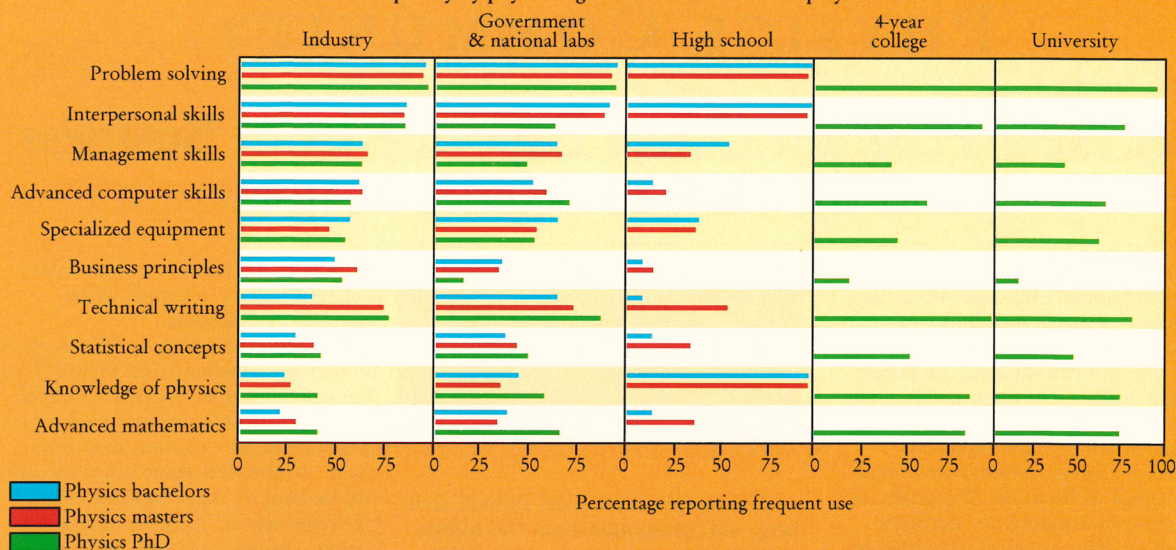


STAT OF THE MONTH

Skills used frequently by physics degree holders in various employment sectors



Source: AIP survey of $\Sigma\Pi\Sigma$ members, 1994 (stats@aip.org).

about science. These attitudes are just as important as the skills."

An excursion to the real world

Arion continues to contact companies and laboratories across the country about hiring students for summer internships. Reflecting the nature of the program, however, an internship would probably not be in research; students might, for example, work in the contracting or technology-transfer office of a government laboratory or in the purchasing office of an industrial firm. Arion hopes that the students can act as "brokers" between the technical people and the business people "because they're going to have both sets of skills."

Upon returning to Carthage for their final year, students will work on senior projects based on their summer experiences. For example, one might write an industrial R&D proposal for a new product. In addition to understanding the science or technology behind the product, the student would also be expected to investigate the product's business potential.

Businesspeople at all levels are encouraging the program, said Arion, adding that local firms have contributed about \$35 000. Senior people see programs of this sort as a way to save them the time (and hence the costs) needed to train their science-educated employees, and junior people believe that taking the courses themselves would fill gaps in their education and increase their chances of moving ahead faster.

Although the program is inde-

pendent of any division or department at Carthage, Arion is also a member of the physics department there. Prior to that he spent ten years at Science Applications International Corporation. His research centered on the effects of x rays and gamma rays on equipment, and when he left he was SAIC's assistant vice president and manager of the applied physics and engineering division at the New Mexico office. As a result he has both the experience and the contacts necessary for his current position: Since Hedberg's endowment covers only Arion's salary, a large part of his job is proposal writing and fund-raising.

Flexible physics

On hearing of Carthage's idea, both Roman Czujko, manager of the education and employment statistics division of the American Institute of Physics, and Jack Hehn, associate executive officer of the American Association of Physics Teachers, noted the concern of academic physicists that their educational duties not be turned into vocational training. Czujko said

of the program that in contrast to simple training in technologies that will change many times within a working lifetime, "it sounds like they're giving students a road map."

Hehn emphasized that the repeated message being directed at physics teachers throughout the US is that they should produce more "flexible" students. Much of the reform effort within science has focused on graduate programs, as illustrated by a recently released report by a joint committee of the National Academy of Sciences, the National Academy of Engineering and the Institute of Medicine. "Reshaping the Graduate Education of Scientists and Engineers" recommends offering a "broader range of academic options" to turn out more "versatile" graduates.

But ultimately, says Hehn, society and the entire physics enterprise will benefit most by having more "citizen scientists." Programs such as Carthage's may be the start, he said, of a "creative and long-term solution."

DENIS F. CIOFFI

Chinese Renege on Invitations to Scientific Societies

On 25 February, after official written invitations to visit China ("You are kindly expected . . .") had already been sent, the Chinese Association for Science and Technology revoked the invitation for a mission that had been organized by the American Associa-

tion for the Advancement of Science and that included participation by the American Physical Society as well as several other societies. The mission had been planned for early May, partly as a follow-up to an October APS trip (see PHYSICS TODAY, Febru-

ary, page 50).

