foreign projects manager for M. W. Kellog Company; 1 July.

CARL T. SCHWARZE, Greer, S.C.; 78; emeritus professor of civil engineering at New York University; 28 June.

HOMER R. SEELY, Woodbury, N.J.; 58; civil engineer; 23 June.

JOSEPH F. TAYLOR, Rochester, N.Y.; 67; chairman of the board and former president of the Bausch & Lomb Optical Co., 13 June.

EMANUEL WALDINGER, Old Saybrook, Conn.; 57; former medical director of the Saybrook Rehabilitation Center; 30 June.

PHILIP ZENNER, Cincinnati O., 104; professor emeritus of neurology at the University of Cincinnati; 25 June.

Education

■ The Carnegie Corporation of New York has awarded $277,000 to the University of Illinois Committee on School Mathematics so that it may continue its work of devising a new mathematics course for the four high-school years, preparing classroom materials and teachers' manuals, and conducting teacher training courses on new teaching techniques to be developed. The 4-year-old program, in which mathematics is treated as an integrated body rather than as a group of isolated courses, is directed by a committee composed of representatives of the colleges of education, engineering, and liberal arts and sciences at Illinois. Its staff is already experimenting with curriculum changes for high-school freshman, sophomore, and junior classes, and is testing new materials in five different high schools in Illinois and Missouri, with the cooperation of 14 teachers and almost 500 students.

■ The department of natural sciences of Hofstra College has announced that in September the department of geology will become the department of geology and geography. Roger H. Charlier, now acting chairman of the department of geology, will become chairman of the new department.

■ A recent innovation at the Worcester Foundation for Experimental Biology, Shrewsbury, Mass., has been its Summer Science Program for high school students. This involves a collaborative arrangement with St. Marks School in Southboro, Mass., wherein selected students are lodged at the school for a 10-week term.

An intensive course of lectures and laboratory work in chemistry and biology is given to a junior group in the first summer. In a second summer the group which has had the first summer's work is assigned to the foundation laboratories for work on specific research problems. This is part of a program designed to interest secondary school students in a scientific career.

Grants, Fellowships, and Awards

■ The John A. Hartford Foundation has granted $159,000 to the New York University–Bellevue Medical Center to support studies of pancreatitis, a disease that, in acute form, has a mortality rate of about 50 percent.

■ The first payment by the Ford Foundation under its endowment program to help raise faculty salaries was made the first week in July. Six hundred thirty colleges and universities received checks totaling $130 million, which is half of the total grant. The program includes all 4-year regionally accredited, privately supported colleges and universities that offer degrees in the liberal arts and science or bachelor's degrees in professional fields. In a second program, 126 of these institutions will receive accomplishment grants as well.

■ The Philadelphia College of Physicians and Surgeons has awarded the 1956 Alvarenga prize to G. N. Papanicoloau, Cornell University Medical College, for his work in the early detection of cancer. Pedro Francisco DaCosta Alvarenga of Lisbon, Portugal, established the prize to be awarded yearly on the anniversary of his death, 14 July 1883.

■ The Population Council, Inc. of New York is offering fellowships for advanced training in the study of population at the predoctoral and postdoctoral levels. Fellowships are available for study both in the United States and abroad; the awards will be divided between students from the United States and those from other countries. An applicant may select his own university.

Fellows will normally receive support for full-time study for a period of 1 year. The basic stipend of $2500 per year may be supplemented to provide for maintenance of dependents, and especially in the case of foreign students, for travel and exceptional expenses. The amount may be diminished in accordance with lesser need or partial support from other sources. Somewhat larger stipends may be granted to postdoctoral than to predoctoral fellows.

Preference will be given to candidates who are not over 40 years of age. Applications for 1957–58 should be received *before 1 Mar. 1957*. Requests for further information and for application forms should be addressed to the Population Council, Inc., 230 Park Ave., New York 17, N.Y.

