

TECH NEWS

for Scientists, Mathematicians

Operations Evaluation Group, M.I.T.

"Operations research"—the term itself—has attained full status in the recently published Webster's Third International Dictionary. OEG takes particular pleasure in this recognition because of our background as the oldest military operations research organization in the country.

Now when someone asks, "But what do you do?" we can refer him to Webster's.

OEG advises the Chief of Naval Operations, the Commandant, U. S. Marines, and certain Fleet and Force commanders regarding operational problems susceptible to quantitative analysis. A recent example is collected under the title, "The Selection of Cargo for Air Transport." Here the objective was to determine criteria for shipping the myriad replacement parts stocked by the Navy's Yokosuka (Japan) Supply Depot.

It was found, for example, that the items which are candidates for air transport from Oakland, California, to Yokosuka

can be selected on the bases of dollar volume of annual shipments and value per pound. Under the assumptions in the study, \$7.00 per pound was the break-even point. That is, there will be transportation savings if items with a higher value per pound go to Yokosuka by air.

The more sobering content of another study can be deduced from its title: "The Effects of Radiation on Populations," a two-part work considering (1) the effects on individuals exposed to radiation today and (2) the genetic consequences for future generations. One of many conclusions: The continued detonation of nuclear weapons in the stratosphere, at a 100-megaton-yearly rate, would result in reducing individual life expectancy by approximately 20 days. Although human survival would not be endangered by this testing rate, radiation from a nuclear war—involving the detonation of 100,000 to 1,000,000 megatons—would constitute a definite hazard to the mortality of the human race.

Assisting in the creation of a stable U. S. deterrent posture is one of the major aims of OEG's research program. Permanent career positions are available to scientists and mathematicians with advanced degrees who are interested in problem-solving and want to contribute substantively to the national purpose. These positions are in Washington, D. C. Please send your inquiry to the Director, Dr. Jacinto Steinhardt.



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with a lecture on phase determination by W. Hoppe. The remainder of the program will include the following papers: Low-Temperature Structure Analysis, C. S. Barrett; Structure Imperfections, H. Jagodzinski; Symmetry, B. N. Delaunay; Electron Microscopy as a Means for Structure Analysis, H. Ruska; and Automatic Instrumentation, R. Pepinsky.

Additional information concerning the meetings can be obtained by contacting the chairman of the local committee, Dr. F. Bopp, Institute for Theoretical Physics, University of Munich, Schellingstrasse 4-8, Munich 13, Germany.

Electromagnetic Scattering

PRREREGISTRATION by May 15 is required for attendance at an interdisciplinary conference on electromagnetic scattering which will be held August 13-15 at Clarkson College of Technology under the sponsorship of the American Chemical Society's Division of Colloid and Surface Chemistry and the Air Force Cambridge Research Laboratories. Participants in the conference are expected to include astronomers, chemists, mathematicians, physicists, meteorologists, radio engineers, geophysicists, biochemists and other scientists working in one or another area of the field.

The program lists sessions on scattering by spherical particles, scattering by nonspherical particles, scattering by charged species in solution, interactions in solids and liquids as determined by electromagnetic scattering, and multiple and incoherent scattering. As much time as possible will be allowed for discussion. Preregistration forms and further information can be obtained from M. Kerker, Clarkson College of Technology, Potsdam, N. Y.

Electromagnetic Measurements

SPONSORED jointly by the Radio Standards Laboratory of the National Bureau of Standards, the Professional Group on Instrumentation of the Institute of Radio Engineers, and the Instrumentation Division of the American Institute of Electrical Engineers, the 1962 Conference on Precision Electromagnetic Measurements will be held August 14-16 in Boulder, Colo.

Formerly called the Conference on Standards and Electronic Measurements, the meeting will be concerned with the strictly technical aspects of electromagnetic measurement. The title of the 1962 meeting was changed in order to emphasize the basic goal: the advancement of standards and accuracy throughout the coherent frequency spectrum. In addition, it is planned to give more emphasis this year to the impact of quantum electronics and space physics on electromagnetic measurements.

As in previous conferences, it is expected that the papers presented will be published in an issue of the *IRE Transactions on Instrumentation*. Specific areas