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Titolo	Robot operating system (ROS) : the complete reference. (Volume 5) // editor, Anis Koubaa
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Descrizione fisica	1 online resource (391 pages)
Collana	Studies in Computational Intelligence, , 1860-949X ; ; 895
Disciplina	629.892
Soggetti	Robotics Robots - Control systems Robots - Programming Operating systems (Computers) Artificial intelligence
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Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Development of an Industry 4.0 demonstrator using Sequence Planner and ROS2 -- ROS2 for ROS1 users -- Multi-Robot SLAM framework for ROS with Efficient Information Sharing -- Agile experimentation of robot swarms in large scale -- Lessons learned building a self-driving car on top of ROS -- Landing a UAV on a moving platform using a front facing camera -- Integrating the Functional Mock-up Interface with ROS and Gazebo -- An ARVA sensor simulator -- ROS Implementation for Untethered Microrobot Manipulation -- ClegS: A package to develop C-legged robots -- Video frames selection method for 3D Reconstruction depending on ROS-based monocular SLAM -- ROS Rescue: Fault Tolerance System for ROS.
Sommario/riassunto	This book is the fifth volume in the successful book series Robot Operating System: The Complete Reference. The objective of the book is to provide the reader with comprehensive coverage on the Robot Operating System (ROS), which is currently considered to be the primary development framework for robotics applications, and the latest trends and contributing systems. The content is divided into six parts. Part I presents for the first time the emerging ROS 2.0 framework,

while Part II focuses on multi-robot systems, namely on SLAM and Swarm coordination. Part III provides two chapters on autonomous systems, namely self-driving cars and unmanned aerial systems. In turn, Part IV addresses the contributions of simulation frameworks for ROS. In Part V, two chapters explore robotic manipulators and legged robots. Finally, Part VI presents emerging topics in monocular SLAM and a chapter on fault tolerance systems for ROS. Given its scope, the book will offer a valuable companion for ROS users and developers, helping them deepen their knowledge of ROS capabilities and features.
