

Engineering Foundation Conferences

The Engineering Foundation Conferences, instituted in 1962 and sponsored by the Engineering Foundation, seek to define and fill gaps in knowledge related to engineering, particularly in the interdisciplinary areas between various branches of engineering and technology. The emphasis at each conference is on in-depth exploration of a particular topic at an advanced technical level by experts from a variety of engineering disciplines, government, economics, and the social, life, and physical sciences. To this end, the meetings are informal, consisting generally of speakers followed by group discussions.

These informal meetings have proved valuable in disseminating information and generating ideas to an extent that could not be achieved through the usual channels of publication and presentation of papers at conventional technical meetings. In addition, individuals from various fields become acquainted and form valuable associations that often result in collaboration and cooperative efforts. Finally, the definition of problems and the statements of need that result from these conferences have often been invaluable to groups in government, academic, and private sectors for long-range planning and research program definition.

To promote free discussion, most of the conferences are off the record. If a conference group decides that it should issue more than a mere summary report by its chairman, it must obtain each individual's specific authorization before his contribution may be included in the proceedings or other publications.

Since the attendees are not merely an audience, but participants in the conference, the conference chairman seeks a diversity of expertise through invitations. Others may request application forms from the Engineering Foundation; the chairman will then select conferees with an eye to the balance of viewpoints that he seeks. In any case, because of space limitations, attendance is limited to about 100 persons, with a maximum of 125. Those

people who have been selected must register in advance. A preregistration deposit of \$50 is required; if registration is cancelled 15 days or more before a conference, \$25 is refundable. The deposit is credited towards the conference fee of \$160, which covers registration, meals, double-occupancy room, and gratuities. A single-occupancy room, where available, will be charged separately. Limited accommodations for guests and family members over 12 years of age are available. These will be assigned on a first come, first served basis. The charges for guests are \$90 and cover double-occupancy room, meals, and gratuities. A deposit of \$25 must accompany each request.

The following 16 conferences will be held this summer.

"Owner-Engineer-Contractor Relations in Tunneling"; 12-16 July, Deerfield Academy, Deerfield, Massachusetts; Madan M. Singh, Illinois Institute of Technology Research Institute, chairman. This conference will explore such problems as the basic philosophy of contracting from the standpoints of the owner, the contractor, and the engineer; and ways and means of improving owner-engineer-contractor relations.

"Clinical Engineering"; 19-23 July, Deerfield Academy; C. A. Caceres, Department of Clinical Engineering, George Washington University, and Gilbert B. Devey, Division of Engineering, National Science Foundation, cochairmen. Emphasis will be placed on examining (i) typical job situations, (ii) certification criteria for clinical engineers, (iii) curriculum development for clinical engineering, and (iv) ethical and legal considerations.

"Engineering and Social Costs in Environmental Control"; 2-6 August, Deerfield Academy; S. V. Margolin, Arthur D. Little, Inc., chairman. The purpose of the conference is to discuss and work with approaches for engineers, economists, public officials, and educators in determining the social costs connected with protecting our environment, especially through engineering modification in processes and practices.

"Research on Coal Mines Safety and Survival"; 15-20 August, Deerfield Academy; Thomas P. Meloy, Meloy Laboratories, Inc., chairman. Cosponsored by the American Institute of Mining, Metallurgical, and Petroleum Engineers, this conference will review the work being done in dust generation, measurements, characterization, and control; methane measurements and control; fire, explosion, and ventilation; ground control and prediction; self-rescuers, survival chambers, radio frequency, and acoustical communications; and location and rescue.

"Solid Waste Disposal—Incineration"; 23-27 August, Deerfield Academy; Richard B. Engdahl, Columbus Laboratories, Battelle Memorial Institute, chairman. The conference will discuss the role of incineration at the present time, 1980, and 2000, in relation to landfill problems, compaction, composting, and their relative costs. Also to be reviewed are commercial units now in operation, new methods of incineration, meeting new emission standards, methods of sampling, and priorities in research on incineration.

"Women in Engineering—Bridging the Gap between Technology and Society"; 12-16 July, New England College, Henniker, New Hampshire; George Bugliarello, University of Illinois at Chicago Circle, and Olive Salember, Society of Women Engineers, cochairmen. Leaders from industry, government, and education will conduct workshops to consider the extent to which a greater participation of women in technology can arrest the widening gap between technology and society and to propose a national strategy for increasing this participation through professional engineering.

"Quantitative Decision Making for the Delivery of Ambulatory Care"; 19-23 July, New England College; Arthur Jacobs, University of Rochester School of Medicine, and J. W. Gavett, University of Rochester Graduate School of Management, cochairmen. This conference will provide an educational exchange between physicians, hospital administrators, and medical

care administrators and industrial engineers, systems analysts, operations researchers, and health care researchers who are interested in the potential contribution to ambulatory care of quantitative decision-making techniques.

"Engineering in Medicine—Automatic Cytology"; 26–30 July, New England College; Kendall Preston, Jr., Perkin-Elmer Corp., chairman. Research workers from the United States, the United Kingdom, and Europe will gather to exchange and discuss recent results of their efforts in the automation of cytological determinations. Included will be discussions of high-speed electrooptical imaging and image processing systems, as well as allied work in fluid dynamics, cytochemistry, and computer science.

