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| Soggetti | Robots - Control systems Robots - Programming Robotics |
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| Nota di contenuto | Part I: Navigation -- A Guide for 3D Mapping with Low-Cost Sensors using ROS -- Path Planning and Following for an Autonomous Model Car Using an "Eye in the Sky" -- Part II: Quadcopters -- Parametric Optimization for Nonlinear Quadcopter Control using Stochastic Test Signals -- CrazyS: a software-in-the-loop Simulation Platform for the Crazyflie 2.0 nano-quadcopter -- Part III: Applications -- Cloud Robotics with ROS -- Video Stabilization of the NAO Robot Using IMU Data -- Part IV: ROS Tools -- Roslaunch2: Versatile, Flexible and Dynamic Launch Configurations for the Robot Operating System -- Penetration testing ROS. |
| Sommario/riassunto | This is the fourth volume of the successful series Robot Operating Systems: The Complete Reference, providing a comprehensive overview of robot operating systems (ROS), which is currently the main development framework for robotics applications, as well as the latest trends and contributed systems. The book is divided into four parts: Part 1 features two papers on navigation, discussing SLAM and path planning. Part 2 focuses on the integration of ROS into quadcopters and their control. Part 3 then discusses two emerging applications for robotics: cloud robotics, and video stabilization. Part 4 presents tools developed for ROS; the first is a practical alternative to the roslaunch |

system, and the second is related to penetration testing. This book is a valuable resource for ROS users and wanting to learn more about ROS capabilities and features.
