

POSITIONS OPEN

THE UNIVERSITY OF MANITOBA

Department of Physics

Applications are invited for two positions in the above Department. Preference will be given to applicants with experience and interest in Solid State or Nuclear Physics. Appointments may be made either as Lecturer, Assistant Professor (minimum salary \$7000) or Associate Professor (minimum salary \$9000) depending on qualifications and experience. Duties to begin 1st September 1963, or earlier by arrangement. Applications should be sent to Dr. B. G. Whitmore, Head, Department of Physics, The University of Manitoba, Winnipeg 19, Canada, from whom further information can be obtained.

FACULTY POSITION

Thiel College wants to add a new member to its physics staff beginning either June or September, 1963. Ph.D. desired. Rank and salary dependent on experience and qualification. Summer teaching extra, if carried. Field of specialization: Theoretical Physics, if possible. Laboratory Technician on duty in the Department. Reply with resume to: B. G. Kossvary, Chairman, Department of Physics, Thiel College, Greenville, Pennsylvania.

TEACHING AND RESEARCH FELLOWSHIPS

Teaching and research fellowships are available in the Physics Department at Northeastern University, Boston, Massachusetts, for September, 1963. The stipend is \$2,200 per academic year with a remission of tuition. Students may register for graduate work leading to the M.S. and Ph.D. degrees. For information, apply to:

Graduate School
Northeastern University
Boston 15, Massachusetts

OVERSEAS

Robert College, in Istanbul, Turkey, presents a challenge in education where East meets West. An opportunity to contribute significantly to the development of a young republic is available to specialists in engineering, business administration and economics, the sciences, the humanities, and English as a foreign language. Graduate degrees required.

Address inquiries to Miss Shirley Osmun, Personnel Officer, Robert College, Bebek Post Box 8, Istanbul, Turkey; with copy to the Near East College Association, 548 Fifth Avenue, New York 36, New York.

FACULTY POSITION. Teaching undergraduate and graduate physics up to M.S. Rank and salary dependent upon qualifications; for Ph.D. with limited experience rank of Asst. Prof. at \$7000 for academic year. Opportunities for research and summer employment. Dr. Stanley H. Vegors, Jr., Physics Dept., Idaho State College, Pocatello, Idaho.

NEW MEXICO HIGHLANDS UNIVERSITY offers graduate assistantships, NIH assistantships, NSF cooperative graduate fellowships, and NDEA fellowships for programs leading to M.S. in physics and Ph.D. in biophysics. Active research in nuclear scattering theory, structure of macromolecules, chemisorption, biophysics and analog computers. Write: Dean, Graduate School, N.M.H.U., Las Vegas, New Mexico.

Forbes Avenue, Pittsburgh 13, Pa. Proceedings of the conference will be published in successive issues of *Carbon*, a recently established international journal.

For registration and reservation blanks, and for further information, write to R. A. Friedel, Sixth Carbon Conference, US Bureau of Mines, Pittsburgh.

Lattice Dynamics

An international conference on lattice dynamics will be held August 5-9 at the Technical University of Denmark in Copenhagen under the sponsorship of the Danish Academy of Technical Sciences, the Danish Physical Society, the International Union of Pure and Applied Physics, the Nordic Institute for Theoretical Atomic Physics, the US National Science Foundation, and the US Office of Naval Research.

Subjects of major interest will include dispersion (frequency versus wavelength) curves, anharmonicity, elastic properties, vibrations in lattices with impurities and in disordered lattices, surface vibrations, and dynamical models. Emphasis will be placed on those experimental and theoretical contributions which have the widest significance for the understanding of the interaction between atoms in solids and their role in lattice dynamics.

March 31 is the deadline for submission of abstracts, which should be sent in six copies to the secretary of the conference, Dr. S. Lundqvist, Department of Mathematical Physics, Chalmers University of Technology, Göteborg, Sweden. Requests for further information concerning the meeting should also be addressed to Dr. Lundqvist.

Summer Conferences for College Teachers

The National Science Foundation has announced the establishment of a summer program of short (less than four weeks) subject-familiarization conferences for college teachers whose academic duties prevent them from attending the longer summer institutes. Under the program, the NSF provides a grant to each participating institution to cover per-diem stipends and travel allowances. All requests for information and for application forms should be sent to the director of the individual conferences. Listed below are the 1963 conferences which deal with subjects in physics.

