

New Openings in reactor physics AND nuclear engineering

AT THE KNOLLS
ATOMIC
POWER
LABORATORY

Physics and nuclear engineering work at KAPL divides about equally between theoretical—analytical aspects and experimental investigations. Extensive computational and laboratory facilities are readily accessible to physicists and nuclear engineers whose broad mission is to generate concepts, data and methods for reactor design. The following openings are immediately available:

THEORETICAL REACTOR PHYSICISTS

A strong theoretical reactor physics program complements our experimental work and provides sound methodology and understanding in core and reactor systems design. The program includes—studies of neutron transport effects in static systems . . . statistical fluctuations studies of flux and power levels . . . evaluation of pulsed-neutron work for criticality and reactor parameter determination . . . investigation of nuclear-thermal interactions and non-linear effects in general . . . reactor kinetics studies. *Qualifications include a PhD in Theoretical or Nuclear Physics or Nuclear Engineering.*

EXPERIMENTAL REACTOR PHYSICISTS

The experimental reactor physics program is aimed at investigating the nuclear physics characteristics of new reactor designs currently under development. Activities include performance and analysis of critical experiments, utilizing several types of zero power reactors designed and built at KAPL . . . nuclear-thermal-hydraulic interaction studies . . . reactor kinetics studies . . . pulsed-neutron experiments with sub-critical lattices. *Openings for both PhD and MS in Nuclear Physics or Nuclear Engineering.*

NUCLEAR ENGINEER

Nuclear engineering at KAPL is concerned with two areas of effort. These include development of analytical techniques, based on new calculational models for high-speed computers and current nuclear physics theory, and secondly, the integration of critical assembly experimental data with theoretical data and their evaluation in terms of the engineering significance to a new reactor core design. *Openings for both PhD and MS in Nuclear Engineering.*

To apply or gain additional information, write fully in strict confidence to Mr. G. L. Smallwood, Div. 51-L.

Knolls Atomic Power Laboratory

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sions of 15-minute contributed papers. Plans are being made for a tour of Cape Canaveral, which will take place after the meeting on March 28.

Abstracts of contributed papers (the deadline is January 11) and requests for further information should be sent to Dr. Mary E. Warga, Executive Secretary, Optical Society of America, 1155 Sixteenth St., N. W., Washington 6, D. C.

Radioisotope Applications

April 1–3 are the dates for an Oak Ridge conference on the applications of radioisotopes to physical science and engineering, which will take place at Gatlinburg, Tenn., under the sponsorship of the Oak Ridge Institute of Nuclear Studies, the Oak Ridge National Laboratory, and the Isotopes and Radiation Division of the American Nuclear Society, in cooperation with the US Atomic Energy Commission.

According to the preliminary announcement, the first day will be devoted to general papers and the two following days to special sessions on radioisotope applications in research in the physical sciences and engineering. Topics on research in the physical sciences will include analytical procedures, exchange reactions, reaction rates, molecular structure, diffusion processes, colloid and surface studies, catalysis, and related matters. The engineering aspects to be discussed will include process control, unit operations research, large-scale tracing, and continuous on-stream measurements.

Further information can be obtained by writing to the Information Services Department, Oak Ridge Institute of Nuclear Studies, P.O. Box 117, Oak Ridge, Tenn.

Optical Masers

A symposium on the various aspects of physics and technology bearing directly on the discovery, theory, and applications of maser phenomena at optical and infrared frequencies will be held April 16–18 in New York City. The meeting will be the 13th annual Polytechnic International Symposium, organized by the Microwave Research Institute of the Polytechnic Institute of Brooklyn in cooperation with the Optical Society of America, the Institute of Radio Engineers, the American Institute of Electrical Engineers, and cosponsored by the Air Force Office of Scientific Research, the Office of Naval Research, and the Army Research Office.

The program, consisting of both invited and contributed papers, is expected to cover (1) quantum electrodynamics and related subjects (dispersion, coherence, radiative corrections, stimulated emission, thermodynamical implications, photon-photon scattering, tests of general relativity, interactions with gravitational fields); (2) materials (solid, liquid, and gaseous systems, spectroscopy, optical properties, crystal growth, nonlinear effects, magneto-optic and electro-optic effects); (3) optical maser configurations (high-