

Advanced Research (CIAR).

A private nonprofit organization started in 1982 by medical-doctor/researcher-turned-entrepreneur Fraser Mustard, the CIAR is unusual in the way it supports research: The institute chooses a field, and then forms a loose network of 20 or so scientists spanning many disciplines, for whom it buys time off from teaching, and pays for postdocs, technicians, conferences, and visits to other institutions. The money goes for people, says CIAR president Stefan Dupré, "not for bricks, mortar, or equipment. We call ourselves a 'university without walls.'" The networks are particularly useful in a place like Canada, where researchers are geographically dispersed. Each network is intended to build on an existing core of scholarship in Canada—although only about half of the 160 or so CIAR members live there, Dupré notes.

"The idea is to generate groups that will excite and inspire each other through their work and their interdisciplinarity," says Martin Moskovits, a University of Toronto physical chemist who in late October was named director of the nanoelectronics program. CIAR networks "bring people together who may not meet at other scientific meetings," he adds. The new program, for example, includes physicists, chemists, materials scientists, and engineers whose research involves, among other things, quantum transport, photonic bandgap materials, lithographic and other techniques for creating nanostructures, and materials synthesis. This fall, at the first nanoelectronics meetings, says Moskovits, "you could see the venetian blinds roll up over their eyelids. Theorists were saying, 'I didn't know that was doable.' At the same time, people who can synthesize [nanostructures] don't have to do it blindly. They can work to inspire [development of] devices."

With nanoelectronics, the CIAR now has a total of nine programs in both the social and natural sciences. Physicists participate in four of the nine: superconductivity, Earth systems science, cosmology, and the science of soft surfaces and interfaces (which, however, is being phased out). Programs are reviewed every five years.

Each program receives about Can \$1 million (US \$673 000) a year of the CIAR's \$10 million annual budget, with about half of the total being provided by private donors, one-fifth by provincial governments, and the rest by the federal government, which kicks in one dollar for

every two raised elsewhere. Much of the private money was donated on a one-time basis about five years ago to rescue the institute from closing, Dupré says. And with the current round of federal funding expiring next March, the CIAR has asked the government to double its contribution, by matching outside sources dollar for dollar.

TONI FEDER

Journal Comparison Shopping Revisited

A buck spent on academic journals tends to go further when the publisher is a nonprofit rather than a commercial company. That and other conclusions of a study undertaken last year by the University of Wisconsin—Madison agree broadly with the findings of a 1988 study by the late physicist Henry Barschall (see *PHYSICS TODAY*, July 1988, page 56).

Using the same methods employed by Barschall to calculate the buyer's cost per 1000 characters and cost per citation frequency, the 1998 study evaluated 94 physics journals,

as well as economics and neuroscience publications. Of the three fields, physics journals were found to have the lowest average cost, and neuroscience journals had the lowest average cost per citation frequency. Commenting on the study, AIP's executive director Marc Brodsky says "it's important to note that the 1998 findings used the institutional subscription rates paid by Madison, and that such rates could vary by country." (The study is summarized in the August 1999 newsletter of the Association of Research Libraries; for the full text see <http://www.library.wisc.edu/projects/glsdo/cost.html>.)

Notably absent from the 1998 study are publications issued by Gordon & Breach Science Publishers, which had sued Barschall, the American Institute of Physics (the publisher of *PHYSICS TODAY*), and the American Physical Society in four countries, for "illegal comparative advertising." Although Gordon & Breach was ultimately unsuccessful (except in France, where litigation is still pending; see *PHYSICS TODAY*, October 1997, page 93), its journals weren't included, says Madison libraries

AIP Industrial Physics Forum Held at Exxon

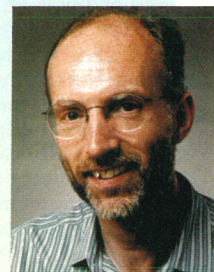
Technological Innovation for Energy in a World without Walls" was the theme of this year's Industrial Physics Forum for Corporate and Academic Leaders—the new name for the American Institute of Physics' Corporate Associates annual meeting—which was held in October at Exxon Research & Engineering in Clinton, New Jersey.

More than 200 industrial and academic physicists, chemical engineers, and policymakers attended the meeting, including physicist and New Jersey Representative Rush Holt. They mingled, toured some of Exxon's research labs, and participated in talks on the economic, environmental, geopolitical, technical, and scientific aspects of energy consumption and production. For example, Exxon representatives reported on physics-based R&D efforts to find and transport oil.

At the meeting, AIP awarded its 1999–2000 prize for industrial applications of physics, cosponsored by General Motors Corp and worth \$10 000, to Stuart Parkin of IBM's Almaden Research Center in San Jose, California, for his "pioneering discoveries and original device demonstrations on giant magnetoresistive (GMR) sensors leading to the realization of GMR read head technology for the magnetic recording industry."

And AIP's 1999 science writing award was shared by John Archibald Wheeler, an emeritus professor of physics at Princeton University, and his former student Ken Ford (who was AIP's executive director from 1987 to 1993), for their collaboration on Wheeler's memoirs, *Geons, Black Holes and Quantum Foam: A Life in Physics* (Norton, 1998).

Next year's Industrial Physics Forum will be held in San Diego on 5–7 November at General Atomics, and will explore the theme "Physics, Energy, and Defense—Synergistic Interactions." More information is available on-line at <http://www.aip.org/aip/corporate/general/meeting.html>.



