1. Record Nr. UNINA9910590091103321

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Titolo	In-Hand Object Localization and Control: Enabling Dexterous Manipulation with Robotic Hands / / by Martin Pfanne
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2022
ISBN	9783031069673 9783031069666
Edizione	[1st ed. 2022.]
Descrizione fisica	1 online resource (213 pages)
Collana	Springer Tracts in Advanced Robotics, , 1610-742X ; ; 149
Disciplina	629.892 629.8933
Soggetti	Automatic control Robotics Automation Control, Robotics, Automation Control and Systems Theory
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Introduction -- Related Work -- Grasp Modeling -- Grasp State Estimation -- Impedance-based Object Control -- Conclusion. .
Sommario/riassunto	This book introduces a novel model-based dexterous manipulation framework, which, thanks to its precision and versatility, significantly advances the capabilities of robotic hands compared to the previous state of the art. This is achieved by combining a novel grasp state estimation algorithm, the first to integrate information from tactile sensing, proprioception and vision, with an impedance-based in-hand object controller, which enables leading manipulation capabilities, including finger gaiting. The developed concept is implemented on one of the most advanced robotic manipulators, the DLR humanoid robot David, and evaluated in a range of challenging real-world manipulation scenarios and tasks. This book greatly benefits researchers in the field of robotics that study robotic hands and dexterous manipulation topics, as well as developers and engineers working on industrial automation applications involving grippers and robotic manipulators.