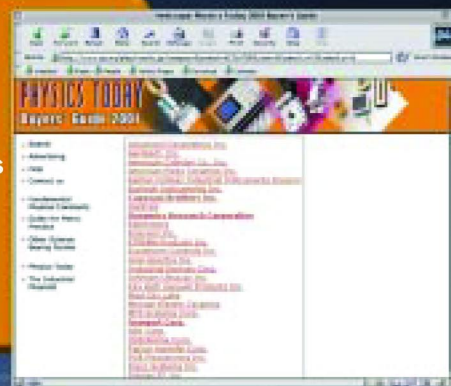
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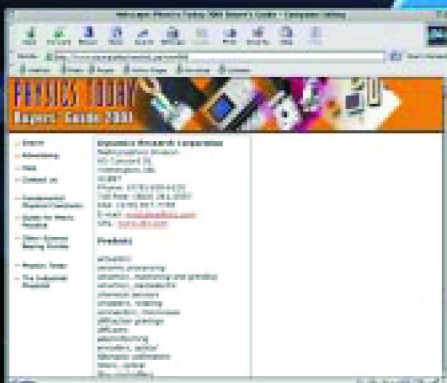
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to nuclear physics. Rasetti's experimental skills proved of vital importance in work that led Fermi and his group, between March and October of 1934, to the discovery of neutron-induced radioactivity and of the unexpected properties of slow neutrons. Rasetti had become the group expert in the preparation of radioactive sources and, on another Rockefeller fellowship, spent 1931–32 learning radioactive techniques under Lise Meitner at the Kaiser Wilhelm Institute for Chemistry outside Berlin.

Rasetti traveled again in 1935 to spend a year at Columbia University, where he worked on slow neutron resonances and taught at Cornell University's summer school. On his return to Italy, he found a deteriorating environment; as he put it, "Fascism was rapidly turning from the nuisance it had represented up to that time to a tyranny affecting our everyday lives." When the racial laws promulgated in 1938 forced most of his friends and colleagues to emigrate, Rasetti could no longer find good reasons to stay in Italy and started looking for a position abroad.

In 1939, he accepted an invitation from the Université Laval in Quebec City, Canada, where a science faculty had just been created, to head the new physics department. In a matter of months, Rasetti transformed the two-room department into a modern laboratory. There, he resumed work on slow neutrons, and, in 1941, he turned to cosmic-ray research. He single-handedly built more than 60 Geiger-Müller counters and the electronic circuits by which he was the first to roughly measure the lifetime of the muon—what was then called the mesotron.

Like his spectroscopic work at Caltech, Rasetti's research on the lifetime of the muon illustrates his style of doing physics: a single, skilled researcher who performed experiments in splendid isolation, shunned large cooperative enterprises, and focused on one project until he had completely mastered it. Not surprisingly then, Rasetti did not look forward to the prospect of being involved in military research during World War II. His dislike for large, controlled enterprises coupled with his ethical objections to the use of science for destructive purposes led him to refuse an offer in early 1943 to take a position with a group of British scientists who had been transferred from England to Montreal and were working on the military use of nuclear energy. As Rasetti later noted, "There

are few decisions I ever made in my life that I had less reason to regret."

Following the war, as physics moved toward the "big science" complex, Rasetti began seeking out work that would fit his styles and rhythms. While at Laval, he resumed his old interest in the Earth sciences, collecting trilobites. That interest soon evolved from a marginal pastime to a full-time endeavor, and he quickly became remarkably competent in paleontology. In 1947, he left Laval for a more attractive professorship in physics at Johns Hopkins University. However, his physics research was reduced to a minimum in the years that followed while he focused almost exclusively on geology and paleontology. His contributions to those fields earned him a reputation in scientific circles comparable to that already earned by his accomplishments in nuclear physics.

Rasetti kept doing fieldwork for a long time after retirement, climbing hills, collecting fossils and flowers, and contributing in various ways to different branches of the natural sciences. A born naturalist-turned-physicist almost by chance, he returned in his later years to that kind of scientific practice—individualistic, free from constraints, and feasible with limited means—that, as he said, could still be found in the natural sciences and that he felt physics had lost. Nonetheless, in the wake of Rasetti's relatively short trajectory in physics are some of the more remarkable experimental results of the 20th century. Rasetti's work is a splendid testimony of a style of research that, although by now may be lost, is so much more worth remembering.

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Peter Meyer

Peter Meyer, a distinguished cosmic-ray physicist, died in Chicago on 7 March 2002 from a stroke, following a long illness.

Peter was born in Berlin, Germany, on 6 January 1920 and grew up in the liberal environment of an educated, music-loving physician-family, attending an all-French-speaking high school. He studied physics at the Technical University in Berlin, with Hans Geiger as one of his teachers, and earned a degree as *Diplom-Ingenieur* in 1942. His partially Jewish origin put Peter in severe danger in Nazi Germany and excluded him

from completing his doctoral studies.

After the war, Peter attended the University of Göttingen and received his PhD in physics in 1948 under the guidance of Wolfgang Paul. His thesis was on a precision measurement of the deuteron's binding energy.

Peter continued nuclear physics research at the University of Cambridge as a member of the university's staff and as a postdoctoral fellow. From 1950 to 1953, he worked as a staff scientist at the Max Planck Institute for Physics in Göttingen.

In 1953, Peter accepted an invitation from John Simpson to become a research associate at the University of Chicago's Institute for Nuclear Studies (now the Enrico Fermi Institute). With Simpson, he used detectors on military airplanes and high-altitude balloons to study global and time variations of cosmic rays. This work was essential to differentiating between galactic, solar, and terrestrial effects on the observed cosmic-ray intensities. From observations of a giant solar flare in February 1956, Simpson, Peter, and Eugene Parker concluded that interplanetary space contains a magnetic field embedded in a plasma; that idea later led to the concept of the solar wind.

Peter became an assistant professor in the physics department at Chicago and in the Institute for Nuclear Studies in 1956. He advanced to full professorship by 1965, served as the director of the Enrico Fermi Institute from 1978 to 1985, and was chair of the physics department from 1986 to 1989. He became a professor emeritus in 1990.

Peter collaborated with Simpson on some of the earliest cosmic-ray detectors flown in space. Simultaneously, he started an independent research program that would make use of increasingly sophisticated instrumentation on giant stratospheric balloons. Using purely electronic detectors, he succeeded in 1961, with his graduate student Rochus Vogt, in identifying the electron component in the cosmic rays, independently of the cloud chamber observations of James Earl at the University of Minnesota, made at the same time. A key question, whether these electrons were secondary debris from cosmic-ray collisions in interstellar space, or were mostly accelerated in primary cosmic ray sources, could be decided by measuring the proportions of negative electrons and positrons. Together with one of us (Hildebrand) and graduate students Jack Fanselow and Robert Hartman, Peter designed