to 1923 and vice-president from 1918 to 1920, 1924 to 1925, and 1930.

His wide human interests and love of geography made him an eager traveler and student of the classic geologic areas of Europe and other parts of the world, experiences that greatly enriched his knowledge of geologic history, places and persons. This wealth of knowledge and experience he was ever ready to share with friends, colleagues and students, who found him an unending and never-failing source of information.

The stimuli to such a wide range of activities and interests were an innate intellectual curiosity and an unselfish desire to be useful to others, and never an urge to display unusual wisdom or to bring himself into the forefront. He adroitly avoided public and formal exhibition of the versatility and range of his knowledge and experience, but he was always ready and happy to share their fruits unobtrusively and informally in friendly conversation. The character and personality of Dr. Mathews can not be more appropriately described than in the words of a colleague of long association who said, " I have never known him to do an unkind or unfair act" and of another fellow geologist who wrote, "All of us who knew Professor Mathews personally had a real affection for him and we had a deep appreciation of his able and unselfish devotion in his chosen field. We shall greatly miss him."

JOSEPH T. SINGEWALD, JR.

RECENT DEATHS

PROFESSOR WILLIAM EDWARD TOTTINGHAM, associate professor of biochemistry at the University of Wisconsin, died on March 2. He was sixty-two years old.

DR. FREDERIC WILLIAM SCHLUTZ, Richard T. Crane professor of pediatrics and chairman of the department at the University of Chicago, died on March 9 at the age of sixty-three years.

DR. HELEN COPELAND COOMBS, instructor in physiology at Brooklyn College, died on March 4 at the age of fifty-two years.

THE death is announced of Dr. H. F. Newall, F.R.S., from 1909 until his retirement with the title emeritus in 1928 professor of astrophysics at the University of Cambridge.

DR. JOHN WILLIAM HENRY EYRE, emeritus professor of bacteriology at the University of London, died on February 17 in his seventy-fifth year.

SCIENTIFIC EVENTS

CHINESE SCIENTIFIC SOCIETIES

IN an account of the joint annual meeting held last July of scientific societies in China, including the zoological, the botanical, the meteorological, the mathematical and the geographical societies, under the presidency of Dr. Wong Wen-Hao, *Nature* reports that Dr. Joseph Needham, Sir William Dunn reader in biochemistry at the University of Cambridge, England, was elected an honorary member of the Science Society of China, in appreciation of "his distinguished academic work and his service in promoting cooperation between Chinese and Western science, which had been so effectively carried on during the previous six months."

The six societies spent two mornings in communicating original papers dealing with their respective sciences; more than three hundred papers were read. Brief abstracts of these papers will be published shortly in Chinese with additional English titles.

One of the two remaining afternoons was devoted to a discussion on "Science and National Reconstruction," with special reference to the problem of how science is to be promoted in China. Opinions were formulated on the following four points, which were presented to the Chinese Government for immediate adoption.

(1) The government is requested to provide a large fund in the forthcoming national budget for, and only for, the furtherance of scientific research and of the scientific education of the masses.

(2) The personnel and equipment of the leading science institutes, such as those of Academia Sinica, must be materially augmented.

(3) The government must endeavor to establish cooperation between the scientific workers on the one hand and officials in charge of national planning on the other, so that the resulting plans may be more practical and fruitful.

(4) While the government is considering sending a large number of young men of science abroad, it is deemed appropriate that such opportunities should be extended to mature scholars also. Here again, the government is requested not to neglect pure science in favor of applied sciences and technology. There was a discussion on "International Science Cooperation," and an address by Dr. Needham entitled "International Science Cooperation in War and Peace" was read by Dr. H. C. Zen, president of the Science Society of China. A scientific exhibition intended for the general public was arranged.

ADVANCED INSTRUCTION AND RESEARCH IN MECHANICS AT BROWN UNIVERSITY

BROWN UNIVERSITY has issued an announcement of the program of advanced instruction and research in mechanics, covering the period since its inauguration

in June, 1941, through the summer of 1944. To provide instruction for men and women who are urgently needed for basic work in mechanical engineering and allied branches of industry, a faculty eminent in the applications of advanced mathematical theory has been serving for eight terms in this program, which is under the auspices of the U. S. Engineering, Science and Management War Training, with liberal support from the Carnegie Corporation and the Rockefeller Foundation.

