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Collana	Studies in Computational Intelligence, , 1860-949X ; ; 707
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Soggetti	Robotics Automation Computational intelligence Artificial intelligence Robotics and Automation Computational Intelligence Artificial Intelligence
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Nota di contenuto	Model Predictive Control for Trajectory Tracking of Unmanned Aerial Vehicles Using ROS -- Design of Fuzzy Logic Controllers to ROS-based UAVs -- Flying Multiple UAVs Using ROS -- SkiROS -- A skill-based robot control architecture on top of ROS -- Control of Mobile Robots using ActionLib -- Parametric Identification of the Dynamics of Mobile Robots and Its Application for the Tuning of Controllers in ROS -- ROSLink: Bridging ROS with the Internet-of-Things for Cloud Robotics -- A ROS Package for Dynamic Bandwidth Management in Multi-Robot Systems -- An autonomous companion UAV for the SpaceBot Cup competition 2015. .
Sommario/riassunto	This second volume is a continuation of the successful first volume of this Springer book, and as well as addressing broader topics it puts a particular focus on unmanned aerial vehicles (UAVs) with Robot Operating System (ROS). Consisting of three types of chapters: tutorials, cases studies, and research papers, it provides comprehensive additional material on ROS and the aspects of

developing robotics systems, algorithms, frameworks, and applications with ROS. ROS is being increasingly integrated in almost all kinds of robots and is becoming the de-facto standard for developing applications and systems for robotics. Although the research community is actively developing applications with ROS and extending its features, amount of literature references is not representative of the huge amount of work being done. The book includes 19 chapters organized into six parts: Part 1 presents the control of UAVs with ROS, while in Part 2, three chapters deal with control of mobile robots. Part 3 provides recent work toward integrating ROS with Internet, cloud and distributed systems. Part 4 offers five case studies of service robots and field experiments. Part 5 presents signal-processing tools for perception and sensing, and lastly, Part 6 introduces advanced simulation frameworks. The diversity of topics in the book makes it a unique and valuable reference resource for ROS users, researchers, learners and developers. .