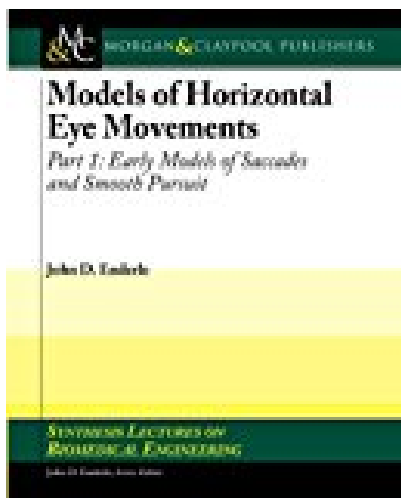


Models of Horizontal Eye Movements Part 1 Early Models of Saccades and Smooth Pursuit Synthesis Lectures on Biomedical Engineering



BOOK DETAILS

- Author : John D. Enderle
- Pages : 164 Pages
- Publisher : Morgan and Claypool Publishers
- Language : English
- ISBN : 1608452328



BOOK SYNOPSIS

There are five different types of eye movements: saccades, smooth pursuit, vestibular ocular eye movements, optokinetic eye movements, and vergence eye movements. The purpose of this book is focused primarily on mathematical models of the horizontal saccadic eye movement system and the smooth pursuit system, rather than on how visual information is processed. A saccade is a fast eye movement used to acquire a target by placing the image of the target on the fovea. Smooth pursuit is a slow eye movement used to track a target as it moves by keeping the target on the fovea. The vestibular ocular movement is used to keep the eyes on a target during brief head movements. The optokinetic eye movement is a combination of saccadic and slow eye movements that keeps a full-field image stable on the retina during sustained head rotation. Each of these movements is a conjugate eye movement, that is, movements of both eyes together driven by a common neural source. A vergence movement is a non-conjugate eye movement allowing the eyes to track targets as they come closer or farther away. In this book, early models of saccades and smooth pursuit are presented. The smooth pursuit system allows tracking of a slow moving target to maintain its position on the fovea. Models of the smooth pursuit have been developed using systems control theory, all involving a negative feedback control system that includes a time delay, controller and plant in the forward loop, with unity feedback. The oculomotor plant and saccade generator are the basic elements of the saccadic system. The oculomotor plant consists of three muscle pairs and the eyeball. A number of oculomotor plant models are described here beginning with the Westheimer model published in 1954, and up through our 1995 model involving a 4th order oculomotor plant model. The work presented here is not an exhaustive coverage of the field, but focused on the interests of the author. In Part II, a state-of-art model of the saccade system is presented, including a neural network that controls the system. Table of Contents: Introduction / Smooth Pursuit Models / Early Models of the Horizontal Saccadic Eye Movement System / Velocity and Acceleration Estimation / 1995 Linear Homeomorphic Saccadic Eye Movement Model

MODELS OF HORIZONTAL EYE MOVEMENTS PART 1 EARLY MODELS OF SACCADDES AND SMOOTH PURSUIT SYNTHESIS LECTURES ON BIOMEDICAL ENGINEERING

- Are you looking for Ebook Models Of Horizontal Eye Movements Part 1 Early Models Of Saccades And Smooth Pursuit Synthesis Lectures On Biomedical Engineering ? You will be glad to know that right now Models Of Horizontal Eye Movements Part 1 Early Models Of Saccades And Smooth Pursuit Synthesis Lectures On Biomedical Engineering is available on our online library. With our online resources, you can find Applied Numerical Methods With Matlab Solution Manual 3rd Edition or just about any type of ebooks, for any type of product.

Best of all, they are entirely free to find, use and download, so there is no cost or stress at all. Models Of Horizontal Eye Movements Part 1 Early Models Of Saccades And Smooth Pursuit Synthesis Lectures On Biomedical Engineering may not make exciting reading, but Applied Numerical Methods With Matlab Solution Manual 3rd Edition is packed with valuable instructions, information and warnings. We also have many ebooks and user guide is also related with Models Of Horizontal Eye Movements Part 1 Early Models Of Saccades And Smooth Pursuit Synthesis Lectures On Biomedical Engineering and many other ebooks.

We have made it easy for you to find a PDF Ebooks without any digging. And by having access to our ebooks online or by storing it on your computer, you have convenient answers with Models Of Horizontal Eye Movements Part 1 Early Models Of Saccades And Smooth Pursuit Synthesis Lectures On Biomedical Engineering . To get started finding Models Of Horizontal Eye Movements Part 1 Early Models Of Saccades And Smooth Pursuit Synthesis Lectures On Biomedical Engineering , you are right to find our website which has a comprehensive collection of manuals listed.