Visual Prosthetics: Physiology, Bioengineering, Rehabilitation

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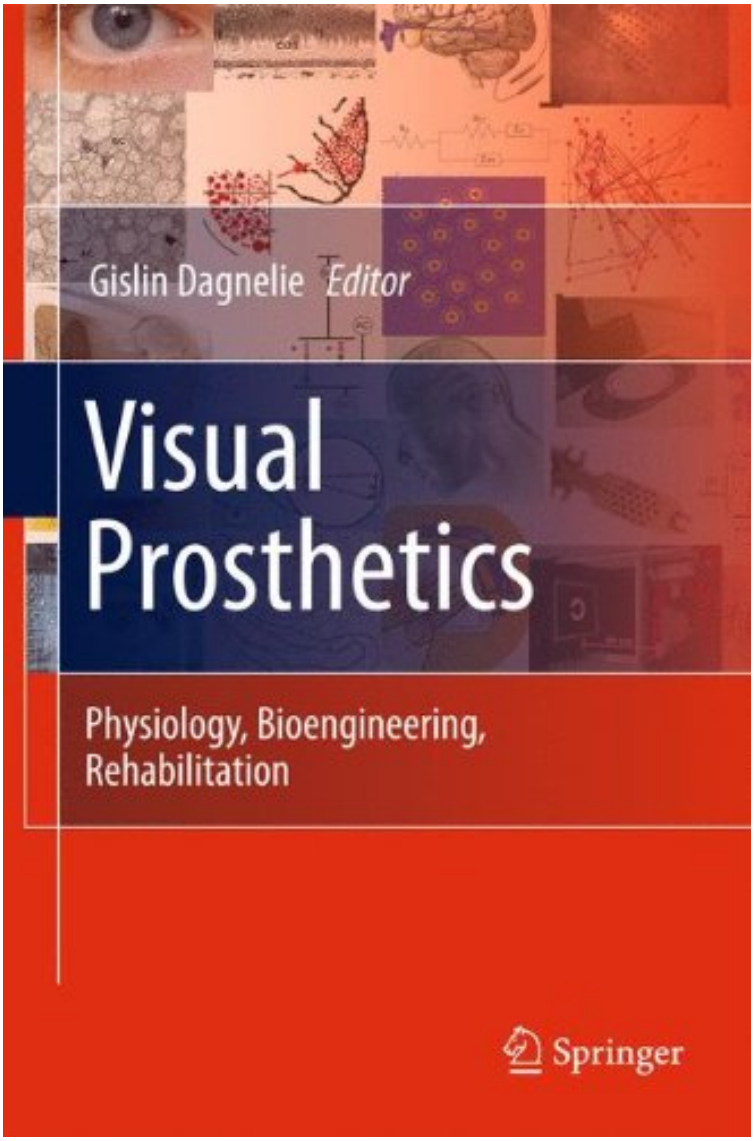

#2102784 in Books Springer US 2011-03-03Original language:EnglishPDF # 1 9.21 x 1.00 x 6.14l, 1.85 #File Name: 144190753X453 pages | File size: 37.Mb

From Brand: Springer US : Visual Prosthetics: Physiology, Bioengineering, Rehabilitation before purchasing it in order to gage whether or not it would be worth my time, and all praised Visual Prosthetics: Physiology, Bioengineering, Rehabilitation:

0 of 0 people found the following review helpful. Vision ProstheticsBy Joseph J GrenierVisual Prosthetics: Physiology, Bioengineering, RehabilitationSpringer New YorkJoseph J Grenier MD PhDThis is an excellent up to date reference on vision physiology and medicine. Retinal research, optic nerve investigations, lateral geniculate

nucleus, and cortical prostheses are covered comprehensively. The comparative engineering and electrophysiology of the various single and multiple electrode arrays are studied, relating the simple and complex images. The history of vision prosthetics is covered back to the 1960s up to 2011. Phosphene images, involving single and multiple dots, and more complex derivatives thereof, are used: facial recognition, bars gratings, and pattern analyzers included. Electrodes, amplifiers, recordings, are covered. There is an attempt to relate all of this to visual training and recovery. I highly recommend this book to students, vision scientists, bioengineers, research fellows, neurosurgeons, and neurophysiologists.

Visual Prosthetics provides an in-depth analysis of the principles of operation, current state, anticipated developments, and functional aspects of visual prosthetics restoring sight to visually impaired individuals. This volume uniquely describes the human visual system in health and disease in a pedagogical and didactic manner, fitting to professionals and researchers with a bioengineering background. Readers will find a balanced overview of electrical, molecular chemical and synthetic chromophore stimulation, in addition to the biophysics and psychological aspects of vision restoration. Unlike competitive texts, this introduction also includes the need and methods for functional evaluation and rehabilitation.Professionals in the field of biomedical engineering and graduate and postgraduate researchers will find Visual Prosthetics a valuable reference.

From the book reviews:This is an excellent up to date reference on vision physiology and medicine. I highly recommend this book to students, vision scientists, bioengineers, research fellows, neurosurgeons, and neurophysiologists. (Joseph J. Grenier, .com, December, 2014)From the Back CoverVisual Prosthetics provides an in-depth analysis of the principles of operation, current state, anticipated developments, and functional aspects of visual prosthetics restoring sight to visually impaired individuals. This volume uniquely describes the human visual system in health and disease in a pedagogical and didactic manner, fitting to professionals and researchers with a bioengineering background. Readers will find a balanced overview of electrical, molecular chemical and synthetic chromophore stimulation, in addition to the biophysics and psychological aspects of vision restoration. The book also:Uniquely describes the human visual system in health and diseaseUnlike competitive texts, covers electrical, molecular chemical, and synthetic chromophore stimulation of the visual systemAddresses both the biophysics and the psychological aspects of vision restoration, including electrode interface and tissue activation, in addition to patient visual experiences and learning in simulated and experimental prosthetic visionProfessionals in the field of biomedical engineering and graduate and postgraduate researchers will find Visual Prosthetics a valuable reference.