

US PHYSICS STUDENTS HOLD THEIR OWN AS ENROLLMENTS CONTINUE TO RISE

The latest AIP survey of enrollments and degrees reports a leveling off of the number of foreign physics students entering graduate school in the US—a marked change from the trend of the past nine years—and a sharp increase in the number of entering students from the US. The survey also shows continuing rises in the numbers of students awarded graduate and undergraduate physics degrees.

The number of physics doctorates awarded in 1987 rose 5% over the previous year, from 1051 to 1105. The number of master's degrees awarded en route to a PhD exhibited a still more noticeable change, increasing 10%, from 885 to 973.

The number of bachelor's degrees given in 1987 was 5253—only a slight increase from the 1986 figure of 5214. The number of bachelor's degrees has climbed steadily since 1979, when it bottomed out at 4416.

Foreign citizens made up 40.6% of the first-year graduate enrollment in 1987-88, a drop of 2.5 percentage points from the previous academic year. During the five years before that, the percentage of foreign students in entering graduate classes increased by 5 percentage points (see table).

Susanne Ellis, the author of the report, cautions that the past year's data do not suffice to establish the beginning of a downward trend in the percentage of foreign physics graduate students at US institutions. She points out, however, that the drop in the percentage of foreign students was the largest since AIP began gathering these statistics in the early 1970s.

In contrast, the number of entering graduate students from the US jumped by more than 7% in 1987-88, from 1799 to 1944—the first major increase in US-student enrollment in five years.

The percentages of women among those granted physics degrees in 1987 increased slightly over the previous year's figure, except for recipients of nonterminal master's degrees. Women garnered 15% of the bachelor's degrees awarded in 1987, and 9% of the PhDs; in the three years to 1987 the number of black women among physics bachelors more than doubled.

Details about teaching assistantships—the major source of support for entering graduate students—are also given in the report. Despite the

Entering US and foreign graduate physics students, 1978-88

Academic year	Number of first-year graduate students			Proportion of foreign students (%)
	US	Foreign	Total	
1978-79	1840	618	2458	25.1
1979-80	1700	739	2439	30.3
1980-81	1720	844	2564	32.9
1981-82	1654	983	2637	37.3
1982-83	1576	1054	2630	40.1
1983-84	1763	1092	2855	38.2
1984-85	1747	1116	2863	39.0
1985-86	1721	1260	2981	42.3
1986-87	1799	1363	3162	43.1
1987-88	1944	1330	3274	40.6

decreased foreign graduate enrollment in 1987-88, about half of the assistantships that were filled went to foreign students. Even so, many schools did not fill their available numbers of assistantships for the year: A total of 63 assistantships

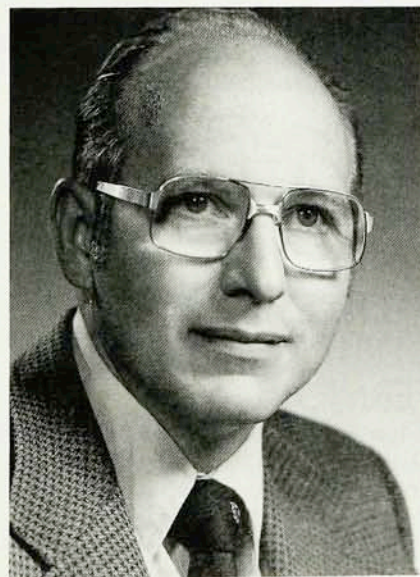
went unfilled at 31 schools.

For a copy of the report, entitled "Enrollments and Degrees," write Susanne Ellis, Education and Employment Statistics Division, American Institute of Physics, 335 East 45 Street, New York NY 10017.

DUCHAMP IS ELECTED VICE PRESIDENT OF CRYSTALLOGRAPHERS

David J. Duchamp, director of physical and analytical chemistry research in the pharmaceutical research and development division at the Upjohn Company in Kalamazoo, Michigan, is the newly elected vice president of the American Crystallographic Association for 1989. Duchamp will become ACA president in 1990, succeeding Bryan M. Craven, chairman of the crystallography department at the University of Pitts-

David J. Duchamp



burgh. In other election results, S. Narasinga Rao, a physicist in the school of mathematics and science at Central State University in Edmond, Oklahoma, has been elected to a three-year term as ACA treasurer.

Duchamp earned a BS in chemistry and mathematics at the University of Southwestern Louisiana in 1961 and a PhD in physical chemistry at Caltech in 1965. He has been a research scientist at Upjohn since 1965. His research interests concern crystallographic determination of molecular structures, molecular mechanics, structural chemistry of biologically active molecules, drug design, crystallographic computing and laboratory automation.

AIP SALARY SURVEY REGISTERS LARGE ONE-YEAR INCREASE

The news about 1986 salaries for AIP society members is good—except for those employed by the government. The latest AIP salary report, entitled "1986 Salaries: Society Membership Survey," reveals trends largely similar to those found in the 1985 survey, outlined extensively in March in PHYSICS TODAY (page 80). The 1986

statistics, however, register the largest median member salary increase against inflation since the survey began in 1979. The increase was due to a record low inflation rate accompanied by salaries that went up.

Inflation in 1986 was only 2.3%, while the median "unadjusted" salary for society members rose to \$47 000, 6.6% above the 1985 level.