August 5-30: Conference on Mechanics at the University of Colorado for college teachers holding a bachelor's degree who have taken courses in physics or have taught courses in physics or physical science. The subject matter will be kinematics and dynamics of a particle, rotational dynamics, and the special theory of relativity. The director is Professor Malcolm Correll, Hellems 16E, University of Colorado, Boulder, Colo.

August 11-30: Conference on Atmospheric Science at Colorado State University for college and university teachers of general science and physics. The program will include lectures on atmospheric general circulation (descriptive), radiation and satellite observation, the laws of atmospheric motion, climatology, atmospheric disturbances,

Physicists & Engineers

ION PROPULSION

The Hughes Research Laboratories have immediate need for research analysts to study the problems associated with the development of **Electric Propulsion Systems** for space missions to be performed in this decade. A strong interest in the study of complete electric propulsion systems coupled with experience related to energy sources, power conversion systems, power conditioning equipment or electric thrust devices is required.

Positions are also available for engineers and scientists with backgrounds in **Trajectory Analysis, Mission Analysis** or **Systems Optimization Techniques** to determine requirements imposed on electric propulsion systems by low-thrust space missions.

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Your inquiry may be directed in strict confidence to: Mr. D. A. Bowdoin, Hughes Research Laboratories, Malibu, California.

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PHYSICS DEPARTMENT OKLAHOMA STATE UNIVERSITY

Has openings for persons interested in combining teaching and academic research. Especially urgent is the need for staff to guide and supervise the research of both M.S. and Ph.D. candidates. Appointments effective immediately or as convenient. Prefer candidates who can qualify for rank of Associate Professor or Professor but would consider applicants at Assistant Professor level. Salary dependent upon experience but competitive.

If interested, write to:
H. E. Harrington, Head
Stillwater, Oklahoma

hydrometeorology and weather modification, numerical prediction methods, and theoretical and computational aspects of the general circulation. *Director*, Dr. Ferdinand Baer, Department of Atmospheric Science, Colorado State University, Fort Collins, Colo.

August 11-30: Mechanics Conference at Dartmouth for college science teachers, especially those in teachers colleges and junior colleges. The conference will involve demonstration lectures, discussions, seminars, and laboratory sessions on specific topics in mechanics. Its objectives will be to "improve and deepen competence in specific topics of mechanics, to suggest demonstrations and laboratory experiments in mechanics, to excite in the participants a desire for further study, and to permit the exchange of ideas on the training of science teachers". *Director*, Professor Allen L. King, Department of Physics, Dartmouth College, Hanover, N. H.

August 26-September 14: College Teachers Conference on Mechanics at Southern Methodist University for junior-college and college teachers of undergraduate physics. Demonstration lectures will present the phenomena of mechanics and its basic theoretical treatment, and conference staff members will lead small sections in discussions, problem solving, and laboratory work. Topics will include kinematics and dynamics of a particle, rotational mechanics, and the special theory of relativity. *Director*, Professor Joe P. Harris, Southern Methodist University, Dallas 22, Tex.

Environmental Measurements

The Division of Air Pollution and of Water Supply and Pollution Control of the US Public Health Service are sponsoring a symposium on environmental measurements, to be held August 26-28 in Cincinnati. The program, which will deal primarily with air and water parameters, will cover various aspects of the design of environmental measurement systems and the collection, reduction, and interpretation of data.

Additional information can be obtained from Dr. John S. Nader, Laboratory of Engineering and Physical Sciences, Division of Air Pollution, US Public Health Service, 4676 Columbia Parkway, Cincinnati, Ohio.

Association for Computing Machinery

A call for original papers to be presented at its 18th annual meeting has been issued by the program committee of the Association for Computing Machinery. The meeting, which will take place August 27-30 at the Denver Hilton Hotel in Denver, is expected to cover a broad range of subjects in computer science and technology and will include an international data-processing exhibit.

April 15 has been set as the deadline for abstracts. Information concerning the form in which abstracts and summaries should be presented can be obtained from the program chairman, Fred P. Venditti, 1963 ACM National Conference, University of Denver, Denver 10, Colo. Requests for general information on the meeting should be sent to ACM Conference, University of Denver.