Record Nr. UNINA9910229359403321 Titolo Asia-Pacific constitutional yearbook Pubbl/distr/stampa Melbourne, [Australia], : Centre for Comparative Constitutional Studies, University of Melbourne, 1995-1999 Descrizione fisica 1 online resource Altri autori (Persone) SaundersCheryl HassallGraham Soggetti Constitutional law - Asia Constitutional law - Pacific Area Droit constitutionnel - Pacifique, Région du Droit constitutionnel - Asie Politics and government Constitutional law Periodicals. Pacific Area Politics and government Periodicals Asia Politics and government Periodicals Pacifique, Région du Politique et gouvernement Périodiques Asie Politique et gouvernement Périodiques Asia Pacific Area Lingua di pubblicazione Inglese **Formato** Materiale a stampa

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Livello bibliografico

Note generali

Periodico

Record Nr. UNINA9910484724603321 Autore Quan Quan **Titolo** Multicopter design and control practice : / : a series experiments based on MATLAB and Pixhawk / / Quan Quan, Xunhua Dai, Shuai Wang Singapore:,: Springer Singapore:,: Imprint: Springer,, 2020 Pubbl/distr/stampa **ISBN** 981-15-3138-2 Edizione [1st edition 2020.] 1 online resource (xvi, 407 pages): illustrations Descrizione fisica Disciplina 629.13339 Soggetti Automatic control Robotics Automation Aerospace engineering **Astronautics** Drone aircraft - Control systems Drone aircraft - Design Control and Systems Theory **Robotics and Automation** Aerospace Technology and Astronautics Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di bibliografia Includes bibliographical references. Introduction -- Experimental Platform Configuration -- Experimental Nota di contenuto Platform Introduction -- Experimental Procedure -- Multicopter Propulsion System Design -- Multicoper Modeling -- Multicopter Sensor Calibration -- State Estimation and Filter Design -- Multicopter Attitude Controller Design -- Multicopter Set-point Controller Design -- Decision-making Controller Design for Semi-autonomous Multicopters -- Multicopter Failsafe Logic Design -- Appendix A --Appendix B. Sommario/riassunto As the sister book to "Introduction to Multicopter Design and Control," published by Springer in 2017, this book focuses on using a practical process to help readers to deepen their understanding of multicopter

design and control. Novel tools with tutorials on multicopters are presented, which can help readers move from theory to practice.

Experiments presented in this book employ: (1) The most widely-used flight platform – multicopters – as a flight platform; (2) The most widely-used flight pilot hardware – Pixhawk – as a control platform; and (3) One of the most widely-used programming languages in the field of controllengi-neering – MATLAB + Simulink – as a programming language. Based on the current advanced development concept Model-Based Design (MBD)process, the three aspects mentioned above are closely linked. Each experiment is implemented in MATLAB and Simulink, and the numerical simula-tion test is carried out on a built simulation platform. Readers can upload the controller to the Pixhawk autopilot using automatic code generation technology and form a closed loop with a given real-time simulator for Hardware-In-the-Loop (HIL) testing. After that, the actual flight with the Pixhawk autopilot can be performed. This is by far the most complete and clear guide to modern drone fundamentals I've seen. It covers every element of these advanced aerial robots and walks through examples and tutorials based on the industry's leading open-source software and tools. Read this book, and you'll be well prepared to work at the leading edge of this exciting new industry. Chris Anderson, CEO 3DR and Chairman, the Linux Foundation's Dronecode Project The development of a multicopter and its applications is very challenging in the robotics area due to the multidomain knowledge involved. This book systematically addresses the design, simulation and implementation of multicopters with the industrial leading workflow – Model-Based Design, commonly used in the automotive and aero-defense industries. With this book, researchers and engineers can seamlessly apply the concepts, workflows, and tools in other engineering areas, especially robot design and robotics ap-plication development.