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Autore	Smith Penelope Probert
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Environments ; 5.5 Texture: Classifying Surfaces ; 5.6 Summary ; Chapter 6 Sonar Systems: A Biological Perspective ; 6.1 Introduction ; 6.2 Echo Formation 6.3 Monaural Sensing 6.4 Multi-Aural Sensing ; 6.5 Summary ; Chapter 7 Map Building from Range Data Using Mathematical Morphology ; 7.1 Introduction ; 7.2 Basics of Sonar Sensing ; 7.3 Processing of the Sonar Data ; 7.4 Experimental Verification ; 7.5 Discussion and Conclusions Chapter 8 Millimetre Wave Radar for Robotics

Sommario/riassunto

This book describes recent work on active sensors for mobile robots. An active sensor interacts with its surroundings to supply data on demand for a particular function, gathering and abstracting information according to need rather than acting as a generic data gatherer. Details of the physical operation are hidden. The book deals mainly with active range sensors, which provide rapid information for local planning, describing extraction of two-dimensional features such as lines, corners and cylinders to reconstruct a plan of a building. It is structured according to the physical principles