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and recommended further readings; Chapter 6Control with muscle activations; 6.1Introduction; 6.2Dual-strategy hypothesis; 6.3Pulse-step model; 6.4Control of multi-muscle systems: muscle synergies; Self-test questions; Essential references and recommended further readings; Chapter 7Control theory approaches; 7.1The basic notions; 7.2Servo-control and Merton's servo-hypothesis; 7.3Optimal control; Self-test questions

Essential references and recommended further readingsChapter 8Physical approaches; 8.1Mass-spring models; 8.2Threshold control; 8.3The equilibrium-point hypothesis; 8.4Control with referent configurations; Self-test questions; Essential references and recommended further readings; Chapter 9Coordination; 9.1Introduction; 9.2Optimization; 9.3Dynamical systems approach; 9.4Synergy; 9.5Perception-action interactions; 9.6Perception-action coupling; Self-test questions; Essential references and recommended further readings; Chapter 10Neurophysiological structures; 10.1The spinal cord
10.2Central pattern generators10.3The brain: A general overview; 10.4Cortex of the large hemispheres; 10.5Loops through the basal ganglia; 10.6Loops involving the cerebellum; Self-test questions; Essential references and recommended further readings; Chapter 11Exemplary behaviors; 11.1Posture; 11.2Locomotion; 11.3Reaching; 11.4Prehension; Self-test questions; Essential references and recommended further readings; Chapter 12Effects of practice and adaptation; 12.1Introduction; 12.2Learning to be quick and accurate: Speed-accuracy and speed-difficulty trade-offs; 12.3 Learning motor synergies
12.4Stages in motor learning

Sommario/riassunto

Motor control is a relatively young field of research exploring how the nervous system produces purposeful, coordinated movements in its interaction with the body and the environment through conscious and unconscious thought. Many books purporting to cover motor control have veered off course to examine biomechanics and physiology rather than actual control, leaving a gap in the literature. This book covers all the major perspectives in motor control, with a balanced approach. There are chapters explicitly dedicated to control theory, to dynamical systems, to biomechanics, to different beh
