



SOOK-IL KWUN

perconducting Tokamak Advanced Research project, which is modeled on the Princeton Plasma Physics Laboratory's canceled Tokamak Physics Experiment. Design and construction are now under way, with operation scheduled to begin in five years.

South Korea has seen a succession of science ministers over the past year, most recently economist Yong-Jin Kim, who served a quick two months before being ousted, along with other cabinet members, over a bank loan scandal. "My impression is that the latest cabinet the president has put together is a squeaky clean one," says George Mason University's Thomas Ratchford, an expert on South Korean science policy. "Kwun is a well-regarded scientist—he's there as a technocrat." But Kwun's tenure is also likely to be a short one. Following next February's presidential elections, he plans to return to his professorship at SNU.

JEAN KUMAGAI

AGU Creates Medal to Honor Lehmann

The American Geophysical Union has established a medal in honor of Inge Lehmann, a pioneering Danish seismologist who discovered the existence of Earth's inner core. This is the first AGU award to be named for a woman; appropriately, Lehmann was the only woman to have garnered the union's highest honor, the Bowie Medal. The biennial Inge Lehmann Medal will recognize outstanding research on the structure, composition and dynamics of Earth's mantle and core. Donald Helmberger of Caltech is the first recipient; he will accept the



INGE LEHMANN

award at AGU's fall meeting in San Francisco.

In proposing the medal's creation, the AGU fellows committee noted that "her career symbolizes the essence of careful and inspired observational inference in global seismology." From 1928 to 1953, Lehmann headed the seismology department of the Danish Geodetic Institute in Copenhagen. Her breakthrough discovery came in 1936, when, after comparing seismograms from a 1923 New Zealand earthquake, she suggested that a discontinuity (now known as the Lehmann discontinuity) divides Earth's core into inner and outer regions, each having distinct seismic velocities.

Following her retirement in 1953, Lehmann continued and even expanded her research, conducting shear wave studies of Earth's upper mantle. She had by then gained renown within the seismological community, and much of her later work she did abroad, at such places as Lamont Geological Observatory and Caltech's Seismological Laboratory. She died in 1993 at the age of 104 (see *PHYSICS TODAY*, January 1994, page 61).

Lehmann was notable not only for her work but also as a woman scientist. According to Bruce Bolt of the University of California, Berkeley, who has written about Lehmann's life and work, her intellectual curiosity was nurtured by her family, particularly her father, a well-known Danish psychologist. She also benefited from her early education at a progressive school run by an aunt of Niels Bohr's, where boys and girls received the same schooling and encouragement. The discrimination she experienced in later years proved disappointing by comparison. "You should know how many incompetent men I had to compete

with—in vain," she once remarked. Ruth Simon, a longtime friend and fellow seismologist, says Lehmann "got put down a lot [by male colleagues]. She didn't marry or do the conventional things that women were supposed to do." Whatever Lehmann accomplished, says Simon, "she did it by hard work."

JEAN KUMAGAI

Survey Finds Tight but Volatile Academic Job Market

Despite recent improvements in the overall US economy, the academic physics job market—the largest employer of PhD physicists—continues to be a tight one, according to a recent survey by the American Institute of Physics. But academic employment is also experiencing considerable volatility, due to early retirements, deferred retirements and frozen positions that departments have not been allowed to fill.

The US physics faculty population (including tenured, tenure-track and "soft money" staff positions, but not postdocs) grew by only 1% between 1994 and 1996, to a total of 8450. One-third of the departments had staff vacancies created by faculty members who had left, retired or died. But of the estimated 345 tenured or tenure-track positions vacated in 1996, nearly a third had been frozen.

Among those newly hired in 1995–96, about half had earned their PhD in the US before 1992. Of the new hires in PhD departments, 19% had earned their degrees outside the US, compared to only 3% in bachelor's departments. Temporary positions accounted for about a quarter of the new hires in PhD departments and nearly half of those in bachelor's and master's departments.

Condensed matter physics continued to be the most sought-after subfield, with 28% of those newly hired having that specialization. At PhD departments, elementary particle physics was the second most common subfield among new hires; at bachelor's departments, it was atomic, molecular and optical physics. About 12% of all new hires came from astronomy or astrophysics.

