



Neural Engineering: Computation, Representation, and Dynamics in Neurobiological Systems (Paperback)

By Chris Eliasmith, Charles H. Anderson

MIT Press Ltd, United States, 2004. Paperback. Book Condition: New. 216 x 168 mm. Language: English . Brand New Book. For years, researchers have used the theoretical tools of engineering to understand neural systems, but much of this work has been conducted in relative isolation. In *Neural Engineering*, Chris Eliasmith and Charles Anderson provide a synthesis of the disparate approaches current in computational neuroscience, incorporating ideas from neural coding, neural computation, physiology, communications theory, control theory, dynamics, and probability theory. This synthesis, they argue, enables novel theoretical and practical insights into the functioning of neural systems. Such insights are pertinent to experimental and computational neuroscientists and to engineers, physicists, and computer scientists interested in how their quantitative tools relate to the brain. The authors present three principles of neural engineering based on the representation of signals by neural ensembles, transformations of these representations through neuronal coupling weights, and the integration of control theory and neural dynamics. Through detailed examples and in-depth discussion, they make the case that these guiding principles constitute a useful theory for generating large-scale models of neurobiological function. A software package written in MatLab for use with their methodology, as well as examples, course notes, exercises, documentation,...

Reviews

The publication is easy in read through safer to comprehend. It is actually loaded with wisdom and knowledge Its been printed in an extremely simple way and is particularly simply right after i finished reading through this pdf where actually modified me, affect the way i believe.

-- **Ms. Clementina Cole V**

This is the very best publication i have got read until now. It is definitely simplified but shocks within the fifty percent of the pdf. You may like how the article writer create this pdf.

-- **Rosario Durgan**