"Engineering in Medicine—Biotelemetry"; 2–6 August, New England College; Charles W. Garrett, Committee on Interplay of Engineering with Medicine and Biology, National Academy of Engineering, chairman. Recent developments in electronic devices and their application to the medical practices will be explored. Case histories of various systems, embracing successes, problems, and causes of failure, will be presented.

"Enzyme Engineering"; 9–13 August, New England College; Lemuel B. Wingard, Jr., State University of New York at Buffalo and University of Pittsburgh, chairman. This conference will examine the engineering knowledge needed for the successful, practical, and economic realization of new possibilities for conducting highly selective, enzyme-catalyzed reactions during industrial processing, laboratory analyses, and medical therapy. An assessment of the progress to date, an exchange of ideas on the scope and possible routes for solution of the major problems, and the exploration of specific areas of application are major goals of the conference.

"Engineering Utility Tunnels in Urban Areas"; 16–20 August, New England College; Lloyd A. Dove, Institute for Municipal Engineering, American Public Works Association, chairman. Three utility tunnel applications will be considered: (i) a new town, (ii) an urban renewal project in a central business district, and (iii) a major street reconstruction in conjunction with the installation of a new rapid transit subway.

"Research to Reduce Cost of High-Voltage Underground Transmission"; 23–27 August, New England College; Lester H. Fink, Philadelphia Electric

Company, and T. W. Mermel, Bureau of Reclamation, cochairmen. The state of the art and the requirements for underground transmission systems will be discussed in light of environmental constraints on overhead transmission systems of the future.

"Mixing Operations"; 9–13 August, Proctor Academy, Andover, New Hampshire; James Y. Oldshue, Mixing Equipment Co., Inc., chairman. The conference will focus on liquid-liquid mixing, liquid-solid mixing, turbulence in mixing vessels, atmospheric and ocean mixing, static mixers, pipeline and jet reactors, waste aerators and fermentation, and descriptions of mixing in industrial projects.

"Future Power Systems—Research, Reliability and Regulation"; 16–20 August, Proctor Academy; Elias Schutzman, Division of Engineering, National Science Foundation, chairman. This conference will examine in depth the resources of the university, industry, government, and the utilities and the way they may be best organized to meet the demands of future power systems.

"Corrosion Engineering"; 23–27 August, Proctor Academy; Walter K. Boyd, Columbus Laboratories, Battelle Memorial Institute, chairman. Several facets of corrosion will be discussed: (i) the application of metals and alloys to provide a practical solution to plant corrosion problems; (ii) such preventative techniques as inhibition and cathodic and anodic protection; and (iii) the practical use of accelerated laboratory tests and other laboratory techniques for assessing corrosion behavior of materials and factors responsible for corrosion in a given system.

"Technology Assessment: Management, Manpower, and Methodologies"; 30 August–3 September, Proctor Academy; Bodo Bartocha, National Science Foundation, and Joel Goldhar, Rensselaer Polytechnic Institute of Connecticut, cochairmen. A follow-up of an Engineering Foundation Conference on technology assessment held 2 years ago, this meeting will focus on the operational problems of performing assessments and preparing individuals for the expected demand for trained assessors.

Additional information and application forms are available from the author.

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Conferences, Room 308,
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POSITIONS WANTED

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Biologist, Ph.D. 1960. Teaching experience: cellular, comparative, general physiology; anatomy-physiology; histology; cellular-molecular biology; biochemistry. Undergraduate teaching preferred. Box 149, SCIENCE. 5/7, 28

Biologist, Ph.D., 35, 9 years of university experience. Particular interest in innovative undergraduate teaching, core curriculum development. General, genetic, cellular, statistical, evolutionary, invertebrate biology. German language facility. Any location. Box 178, SCIENCE. X

Industrial Biochemist in United States. Research experience in microbial enzymes; production, purification, application, wants job in Europe. Box 202, SCIENCE. 5/14

Mathematics-Biometrics. Versatile researcher in biomathematics, statistics, and computers seeks position in instruction, computer applications, or research. A.B. in mathematics and biology, M.S. in Ed Admin + 30 graduate hours of mathematics and statistics. Currently supervisor of computer installation with extensive work in mathematical models (cancer cell growth, lead contamination of land, photoreactivation, and radionuclides) and data management. Prefer Midwest or South. 235 W. Adams, Villa Park, Ill. 60181, (312) 279-4185 after 6. X

Microbiologist, Ph.D.; 7 years' industrial, 2 years' academic experience in eutrophication, pollution studies—product screening, test-methods development. Current specialty: algal nutrient bioassays. Desires responsible position in environmental research or teaching. Publications. R. M. Gerhold, University of Wisconsin, Water Resources Center, Madison 53706. X

Physical Bio-Organic Chemist, Ph.D., desires research associate position in magnetic resonance laboratory in research institute, medical school or industry. Publications, experience, and interests applications of nuclear magnetic resonance to biochemical, biological problems. Box 185, SCIENCE. X

Physiologist-Biologist, Ph.D.; 31. Desires teaching research position—general physiology, insect physiology, or entomology. Three years' postdoctorate experience in endocrinology-molecular biology. Research interests control mechanisms during pheromone production-differentiation. Can handle graduate students. Write D. Nielsen, 539 West Doty, Madison, Wisconsin 53703. X