■ The American Academy of Arts and Sciences invites applications for grants from its Permanent Science Fund. Awards are made in support of research in any field of science whatsoever in amounts that ordinarily do not exceed $1500. Applications for grants to be made in the early fall should be filed *by 1 Sept.* on forms available from the Chairman, Permanent Science Fund Committee, American Academy of Arts and Sciences, 77 Massachusetts Ave., Cambridge 39, Mass.

Special consideration will be given to projects on new frontiers of science; those that lie between, or include, two or more of the classical fields; and those proposed by investigators who may be on the threshold of investigational careers or who are handicapped by inadequate resources and facilities. The committee does not ordinarily approve grants for research the results of which constitute partial fulfillment of requirements for an academic degree.

■ The Research Corporation has granted $247,775 for basic research in science to 72 colleges and universities in the United States and three in Canada. The corporation, which was established in 1912 by F. G. Cottrell, has distributed a total of $8.5 million.

■ New York University has received a grant of $70,000 from the Rockefeller Foundation in support of a study of public attitudes toward science reporting. The project, which is an extension of a pilot study begun last year, is jointly sponsored by the university and the National Association of Science Writers.

■ Forty fellowships for graduate students specializing in services for the blind have been established by Columbia University and the New York Guild for the Jewish Blind. Recipients will get $1200 for each of 2 years of study. They will be enrolled at the university's New York School of Social Work and will attend workshop classes at the guild center. The $96,000 program is to be offered over a 5-year period beginning this fall, when six students will be admitted to study under the plan.

In the Laboratories

■ The formation of the first scientific organization in the United States designed expressly to conduct research and development in interplanetary space travel has been announced by John L. Barnes, president of the newly established Systems Laboratories Corporation, Los Angeles, Calif. Barnes is a professor of engineering at the University of California, Los Angeles. The corporation has been

organized especially to overcome the technical obstacles that still stand in the way of man's first flight to the moon.

■ A division for theoretical physics under the leadership of Conyers Herring has been formed in the physical research department of the Bell Telephone Laboratories, New York. In addition to a number of theoretical physicists already at Bell, the new department will have as members M. Lax, formerly of Syracuse, J. C. Phillips of Chicago, and A. D. Brailsford of Birmingham.

■ The Union Carbide and Carbon Corporation plans to build a $28.5-million plant in Puerto Rico to make thylene glycol, best known to the layman as a principal ingredient of "permanent" antifreezes. It also is used as a moistening agent for dynamite in low-temperature conditions, and as a moistening agent and conditioner in cigarette packaging.

Miscellaneous

■ A comprehensive guide to information on international migration for 24 countries has been published by the United Nations. The countries were chosen with a view to facilitating studies of emigration from Europe. The 200-page volume, entitled *Analytical Bibliography of International Migration Statistics, Selected Countries, 1925–1950*, was prepared by the Population Branch of the U.N's Bureau of Social Affairs, with the help of the United Nations Library, the Library of Congress, the U.N. Statistical Office, and the Statistical Division of the International Labor Office.

It meets in part requests by the U.N. Population Commission and the Economic and Social Council for means to improve statistics on international migration in order "to increase their adequacy and comparability." All information compiled for a given country was sent to the government of that country for completion or correction. As a result, in several instances, governments made additional data available for inclusion in the publication. The new bibliography is on sale for $2 per copy at the U.N. Bookshop and all other sales agents for U.N. publications.

■ The Southern Research Laboratory, U.S. Department of Agriculture, is expanding its research program to improve the quality of cotton fiber, yarns, fabrics, and textiles, and to produce products with greater utility in such fields as surface coatings, plasticizers, printing inks, and many other industrial fields. Research is also being carried out on pine gum, turpentine, and rosin. Chemists are needed to conduct research in the solution of public problems in the fields of agricultural development and utilization of agricultural commodities, by-products, and residues, and in the creation of improved foods, feeds, drugs, fabrics, industrial chemicals and other inedible products.