PARKIN



JOHN ARCHIBALD WHEELER (center) and Ken Ford (right) collect their science writing award from AIP's director of programs, Jim Stith.

TIM INGOLDSBY/AIP

director Ken Frazier, "because G&B impact factors are no longer available, and because the journal issues we needed for the study hadn't come in by our cutoff date."

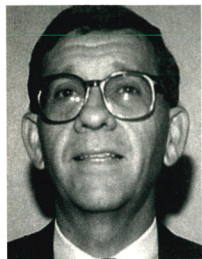
The university plans to carry out similar studies in other fields in both the social and natural sciences. Says Frazier, "I've always felt that the G&B lawsuits against Henry Barschall were a blatant assault on academic freedom. By doing the studies, we want to assert our right to investigate the cost effectiveness of journals and to demonstrate the continuing usefulness of Barschall's methodology." The results of such studies are used by libraries under budgetary pressure to aid in making choices about which subscriptions to cut, he adds.

TONI FEDER

Coffey Will Lead AAPM in 2001

Charles W. Coffey II, chief of clinical physics at Vanderbilt University Medical Center, has been elected president-elect of the American Association of Physicists in Medicine. Coffey's term begins on 1 January, and he will assume the presidency in 2001. AAPM's president for 2000 is Kenneth R. Hogstrom of the University of Texas M. D. Anderson Cancer Center in Houston.

Coffey, who holds a PhD in bionucleonics from Purdue University, has investigated radiation dose verification and quality assurance methodologies in clinical radiotherapy and is presently doing intravascular brachytherapy dose measurement studies. He has also been active in the teaching and training of graduate students and postdocs in medical physics.



COFFEY

In other results of the AAPM elections, Gerald A. White Jr, a clinical medical physicist with a private practice in Colorado Springs, Colorado, was elected secretary of the association, and Howard I. Amols (Memorial Sloan-Kettering Cancer Center and Cornell University), Mary Ellen Masterson-McGary (Holmes Regional Medical Center, Melbourne, Florida), Maryellen Lissak Giger (University of Chicago), and Michael T. Gillin (Medical College of Wisconsin) were elected to the AAPM board of directors.

Brinkman Is Elected Vice President of APS

On 1 January, William Brinkman will take office as vice president of the American Physical Society. He will succeed George Trilling and will become president-elect of APS in 2001 and president in 2002.

Brinkman is vice president of physical sciences research at Bell Laboratories, Lucent Technologies, where he has spent much of his career. He joined Bell Labs in 1966, after receiving a PhD in physics from the University of Missouri. Brinkman left in 1984 to become vice president of research at Sandia National Laboratories, but returned in 1987, when he was named executive director of the physics research division. He has held his current position since 1993, overseeing a \$200 million annual research budget for physical sciences, optoelectronic and electronic devices, fiber optics, and related areas.

Also taking office next month will be the new chair-elect of the APS nominating committee, Curtis Callan Jr, a professor and chairman of the physics department at Princeton University. The four new members of the APS council are Stuart Freedman (University of California, Berkeley), Margaret Murnane (University of Colorado at Boulder), Philip Phillips (University of Illinois at Urbana-Champaign), and Jin-Joo Song (Oklahoma State University).



BRINKMAN

IN BRIEF

New management for ORNL. A university-nonprofit partnership has received a \$2.5 billion, five-year contract to manage the Department of Energy's Oak Ridge National Laboratory. Under the new contract, which takes effect on 1 April, the lab's research on the environment, fusion energy, advanced computing, nuclear physics, and renewable energy will be overseen by the University of Tennessee system; the Battelle Memorial Institute (of Columbus, Ohio); and Oak Ridge Associated Universities (made up of Duke University, Florida State University, Georgia Institute of Technology, North Carolina State

University, University of Virginia, and Virginia Polytechnic Institute and State University). Among the biggest projects now under way at the lab is the planned \$1.3 billion Spallation Neutron Source. Work on nuclear weapons will be run separately by Lockheed Martin Corp, which currently manages the entire lab. Meanwhile, the search continues for a successor to Oak Ridge director Alvin Trivelpiece, who plans to step down at the end of March.

CERN outreach. Beginning in January, CERN (formally the European Laboratory for Particle Physics) located in Switzerland, near Geneva, will increase its emphasis on education and technology transfer, joining a growing worldwide trend of courting taxpayers. A new CERN division, headed by Juan Antonio Rubio, a particle and nuclear physicist from Spain, will sponsor a variety of endeavors, such as traveling exhibitions on high-energy physics, as well as educational programs for the more than 30 000 people who visit CERN each year, Rubio says. The division's other main charge will be to step up CERN's collaborations with industry. For example, with more than half of young scientists going into industry after their lab stays, one aim is to help them get jobs by strengthening ties between CERN and companies in its 20 member countries. The new division will also stress patenting ideas developed at CERN, and getting industry to commercialize them. "It's really knowledge transfer, more than technology transfer," Rubio says, adding that the goal is not to earn income for CERN, but to "be at the service of society"—and to stave off future attacks on the lab's budget.



RUBIO

Physics competitions journal. The first issue of a new biannual journal on physics competitions is due out this month. *Physics Competitions* will cover national and international physics meets, and will include reports and announcements, tests, questions from tournaments, and student research submitted for judging to the International Conference for Young Scientists. The journal is being modeled on a similar mathematics publication, says editor Hans Jordens, a physicist at the University of Groningen and an organizer of the Dutch Physics Olympiad, which for