In the two-year period 1994–96, retirements created a total of 254 openings, with about half of the retirees taking advantage of early-retirement programs. Although the retirement rate is expected to remain at around 2% through next year, master's and bachelor's departments projected higher retirement rates of 3.3% and

3.2%, respectively.

About three-quarters of the responding departments gave the racial and ethnic composition of their faculties, which averaged out to 87% white, 9% Asian, 2% African American and 2% Hispanic. But since all-white departments would have been more likely to withhold information on ethnicity, these figures may somewhat exaggerate the presence of minorities, the survey report concluded.

Single copies of the 1995-96 *Academic Workforce Report* are available free of charge from the Education and Employment Statistics Division, AIP, One Physics Ellipse, College Park, MD 20740; phone 301-209-3070, e-mail stats@aip.org.

JEAN KUMAGAI

IN BRIEF

The Tokamak Fusion Test Reactor at the Princeton Plasma Physics Laboratory was permanently shut down in the wee hours of 4 April. It

was the world's most powerful fusion reactor, and in 1994 set the still-standing record of 10.7 MW for fusion power production. A total of about \$1.6 billion "as-spent" dollars were invested in its design, construction and operation. TFTR was closed because of Federal budget cuts and a corresponding change in focus in US fusion research. (See PHYSICS TODAY, January, page 54.) Between 150 and 200 positions at PPPL will be cut in June as part of a full-scale reorganization of the lab.

On March 20 the European Space Agency council appointed Antonio Rodotà, an electronics engineer from Italy, to a four-year term as director general of ESA. He succeeds Jean-Marie Luton, who announced in December that he would not seek a third term.

Denis Weaire, a solid state and materials theorist at Trinity College in Dublin, Ireland, is the new president of the European Physical Society. His two-year term began on 1 April. ■

Web Watch: Patents and Reader Suggestions

This month's offerings are sites with patent information, and a few suggestions from readers.

▷ <http://www.ibm.com/patents> If you studied last month's article on patent basics for physicists, by James Richardson and Craig Wood (PHYSICS TODAY, April, page 32), perhaps you're now considering patenting your design for a nanotechnology mousetrap. To check if anyone has patented a similar device in the past 26 years, go to this IBM patent search Web site. The site provides the text descriptions from patents issued by the US Patent and Trademark Office (USPTO) since 1971 and images of patents issued since 1980. When the images from 1971-80 are added, the site will boast over a terabyte of data, stored on about 2800 CD-ROMs.

▷ <http://www.uspto.gov/> The USPTO home page has a variety of patent and trademark information, and allows searching of its on-line patent bibliographic database, which goes back to 1976. It also provides an extensive list of international patent offices at <http://www.uspto.gov/web/menu/other.html>.

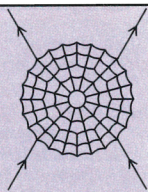
▷ <http://astro.nmsu.edu/~cgarasi/astropp.html> This student resource page is intended for graduate and undergraduate students seeking employment or funding. Space science is emphasized but many of the links are of more general interest. The page provides numerous links to US national laboratories and government research agencies, and to information on fellowships, summer programs and job search engines.

▷ **More BEC:** Readers have recommended two sites for adding to our list of atom laser and Bose-Einstein condensation (BEC) sites (PHYSICS TODAY, March, page 70). One is <http://physics.nist.gov/Pubs/Bec/TofCont.html>. This is the special issue on BEC of the *Journal of Research of the National Institute of Standards and Technology* (July-August 1996). The lead-off article is a very readable February 1996 colloquium on BEC by Eric Cornell. All the articles are available in pdf (portable document format). The other site is the BEC page of the University of Oxford BEC theory team, <http://eve.physics.ox.ac.uk/Personal/ruprecht/BEC/BEC.html>.

Both of these sites and numerous others on BEC can be found linked to the Georgia Southern University BEC home page listed in the Web Watch for March.

All links mentioned in Web Watch are included on PHYSICS TODAY's home page, <http://www.aip.org/pt/>. If you have suggestions for other topics or sites to be covered in Web Watch, please e-mail them to ptwww@aip.acp.org.

Compiled by GRAHAM P. COLLINS



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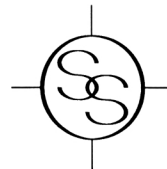
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