Chemists with specialization in the fields of analytical, organic, physical, inorganic, and biochemistry are invited to apply for positions with federal agencies located in Texas, Oklahoma, Louisiana, and Arkansas. Salaries range from $5440 to $10,320 per annum. Application form SF-57, which may be obtained at most post offices, should be submitted to the Director, Eighth U.S. Civil Service Regional Office, 1114 Commerce Street, Dallas, Tex.

■ Acting under a law that permits higher salaries when the Federal Government finds its scale too low to compete effectively with private industry, the U.S. Civil Service Commission has authorized increases of from $135 to $1075 a year in starting pay for engineers, scientists, and certain specialists. The commission expects that federal agencies will be able to recruit 4700 additional employees in these categories by the aid of the more attractive salary scales. Some 30,000 government workers will also benefit by the general increase, the total cost of which will be about $12 million annually.

■ The National Academy of Sciences–National Research Council has announced the availability of a second edition of *Baccalaureate Origins of Science Doctorates Awarded in the United States*, which was compiled by the Office of Scientific Personnel, under the direction of M. H. Trytten. The first edition covered the period 1936–1945; the current publication extends the work through 1950. The study was undertaken for the purpose of identifying all doctoral degrees granted in the natural sciences, by institution and field of specialization, from the beginning of 1936 on, and to determine where and when the first (usually baccalaureate) degrees were obtained.

The new volume, which costs $2, presents in tabular and graphic form the product of 10 years of research begun early in 1946. A few of the many questions it answers are as follows: (i) How many doctorate degrees in the natural sciences were granted in the United States between 1936 and 1950? How many were granted in each field? (ii) What are the annual trends in the national production of doctorates in the various sciences? (iii) Where are the doctorates in the natural sciences obtained? What sections of the United States furnish the most scientists? What sections furnish the fewest? (iv) What institutions granted the largest number of doctorates between 1936 and 1950? What institution granted the largest number in chemistry? physics? psychology? engineering? zoology? (v) What colleges most effectively stimulate the interest of their students in the natural sciences, as evidenced by continued studies culminating in the doctorate? (vi) What institution ranked highest in the production of young scholars who took the doctorate between 1936 and 1950?

■ The Lincoln Laboratory at Massachusetts Institute of Technology has issued a brochure describing current opportunities in physics, electrical engineering, mathematics, and psychology. Doctors and graduate engineers interested in working on classified projects may secure a copy of the bulletin by writing: Research and Development, M.I.T. Lincoln Laboratory, Box 24, Lexington, Mass.

■ U.S. Atomic Energy Commission research reports are now available in eight category "packages." Prices take into account reduced handling costs made possible by bulk packaging. The categories are health, physics, biology and medicine (220 reports); chemistry (455 reports); engineering (105 reports); geology and mineralogy (144 reports); instruments (292 reports); metallurgy and ceramics (380 reports); physics (1190 reports); miscellaneous (55 reports). For information, write to Office of Technical Services, U.S. Department of Commerce, Washington 25, D.C.

■ The U.S. State Department's traveling exhibit, "Atoms-for-Peace," consisting of model reactors and a variety of atomic equipment, has, according to the *New York Times*, had considerable success in Hiroshima, Japan. About 120,000 people have visited the exhibit, a notably large attendance in a city of some 380,000 inhabitants.

■ The Priestley Memorial Association of Northumberland, Pa., will restore and maintain the home of Joseph Priestley, noted 18th-century divine and chemist, as a national shrine. The home, formerly owned by Pennsylvania State University, has been transferred to the custody of the Borough of Northumberland. Priestley's crude laboratory in which he continued experiments begun in England is attached to the house. It was here that he isolated carbon monoxide.

Help in providing funds for refurnishing and maintaining the house will be welcomed by the memorial association. Communications should be addressed to R. L. Davis, Director, Priestley Memorial Association, 306 Water St., Northumberland, Pa.