Books

THE MACHINERY OF THE BRAIN

by Dean E. Wooldridge
McGraw-Hill Paperbacks $2.95

Reviewed by G. D. McCann, professor of electrical engineering

A review of this book should start with its author. Dean Wooldridge received his PhD in physics from Caltech in 1936 and is now serving as a research associate in engineering. With an eminent career both as a physicist and administrator at the Bell Telephone Laboratories, the Hughes Aircraft Company and the Thompson Ramo Wooldridge Company, he has recently directed a major portion of his attention to the nervous system.

He has reviewed the literature and research from the various fields and points of view that seek an understanding of nature's methods of intelligent information processing. In this book he presents a remarkably comprehensive summary, together with some of the interesting analogies that can be drawn with engineering principles employed for computers and automatic control systems.

The principal emphasis of the book is the central brain and higher-order thought processes of man. However, it also contains a comprehensive treatment of the sensory organs, the transducer properties of light, touch, smell, and taste receptors, and the information processing characteristics of the interneurons. Following this is a description of some of the more interesting simple reflexes, tropisms, and feedback control systems found in both the lower-order animals and the higher-order vertebrates. With these as illustrations of basic concepts used in the organization of nervous systems he then develops the principal subject of the book, the higher-order mental processes in the central cortex of man. Established concepts of complete sensory perception, conscious mental processes, and memory are presented, together with information on the control centers and seats of emotion, speech, and personality.

Written in a very readable form for the nonspecialist it nevertheless makes a valuable reference book for any research library that seeks to serve the interests of engineers, biologists, psychologists, or other related fields of the behavioral sciences.

MARINER: MISSION TO VENUS

by the Jet Propulsion Laboratory Staff
McGraw-Hill....Paper $1.45, Cloth $3.50

A straightforward account of the Mariner Project which sent a spacecraft to Venus in 1962, written by the men at JPL who carried out the mission which is probably the greatest feat to date in the exploration of space.

Alumni Books

RELIABILITY: MANAGEMENT, METHODS, AND MATHEMATICS

By D. K. Lloyd and Myron Lipow '49
Prentice-Hall, Inc. $11.25

ENZYME AND METABOLIC INHIBITORS (Vol. 1)

by John L. Webb '36, PhD '40
Academic Press $26.00