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Collana	Lecture Notes in Artificial Intelligence ; ; 1093
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Nota di contenuto	Mathematical foundations of navigation and perception for an autonomous mobile robot -- Reasoning with uncertainty in AI -- Robot navigation: Integrating perception, environmental constraints and task execution within a probabilistic framework -- Uncertainty reasoning in object recognition by image processing -- Partially observable markov decision processes for artificial intelligence -- An evidential approach to probabilistic map-building -- Belief formation by constructing models -- Causal relevance -- The robot control strategy in a domain with dynamical obstacles -- Reasoning about noisy sensors (and effectors) in the situation calculus -- Recursive total least squares: An alternative to using the discrete kalman filter in robot navigation -- A

	sensor-based motion planner for mobile robot navigation with uncertainty -- Knowledge considerations in robotics -- Neural network applications in sensor fusion for an autonomous mobile robot -- Structuring uncertain knowledge with hierarchical bayesian networks -- Uncertainty treatment in a surface filling mobile robot -- Probabilistic map learning: Necessity and difficulties -- Robot navigation with markov models: A framework for path planning and learning with limited computational resources -- A refined method for occupancy grid interpretation -- Sensor planning with bayesian decision theory -- Perception-based self-localization using fuzzy locations.
Sommario/riassunto	This book presents the refereed proceedings of the International Workshop on Reasoning with Uncertainty in Robotics, RUR'95, held in Amsterdam, The Netherlands, in December 1995. The book contains 13 revised full papers carefully selected for presentation during the workshop together with six invited papers. Also included are two comprehensive tutorial texts and an introduction by the volume editors. Thus the book is both a competent state-of-the-art report on current research and development and a valuable survey and introduction for researchers entering the area or professionals interested in the application of up-to-date techniques.