A recent compilation has shown that from this program more than sixty students have entered on research in mathematics, physics and engineering for government agencies and that twenty-five are serving similarly in war industries. While it was originally expected that students would remain for three or four years and proceed to the doctorate, in the emergency men have taken up useful research after fifteen months of training beyond the baccalaureate.

In addition to the regular instruction given, activities have included

(1) two conferences, one on Non-Linear Vibrations and the other on Exterior Ballistics; (2) fifty-five special lectures by authorities in related fields; (3) the inauguration of a new journal, the *Quarterly of Applied Mathematics*, (4) the publication of twenty research papers by students and the preparation of as many other confidential reports; (5) the preparation of two advanced treatises for printing and the mimeographing and distributing of eleven others; (6) research at Brown University for various government agencies connected with the war.

The Advisory Committee consists of Dr. Thornton C. Fry, mathematical research director, Bell Telephone Laboratories; Marshall H. Stone, professor of mathematics, Harvard University; Theodore Theodorsen, chief of the physical research division of the National Advisory Committee for Aeronautics, Langley Field. The Board of Editors of the *Quarterly of Applied Mathematics* consists of H. L. Dryden, J. M. Lesells, T. C. Fry, W. Prager, J. L. Synge, Th. v. Kármán, I. S. Sokolnikoff; it is assisted by an equally eminent international Board of Collaborators.

The progress made by America in the physical sciences and in the practical aspects of engineering since the turn of the century almost outruns the imagination. But, as was pointed out by Thornton C. Fry in the 1940 report to the National Resources Planning Board, there are some sectors in which we have lagged. We have not kept pace with mathematics fundamental to the development of new industries, such as aircraft manufacture; other countries have ranged dangerously ahead of us. In order that the nation forge ahead in war or in peace, there is need for a more intensive cultivation of the theoretical aspects of some branches of mechanical and electrical engineering. The deficiency is in part due to the paucity of university courses for the graduate training of industrial mathematicians. In part also it is due to a fundamental attitude of the American public which is suspicious of theory. The nation has relied on practical and experimental methods for solving problems; we see this in government as well as in engineering. In a democracy this attitude is attended with grave dangers, for it does not have within itself the seed for its own correction. Some extraordinary means must from time to time be found to bring the necessities of the case home to those with influence in making policies.

These were some of the considerations which occasioned the inauguration at Brown University of the program a few months before war came to America. For the twelve weeks Summer Session of 1944, beginning on June 12, a series of ten courses has been scheduled. On the faculty for the summer are S. Bergman, L. Bers, W. Feller, D. L. Holl, W. Hurewicz, R. K. Luneberg, W. Prager, J. D. Tamarkin and one other still to be chosen. In addition there will be a series of special lectures. No tuition fees are charged; small stipends to cover living expenses are available for some specially qualified persons. A prerequisite is an undergraduate major in mathematics, physics or engineering performed with distinction. The number of participants will be limited to seventy-five. Inquiries may be directed to the Dean of the Graduate School, Brown University, Providence 12, R. I.

R. G. D. RICHARDSON

SCIENTIFIC INSTRUMENTS NEEDED

REQUESTS for instruments urgently needed for essential war work have been received by the Committee on Location of New and Rare Instruments. Any one having any of the following instruments, willing to sell, rent, lend or give them for necessary work, will perform a service by informing D. H. Killeffer, Chairman, 60 East 42nd St., New York 17, N. Y.

Weston Ammeter #622 (0–100 ma)
Weston Ammeter #280 (0–50)
Surface Tension Balance
Precision Cathetometer 32″ Range .003″ error
Babinet Compensator (Soleil)
High Speed Impulse Counter (Cenco #73506 or #73511)
Amsler #4 Integrator
Gas Interferometer (Zeiss or Hilger) (several)
G. E. or Esterline Angus Recording Milliammeter Spring Drive 0–5 ma 6″12″/min speed
Beckman Industrial Model M or Coleman Model 3A pH meter
Weston Microammeter
#643 100 scale div. Res 385 ohms.
#741 100 scale div. Res. 1110 ohms.