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Nota di contenuto	Introduction -- The Concept of “Attractive Region in Environment (ARIE)” and its Application in High-precision Tasks with Low-precision Systems -- The Compliance of Robotic Hands and Human-inspired Motion Model of Upper-limb with Fast Response and Learning Ability -- Learning an Intrinsic-Variable Preserving Manifold for Dynamic Visual Tracking -- Explicit Nonlinear Mapping for Manifold Learning with Neighborhood preserving polynomial embedding -- Biologically Inspired Visual Model with Memory and Association Mechanism -- Biologically Inspired Visual Model with Preliminary Cognition and Active Attention Adjustment -- Biologically Inspired Visual Cognition Model with Unsupervised Episodic and Semantic Feature Learning --

Conclusions and Future Research Directions.

Sommario/riassunto

This book reports the new results of intelligent robot with hand-eye-brain, from the interdisciplinary perspective of information science and neuroscience. It collects novel research ideas on attractive region in environment (ARIE), intrinsic variable preserving manifold learning (IVPML) and biologically inspired visual congnition, which are theoretically important but challenging to develop the intelligent robot. Furthermore, the book offers new thoughts on the possible future development of human-inspired robotics, with vivid illustrations. The book is useful for researchers, R&D engineers and graduate students working on intelligent robots.