waves, either in water or in air, and deals with damping, sedimentation and mass transport, turbulence, instability, wind or currents. He has published a text-book on incompressible fluid dynamics and is working on a book on gravity wave theory and its engineering applications. He will take up his duties on October 1.

U.S. National Science Foundation Division of Engineering

A Division of Engineering has been established by the U.S. National Science Foundation. Dr. John M. Ide, formerly director of the SACLANT Antisubmarine Warfare Research Centre, La Spezia, Italy, has been appointed director of the new Division.

Engineering research supported by the National Science Foundation has brought all the traditional disciplines of science to bear on technical problems. Not limited to the physical sciences, although it has historically had most connexion with them, engineering research has involved biology or the social sciences. Hitherto, basic research in engineering has been supported within the Foundation by the Engineering Section of the Division of Mathematical, Physical and Engineering Sciences. Engineering now becomes the fourth research Division, the other three being the renamed Division of Mathematical and Physical Sciences, the Division of Biological and Medical Sciences and the Division of Social Sciences.

Engineering research eligible for support by the National Science Foundation will have to be of a true scientific nature and not routine engineering practice. Examples of the types of engineering research that may be supported are: the development of principles and techniques in systems engineering design; interdisciplinary research related to such matters as biomedical engineering, transportation, urban planning, fire prevention, etc.; the development of principles of generation and control of energy systems and information systems; the analysis and synthesis of processes and systems which contribute to mastery of the environment.

Research supported by the National Science Foundation in the engineering sciences for the fiscal year 1963 totalled nearly 12 million dollars, through approximately 290 grants; in 1962 it was 9 million dollars through about 240 grants. During the fiscal year ending June 30, 1964, the Foundation granted approximately 13 million dollars for basic research in engineering.

Universities of Manchester and Liverpool Joint Research Reactor

The research reactor which was built for the universities of Manchester and Liverpool at Risley, near Warrington, with a grant of £350,000 from the Department of Scientific and Industrial Research, became critical on July 7. The reactor will be used for postgraduate study and research, in the fields of nuclear engineering, radiochemistry and neutron and solid-state physics, mainly by workers from the two universities, although facilities will be made available to other universities and technical colleges in the north-west. It will also provide valuable facilities for the production of short-lived isotopes which are not at present available in the north of England. The reactor is based on an American design which has been considerably modified in order to raise the power from 10 kW to 100 kW and to increase its flexibility for experimental purposes. The main contractors for the reactor were Pye, Ltd., acting under licence from the American Machine and Foundry Co. of New York. The main contractors for the building were Harry Fairclough, Ltd., Warrington. The United Kingdom Atomic Energy Authority, acting as agents for the universities and the Department of Scientific and Industrial Research, placed contracts for the manufacture and supervised construction of the reactor, associated buildings and services on the site purchased by the University of Manchester.

Employment of Graduates

The eighteenth annual report of the Appointments Board of the Universities of Newcastle and Durham for the year 1962–63 (Pp. 18. Newcastle and Durham: The Universities, 1964) covers the last year of operation of the Durham University Appointments Board—the Appointments Board of the Federal University having been reconstituted under a new title, but for the time being continuing to be responsible for appointments work on behalf of students and graduates of the two new Universities. In reviewing the general employment situation of graduates in 1963, the report suggests that demand by the private sector of the economy was little, if anything, stronger than in 1962, although there appears to be no reason for thinking that an end is in sight to the shortage of mathematicians, physicists and engineers. The report, however, is very critical of the forecast in the report issued by the Advisory Council on Scientific Policy, *The Long-Term Demand for Scientific Manpower*, in 1961. It suggests that the forecast failed to foresee the imminent explosion of demand for teaching man-power and that it also took too much account of short-term recession in industrial demand. While taking note of explicit demand, it neglected inarticulate demand, and was too complacent about staffing schools with science specialists. It implied also that only a small, and perhaps comparatively unimportant, section of the scientific community needed a good mathematical background. The report insists that discussions of the problem of teaching man-power commonly neglect quality and deployment and concern themselves mainly with numbers. While opportunities for some science and engineering graduates became scarcer in 1962 and remained so until quite late in 1963, the difficulties largely arose because of inflexibility on the part of the graduates. There are signs of significant increase in industrial interest in the recruitment of biologists. The Board is watching with interest the progress of trends towards subject-specificity in employers' demands for graduates in non-technical subjects, and away from subject-specificity in fields where it is at present fairly uniformly assumed.

Political and Economic Affairs in France, 1959–64

A pamphlet issued by the Press and Information Service of the French Embassy gives a concise survey of political and economic affairs in France for the period 1959–64 (*A Survey of Political and Economic Affairs in France, 1959–1964*. Pp. 26. London: Ambassade de France, Service de Presse et d'Information, 1964). It covers first the political institutions and recent innovations, which have ended the instability of Government, the decolonization measures, including the Evian agreements and the measures taken in Black Africa and Madagascar, changes in economic and financial affairs, and in defence and foreign policy. The pamphlet is a distinct contribution to the understanding of the situation in France and the changes in French domestic and foreign policy.

Sound Radio in the Television Age

In the sixth of the second series of Lunch-Time Lectures arranged by the British Broadcasting Corporation, "Sound Radio in the Television Age", which has recently been published, Mr. F. Gillard observes that while there are unmistakable signs that radio will continue to be a medium in wide and accepted currency, the form of survival is more important and significant than survival itself (Pp. 16. London: British Broadcasting Corporation, 1964). So long as sound radio continues to uphold the principles of public service, integrity, independence, fairness, impartiality, sense of taste and sense of purpose, it will continue to flourish and justly hold its head high among the mass media of our day. Nevertheless, there will be change, and flexibility is essential—broadcasting