

Electronics Engineering Specialist

The Systems Support element, Nortronics, a division of Northrop Corporation, has an opening for an Electronics Engineering Specialist, in Anaheim, California.

This specialist will be responsible for the electronic portion of preliminary design of optical-electronic, electrooptical and electromechanical devices for military fire control applications, and for performing or directing detailed design. Work will involve application of Kerr cells and other electro-optical devices; TV-type systems employing mechanical as well as electronic scanning techniques; solid state photo-detection and light-amplifying units; and their associated amplifiers, power supplies, etc.

Where current equipment and techniques are inadequate, a theoretical analysis of the feasibility and practicality of advancing state of the art to achieve the desired results will be required, along with formulation of detailed research plans.

PhD in Physics or Electronics with 7 to 10 years of applicable experience desired. MS or BS degrees with greater experience will receive full consideration.

In addition to the outstanding opportunity, this position offers residence near Los Angeles, in suburban Orange County; provides innumerable benefits in a fine residential area with nearby schools, modern shopping centers, and a variety of recreational facilities for family enjoyment.

Qualified applicants should check this opening now by contacting Nortronics Personnel Office,

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500 E. Orangethorpe, Anaheim, California

mathematical theory. The bibliography would be helpful in such a seminar and is a good bibliography for one beginning a study of linear programming.

Physique Electronique des Gaz et des Solides. By Michel Bayet. 246 pp. Masson et Cie, Paris, France, 1958. 4,900 fr. *Reviewed by R. Bruce Lindsay, Brown University.*

This volume covers essentially the content of a course offered by the author in the science faculty at the University of Toulouse, where he is Maître de Conférences d'Electronique. It represents the attempt to introduce a certain unity into theoretical electron physics by deducing the electrical properties of both gases and solids from the behavior of a Lorentz gas of electrons immersed in an aggregate of heavy particles (molecules or ions). This unifying thread is the chief merit of the book, since the topics covered are by and large the usual ones encountered in the standard texts on physical electronics.

The book begins with a brief review of physical statistics, both classical and quantum, and with a consideration of collision cross sections in the interaction of the particles of an aggregate. This is followed by the elements of the kinetic theory of gases, including a derivation of the Boltzmann equation, the classical distribution function and the standard transport properties. The Lorentz electron gas is then introduced and its properties discussed for the nondegenerate case. This leads to a consideration of the propagation of electromagnetic radiation through a Lorentz gas and the study of plasma oscillations. Two chapters are devoted to standard material on electric discharges through gases. The last two chapters are devoted to the electron theory of metals, first in terms of the old Sommerfeld theory and then using the Bloch-Brillouin quantum theory of energy bands.

The book is clearly written and there is a definite attempt to connect the theoretical developments with experimental results. Unfortunately its use as a reference book is considerably diminished by an inadequate index.

Dynamical Analogies (2nd Revised Ed.). By Harry F. Olson. 278 pp. D. Van Nostrand Co., Inc., Princeton, N. J., 1958. \$6.75. *Reviewed by Peter L. Balise, University of Washington.*

This second edition of the well-known work originally published in 1942 is welcome, both for the additional material now included and because the subject is of increasing importance. Modern computational aids promote more exact analyses, which results in greater recognition of the fundamentally analogous mathematical behavior of systems which appear physically to be quite different.

This edition consists of the entire first edition essentially unchanged, which is reasonable since fundamental theory has not changed, plus additional material. The older material is a comprehensive presentation of the