Salaries in 1986 varied according to employment sector. Industrially employed PhDs received a median salary of \$56 000; the next highest paid were PhDs working for Federally funded research and development centers, who received a median of \$53 000. Government employees received a median salary of \$51 500, while overall median academic salaries ranged from \$31 600 at four-year colleges to \$45 000 in universities.

The exception to the rise in salaries came for members employed by the government, whose median salary did not increase between 1985 and 1986. In the past, government employees have typically received "comparability" increases to narrow the gap between government and industrial salaries. In 1986, however, there was a pay freeze for the civilian work force: While some individuals may have received salary increases, the average increase was kept at zero.

The 1986 statistics make apparent the value of a good education, as society members with PhDs—over two-thirds of the membership—enjoyed a 7.6% increase from the previous year, receiving \$49 500 median annual salary. The \$23 000 median salary of postdoctoral fellows was the result of a sharp 9.5% increase from the previous year.

AGU SELECTS 12th CONGRESSIONAL FELLOW

The American Geophysical Union has selected Virgil A. Frizzell Jr of the US Geological Survey to be its 12th Congressional Science Fellow. Frizzell is interested in policy issues connected with the reduction of hazards, mineral and energy resources, Earth science research, land management and environmental policy.

Frizzell earned a BS in business at San Jose State University in 1968, a BA in geology at San Jose State in 1970, an MS in geology at Stanford University in 1974 and a PhD in geology at Stanford in 1979. He has worked for the USGS since 1969.

The AGU is one of about 20 professional societies and organizations, in-

cluding The American Physical Society and the American Institute of Physics, that participate in the Congressional Science and Engineering Fellows Program sponsored by the American Association for the Advancement of Science. AIP's Congressional fellow this year is Arthur Charo of Harvard University's Center for Science and International Affairs (PHYSICS TODAY, June, page 73), and this year's APS fellows are Joan F. Cartier of the University of Texas and Mark W. Pestak of BP America (PHYSICS TODAY, July, page 87).

The Acoustical Society of America occasionally sponsors a Congressional scientist fellow. Its most recent fellow was Charles Schmid, who worked for Representative Al Swift, a Democrat from Washington state, in 1985–86. Schmid, an employee of the Honeywell Marine Systems Division, located in the Seattle area, has a PhD in electrical engineering.

EPRI MAKES FIRST AWARD IN MEMORY OF THORNTON

Virginia Chu, a doctoral student in the department of electrical engineering at Princeton University, has received the first John A. Thornton Memorial Award of the Electric Power Research Institute. The award was established in memory of University of Illinois professor John Thornton. Thornton was a president of the American Vacuum Society, he was active in The American Physical Society and the Materials Research Society, and he served on AIP's governing board and on the advisory committee to PHYSICS TODAY.

The annual award recognizes an outstanding student contribution to EPRI's university research program in photovoltaics. Chu, who received her BSEE from Michigan State University in 1984, specializes in work on the formation, properties and photo-current collection of Schottky barrier diodes made with amorphous alloys of hydrogenated silicon and germanium.

PEOPLES IS NEW DEPUTY DIRECTOR OF FERMILAB

John Peoples Jr is the new deputy director of the Fermi National Accelerator Laboratory in Batavia, Illinois. Peoples joined the laboratory in 1973, but since October 1987 he has been on leave, serving at Lawrence Berkeley

Laboratory as head of the magnet division for the proposed Superconducting Super Collider. He succeeds Philip V. Livdahl, who served as deputy director from 1984 until 1987.

Peoples received his BSEE degree from the Carnegie Institute of Technology in 1955 and his PhD in physics from Columbia University in 1966. He worked at Martin Aircraft Company from 1955 to 1959, joined the physics faculty at Columbia in 1966 and moved to Cornell University in 1969. Peoples has held a number of leadership positions at Fermilab since accepting an appointment there in 1973. He served as head of the research division from 1975 until 1980, and as project manager of the Tevatron I project in 1981.

Most recently his continuing interest in experimental high-energy physics has led Peoples to collaborate on an experiment intended to measure more accurately the properties of the bound states of the charm and anti-charm quarks.

BLOSSER STEPS DOWN AS MICHIGAN STATE LABORATORY HEAD

Henry Blosser has stepped down as codirector of the National Superconducting Cyclotron Laboratory at Michigan State University after 30 years as leader of the facility, which he founded. Blosser came to MSU to build the university's first cyclotron, which was completed in 1965. In 1985 MSU put the lab under a codirectorship for a three-year trial period, and Sam Austin was named codirector with Blosser. The laboratory is to be restored now to a single directorship, which is to be filled in a formal search.

Blosser and his colleagues have just finished building the world's highest-energy cyclotron, a 5-tesla, 1-meter-radius machine that will be capable of accelerating fully stripped $N = Z$ nuclei to 200 MeV/nucleon (approximately 8 GeV/nucleus) and uranium-like nuclei to 30 MeV/nucleon (approximately 7 GeV/nucleus) when it is fully operational. In 1982 Blosser's team completed the smaller K500 cyclotron, the first superconducting cyclotron to come into operation. A third superconducting cyclotron, expected to be completed late this year, will be installed at Detroit's Harper Hospital as a neutron source for cancer therapy. It will produce 50-MeV neutrons via the Be(d,n) reaction. ■