SCIENCE EDUCATION

Ettore Majorana

Physicists interested in theoretical understanding of elementary-particle structure are invited to attend the 1965 International School of Physics "Ettore Majorana" to be held from September 27 to October 10 at Trapani in Sicily. The school's morning lectures will cover the introduction to higher symmetries, relativistic SU_6, consequences of SU_6 and other symmetries in weak, electromagnetic, and strong interactions, symmetry breaking, and the more fundamental symmetries and their experimental status. Afternoon working sessions devoted to clearing up the topics of the morning lectures, as well as seminars on experimental topics are also included in the program. Proposed lecturers are J.S. Bell, N. Cabibbo, J. Steinberger, and V.F. Weisskopf, all of CERN; P. Franzini of Columbia University; R. Gatto of the University of Florence; S. Glashow of the University of California at Berkeley; A. Pais of the Rockefeller Institute; J. Prentki of CERN and the Collège de France; and G. Puppi of the University of Bologna. Persons wishing to attend the course should apply as soon as possible to Mrs. M. Bell, CERN, Geneva 23, Switzerland. In their applications, they should specify date and place of birth, degree and other academic qualifications, publications, present position and place of work, together with a letter of recommendation from their research-group head or professor of physics. The total fee, including full board and lodging, is about 600 Swiss francs ($139).

New computer department

A Department of Computer and Information Sciences is being established by the Carnegie Institute of Technology. Although the new department will enroll only graduate students initially, it expects to set up undergraduate programs in the next few years. Funds for the new program will come from a $5 million grant from Lt. General Richard K. Mellon and are expected to be used for the following projects:

1. Construction of a $2-million, 60 000-square-foot building for research and education.

2. Expenditure of $1 250 000 over five years for research in computer development and applications.

3. Purchase of a new advanced computer ($1 million).

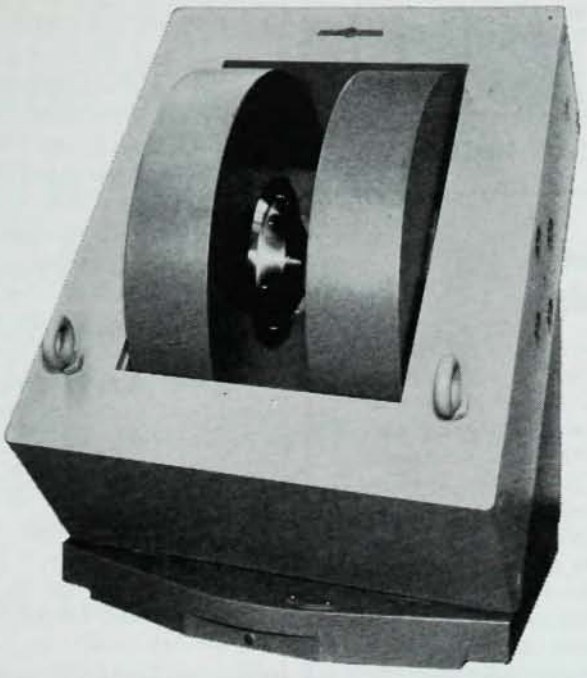
4. Endowment of a named professorship ($750 000).

Carnegie Tech's Computation Center was established in 1956. Its current annual budget amounts to nearly $1.5 million, and it employs about 100 workers. An area of research that will be intensified under the new grant is the development of computer languages and systems, which is under the direction of Dr. Alan Perlis, present head of the Computation Center. Other fields of expanded research will cover simulation of thought processes, problems of engineering design, and information systems for business firms.

Theoretical center at Miami

The University of Miami in Coral Gables is establishing a Center for Theoretical Studies designed to bring scholars in the natural sciences and history and philosophy of science together for periods from a month to an academic year. No specific duties will be assigned to the visitors other than their own research interests; however it is expected that many of them will hold seminars, lecture occasionally, and supervise the research of graduate students and associates brought from their parent institutions.

Some fifteen scientists have indicated their interest in coming to the center during the 1965-66 academic year. Already in residence is Oktay Sinanoglu, professor of theoretical chemistry at Yale University, who will be joined during the summer by Dr. Cavid Erginsoy of Brookhaven National Laboratory, and during the



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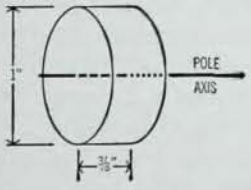

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winter and later by Professors Julian Schwinger of Harvard University, Robert Oppenheimer of the Institute for Advanced Study, and others.

Although initially all memberships at the center will be temporary, it is hoped that permanent chairs, designated as Distinguished University Professorships, will be made available in a few years. These permanent members will not be attached to any department and will be accorded the full privileges of tenured faculty.

The center will be governed by a scientific council of five members from the University of Miami and five scholars from outside the institution. The latter group is currently composed of members of the committee of the Coral Gables Conference on Symmetry Principles at High Energy. Behram Kursunoglu and Arnold Perlmutter, professors of physics at Miami, are director and secretary of the Center, respectively.

Graduate acoustics

Acoustics will become a full-fledged graduate degree program at Pennsylvania State Universtiy this fall. By action of its Board of Trustees, Penn State will offer both MS and PhD degrees in engineering acoustics through the University's Graduate School. The program is expected to make an important contribution to graduate acoustics education in the US, where opportunity for such training has long been severely limited largely because of the diverse nature of modern acoustics.

Acoustics, originally one of the classical areas of physics, has evolved into a large number of varied disciplines represented by many departments, usually in several different colleges of a university. Interrelation of these areas makes it necessary for a student wishing to specialize in any one of them to acquire a background in the entire field.

Architectural acoustics, for example, involves problems in audio engineering, noise, shock and vibration; bioacoustics involves radiation, signal processing, and air acoustics; underwater acoustics requires a study of sonic and ultrasonic engineering, and sound propagation in layered media. For this reason, many acoustics educators have come to believe that it is not feasible to prepare for a career in acoustics by simply treating the field as one of the specializations of physics. A graduate student in physics usually must satisfy the many requirements of the physics department in other branches of physics which consequently leaves him little time for his work in acoustics. Yet, the breadth of education required for graduate study in acoustics should be just as great as that demanded for a graduate degree in physics, biology, or medicine.

That there is very little opportunity today for a student to pursue a graduate program in acoustics at universities in the United States has long been recognized by the Acoustical Society of America. Graduate training in acoustics was discussed on several past occasions by the ASA Technical Committee on Underwater Acoustics, and it was one of the significant themes at the Society's conference on acoustics education last March. One of the recommendations arising from the latter meeting urged that the organization's Education Committee "explore thoroughly the possibilities provided by interdisciplinary programs in acoustics . . . as well as establishing acoustics as a major field of graduate study".

The new program at Penn State constitutes a beginning in this direction. One of the main reasons for the University's decision to organize the program is that Penn State already possesses one of the largest academic groups of acousticians in the country, and in its Ordnance Research Laboratory, employs a staff of some 65 scientists who concentrate their efforts in acoustics.

The new program will be administered by an interdisciplinary committee headed by Dr. Vernon Albers, chief scientist and professor of engineering research in the Ordnance Laboratory, and made up of members from the various departments having interest in acoustics. Six areas of specialization will be covered: physical acoustics, architectural acoustics, bioacoustics, underwater acoustics, shock and vibration, and speech and hearing.