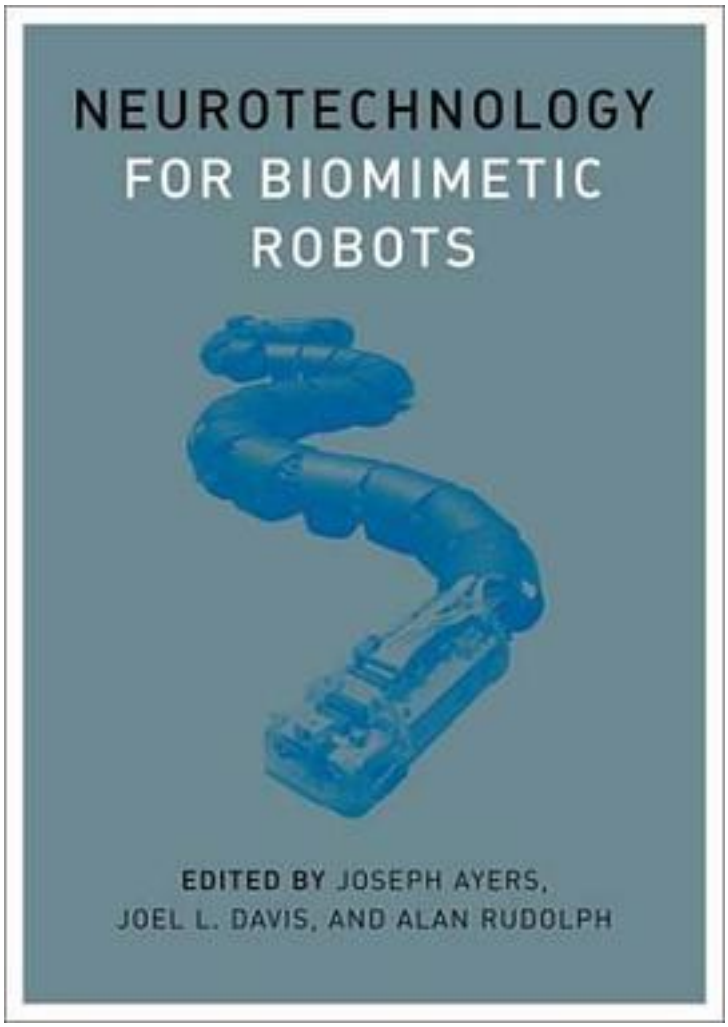
Neurotechnology for Biomimetic Robots (Bradford Books)



Neurotechnology for Biomimetic Robots (Bradford Books)_下载链接1_

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The goal of neurotechnology is to confer the performance advantages of animal systems on robotic machines. Biomimetic robots differ from traditional robots in that they are agile, relatively cheap, and able to deal with real-world environments. The engineering of these robots requires a thorough understanding of the biological systems on which they are based, at both the biomechanical and physiological levels.

 This book provides an in-depth overview of the field. The areas covered include myomorphic actuators, which mimic muscle action; neuromorphic sensors, which, like animal sensors, represent sensory modalities such as light, pressure, and motion in a labeled-line code; biomimetic controllers, based on the relatively simple control systems of invertebrate animals; and the autonomous behaviors that are based on an animal’ s selection of behaviors from a species-specific behavioral "library." The ultimate goal is to develop a truly autonomous robot, one able to navigate and interact with its environment solely on the basis of sensory feedback without prompting from a human operator.

作者介绍:

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