

Molecular Biophysics, Richard B. Setlow, *Oak Ridge National Laboratory*, and Ernest C. Pollard, *Pennsylvania State University* (Addison-Wesley Publishing Co. Inc., Reading, Mass., 1962), 545 pp. \$11.75.

Chapters: 1) Physics and Biology; 2) The Biophysicist's View of the Living Cell; 3) Energetic and Statistical Relations in the Living Cell; 4) Physical Methods of Determining the Sizes and Shapes of Molecules; 5) X-Ray Analysis and Molecular Structures; 6) Intramolecular and Intermolecular Forces; 7) Absorption Spectroscopy and Molecular Structure; 8) Enzymes; 9) Action Spectra and Quantum Yields; 10) Action of Ionizing Radiation on Cellular Constituents; 11) Use of Ionizing Radiation to Study Cell Structure; 12) Microscopes; 13) Isotopic Tracers in Molecular Biophysics; 14) Molecular Biophysics and Muscle, Nerve, and Eye Studies; 15) The Physics of Cellular Processes.

This textbook, written at the advanced undergraduate level, explains the properties of biological systems and phenomena in terms of the properties of molecules, both small and large. The emphasis throughout is both theoretical and experimental.

Handbook of Nonparametric Statistics—Investigation of Randomness, Moments, Percentiles, and Distributions, John E. Walsh, *System Development Corporation* (D. Van Nostrand Co. Inc., Princeton, N. J., 1962), 549 pp. \$15.00.

Chapters: 1) Outline and Scope of Handbook; 2) Standardized Notation; 3) Description and Use of Format; 4) Discussion of Concepts and Special Terminology; 5) Tests of Randomness; 6) Tchebycheff Type Inequalities; 7) Estimates and Tests for Expected Values; 8) Estimates and Tests for Population Percentiles; 9) Distribution-Free Tolerance Regions; 10) Nonsequential Results for Distributions From Ungrouped Data; 11) Sequential Decision, and Categorical Data Results for Distributions.

This handbook presents a large number of nonparametric probability information procedures of practical significance in

scientific research today. The methods used are widely applicable to the data of science, engineering, medicine, and other related fields.

Handbook of Engineering Mechanics, edited by W. Flugge, *Professor of Engineering Mechanics, Stanford University* (McGraw-Hill Book Co. Inc., New York, 1962), 1st ed., 1632 pp. \$27.50.

Contents: 88 chapters contributed by different authors and divided into 7 major parts. Part 1) Mathematics; Part 2) Mechanics of Rigid Bodies; Part 3) Theory of Structures; Part 4) Elasticity; Part 5) Plasticity and Viscoelasticity; Part 6) Vibrations; Part 7) Fluid Mechanics.

This handbook is designed to be a valuable timesaver for work in engineering, designing, and graduate-level study in mechanics. It contains over 1000 diagrams, charts, tables, and graphs, thus making it a useful tool for engineers and students in any field concerned with the efficient solution of applied mechanics problems.

Technical Literature Digest

M. H. Smith, *Associate Editor*

The James Forrestal Research Center, Princeton University

Propulsion and Power (Combustion Systems)

A Method for the Determination of Local Transient Heat Flux in Uncooled Rocket Motors, W. B. Powell, G. W. Howell, and J. P. Irving. *Calif. Inst. Tech., Jet Propulsion Lab. TR 32-257* (supersedes Memo. 20-154), July 1, 1962, 26 pp.

Effects of Selected Gas Stream Parameters and Coolant Physical Properties of Film Cooling of Rocket Motors, D. L. Emmons. *Purdue Univ., Jet Propulsion Center Rept. TM-62-5*, Aug. 1962, 132 pp.

Elastic Stresses and Displacements Induced in Solid Propellant Rocket Motors by Transverse Gravity Forces, G. F. Gillis. *Rohm & Haas Co., Redstone Arsenal Research Div. Rept. P-62-13* (Quart. Progr. Rept. on Eng. Research, March 15–June 15, 1962), July 25, 1962, 64 pp.

An Experimental Investigation of Longitudinal Combustion Pressure Oscillations, J. R. Osborn and R. L. Derr. *Purdue Univ., Jet Propulsion Center (Interim Rept. 6), Rept. I-62-8*, Aug. 1962, 50 pp.

A Use of Conformal Mapping to Determine the Apparent Additional Mass of Scaloped and/or Clustered Cylinder Configurations with Experimental Evaluations of Results, C. E. Watkins, D. L. Lansing, and F. W. Gibson. *NASA TN D-1373*, Sept. 1962, 33 pp.

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Propulsion and Power (Noncombustion)

Reactor-Weight Study of Beryllium Oxide, Beryllium, Lithium-7 Hydride and Water as Moderators with Tungsten 184 Structural Material and Uranium Dioxide Fuel, R. E. Hyland. *NASA TN D-1407*, Sept. 1962, 41 pp.

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Experimental Determination of Spectral and Total Transmissivities of Clouds of Small Particles, C. D. Lanzo and R. G. Ragsdale. *NASA TN D-1405*, Sept. 1962, 41 pp.

Solar-Cell Power Systems for Space Vehicles, N. W. Snyder. *IRE Trans. Military Electron. MIL-6*, 84–91 (Jan. 1962).

Estimate of Space-Radiation Effects on Satellite Solar-Cell Power Supplies, J. M. Denney, R. G. Downing, S. R. Lackman, and J. W. Oliver. *IRE Trans.*

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EDITOR'S NOTE: Contributions from Professors E. R. G. Eckert, E. M. Sparrow, and W. E. Ibele of the Heat Transfer Laboratory, University of Minnesota, are gratefully acknowledged.

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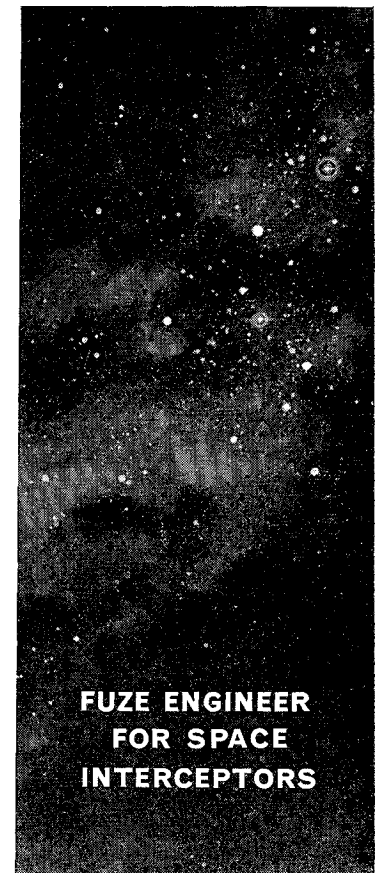
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