1. Record Nr. UNISOBSOBE00069582

Autore	Ehrenstein, Albert
Titolo	Tubutsch / Albert Ehrenstein ; traduzione di Helena Janeczek
Pubbl/distr/stampa	Milano, : Adelphi, 2000
ISBN	8845915484
Descrizione fisica	78 p. ; 18 cm
Collana	Piccola Biblioteca Adelphi ; 448
Lingua di pubblicazione	Italiano
Formato	Materiale a stampa
Livello bibliografico	Monografia

2. Record Nr. UNINA9910299728203321

Autore	Marani Giacomo
Titolo	Introduction to Autonomous Manipulation : Case Study with an Underwater Robot, SAUVIM / / by Giacomo Marani, Junku Yuh
Pubbl/distr/stampa	Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 2014
ISBN	3-642-54613-7
Edizione	[1st ed. 2014.]
Descrizione fisica	1 online resource (XVII, 162 p. 76 illus., 73 illus. in color.)
Collana	Springer Tracts in Advanced Robotics, , 1610-7438 ; ; 102
Disciplina	629.89263
Soggetti	Automatic control Robotics Mechatronics Artificial intelligence System theory Control, Robotics, Mechatronics Artificial Intelligence Systems Theory, Control
Lingua di pubblicazione	Inglese
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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Introduction -- Geometry, kinematics and dynamics of multi-body systems -- Kinematic control -- The SAUVIM Underwater Vehicle-Manipulator System -- Target localization -- Case study -- Mathematical supplement.
Sommario/riassunto	“Autonomous manipulation” is a challenge in robotic technologies. It refers to the capability of a mobile robot system with one or more manipulators that performs intervention tasks requiring physical contacts in unstructured environments and without continuous human supervision. Achieving autonomous manipulation capability is a quantum leap in robotic technologies as it is currently beyond the state of the art in robotics. This book addresses issues with the complexity of the problems encountered in autonomous manipulation including representation and modeling of robotic structures, kinematic and dynamic robotic control, kinematic and algorithmic singularity avoidance, dynamic task priority, workspace optimization and environment perception. Further development in autonomous manipulation should be able to provide robust improvements of the solutions for all of the above issues. The book provides an extensive tract on sensory-based autonomous manipulation for intervention tasks in unstructured environments. After presenting the theoretical foundations for kinematic and dynamic modelling as well as task-priority based kinematic control of multi-body systems, the work is focused on one of the most advanced underwater vehicle-manipulator system, SAUVIM (Semi-Autonomous Underwater Vehicle for Intervention Missions). Solutions to the problem of target identification and localization are proposed, a number of significant case studies are discussed and practical examples and experimental/simulation results are presented. The book may inspire the robot research community to further investigate critical issues in autonomous manipulation and to develop robot systems that can profoundly impact our society for the better.