The original invitation and AAAS's "proposed points of discussion"—many of which dealt with human rights—effectively crossed in the mail. After CAST saw the intended topics, it responded in less than three weeks with a one-page letter couched in standard diplomatic language:

"CAST find[s] it inconvenient to receive the mission you have proposed"—translation, according to one China expert, "No way, nohow." Of the eight general discussion points, three were explicitly related to human rights, for example, "assuring standards of scientific freedom."

In a letter sent last month to Zhu Guangya, chairman of CAST and vice-chairman of the State Commission on Science and Technology, APS President C. Kumar Patel expressed deep regret at the cancellation. Patel, writing for himself and on behalf of the council of the APS, stated carefully that they did not want to interfere in China's internal affairs but that "issues of academic freedom and human rights are central to our function as scientists."

Morton Sklar, senior program associate of AAAS's science and human rights program, said that he was very surprised by the Chinese cancellation. Sklar thinks that the action indicates a "supersensitivity" by the Chinese: The death of leader Deng Xiaoping is believed imminent and will likely lead to a power struggle, and thus few want to be perceived as acquiescing to the West's concerns about human rights. State Department officials confirmed that China faces a period of general political uncertainty and is more afraid of openness now.

Sklar said that "the key question that all of this poses is, How do we proceed with dealing with scientific contacts and joint activities as usual without dealing in a more direct way with the human rights element? If we do not deal with human rights more effectively, we're left with it being ignored as the scientific activities proceed."

DENIS F. CIOFFI

IBM Research Secures Toehold in China With New Laboratory

IBM is in the process of establishing its China Research Laboratory in Beijing, China. The director of the laboratory is George W. Wang, formerly a research director at IBM's Thomas J. Watson Research Center, in Yorktown Heights, New York.

Wang was born in Tianjin, China,

but grew up in Taiwan. He received a doctorate in experimental physics from Columbia University in 1977 and returned there to obtain an MS in computer science in 1978. While at IBM Wang has directed research in computer operating systems, parallel processing and distributed computing, among other things.

IBM plans to spend about \$3 million this year to set up the laboratory and hire 15–20 local MS and PhD scientists. The company expects the laboratory to be fully operational within the next few months and has acquired the appropriate space to house it. As yet, IBM has no plans to construct its own building.

The laboratory's first research will aim at creating software with applications of particular relevance to China: speech recognition, language translation and Chinese network services. The laboratory will also work with universities and research institutes in Beijing as well as in other parts of China, and physics will have its place. "We will have physics programs as part of our 'indirect agenda,'" Wang told PHYSICS TODAY. Physicists from other IBM research facilities will work on so-far-undetermined projects with their peers in China, with the new laboratory serving, Wang said, as "the local coordinator" for the collaborations.

In addition to the Yorktown Heights location, IBM Research currently conducts operations in San Jose, California; Zurich, Switzerland; Haifa, Israel; and Yamato, Japan.

DENIS F. CIOFFI

Trieste Physics Center Gets New Director

Miguel A. Virasoro will soon be moving from Rome to Trieste, Italy, to become the director of the International Centre for Theoretical Physics. He replaces Abdus Salam, who will continue to serve as president of the center. Virasoro, who hopes to start sometime this month, was selected by Hans Blix, the director general of the International Atomic Energy Agency, in consultation with Federico Mayor, the director general of the United Nations Educational, Scientific and Cultural Organization. As of this year, UNESCO has assumed IAEA's role as the sponsoring organization for ICTP.

Virasoro's career includes stints in Israel, the US, France, Italy and Switzerland (at CERN, in Geneva). He summarized his plans for ICTP in one sentence: "I want to stress the international character of the center."

He said he will try to get more countries involved "both in the planning and in the funding."

Now 55, Virasoro was born in Buenos Aires, Argentina. He left his country in 1967, three days after obtaining his PhD in physics from the University of Buenos Aires. After returning in 1971, he left again in 1975. He said that although both departures were due to political reasons, he now enjoys excellent relationships with Argentina's scientific community and its governing bodies.

Virasoro has taught theoretical physics at La Sapienza University in Rome since 1982. His research interests have centered on elementary particles—he was among the founders of string theory—statistical mechanics and complex systems. He is also interested in using neural-network models to simulate brain activity. In becoming the first recipient of the Ramon Medal, awarded by the Société Française de Physique and the Ecole Normale Supérieure Foundation in 1994, Virasoro was recognized for his research and for "his sensibility to the problems of developing countries."

AIP Writing Awards Go to Taubes, Ride and O'Shaughnessy

Sally K. Ride and Tam O'Shaughnessy are the recipients of the 1995 American Institute of Physics award for science writing intended for children, for their book *The Third Planet—Exploring the Earth from Space*. Published by Crown Books in 1994, the book includes text and pictures that describe our planet and how we affect it.

Ride is a professor of physics and director of the California Space Institute at the University of California, San Diego. O'Shaughnessy is working on her PhD at the University of California, Riverside, and teaches biology at San Diego Mesa College.

Gary A. Taubes is the winner of this year's AIP science writing award to a journalist, for his article "Welcome to Femtoland," which appeared in *Discover* magazine in February 1994. The article described the work of Ahmed Zewail of Caltech, who uses femtosecond-pulse lasers to study reactions and processes such as photosynthesis. Taubes is a freelance journalist and contributing editor at *Discover*.

The three received their awards during the April meeting of the American Physical Society and American Association of Physics Teachers in Washington, DC. ■