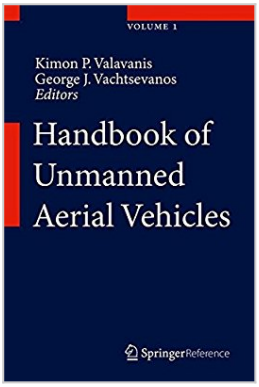

Handbook of Unmanned Aerial Vehicles

From Springer

Handbook of Unmanned Aerial Vehicles From Springer

The *Handbook of Unmanned Aerial Vehicles* is a reference text for the academic and research communities, industry, manufacturers, users, practitioners, Federal Government, Federal and State Agencies, the private sector, as well as all organizations that are and will be using unmanned aircraft in a wide spectrum of applications. The Handbook covers all aspects of UAVs, from design to logistics and ethical issues. It is also targeting the young investigator, the future inventor and entrepreneur by providing an overview and detailed information of the state-of-the-art as well as useful new concepts that may lead to innovative research. The contents of the Handbook include material that addresses the needs and *'know how'* of all of the above sectors targeting a very diverse audience.
The Handbook offers a unique and comprehensive treatise of everything one needs to know about unmanned aircrafts, from conception to operation, from technologies to business activities, users, OEMs, reference sources, conferences, publications, professional societies, etc. It should serve as a Thesaurus, an indispensable part of the library for everyone involved in this area. For the first time, contributions by the world's top experts from academia, industry, government and the private sector, are brought together to provide unique perspectives on the current state-of-the-art in UAV, as well as future directions. The Handbook is intended for the expert/practitioner who seeks specific technical/business information, for the technically-oriented scientists and engineers, but also for the novice who wants to learn more about the status of UAV and UAV-related technologies.
The Handbook is arranged in a user-friendly format, divided into main parts referring to: UAV Design Principles; UAV Fundamentals; UAV Sensors and Sensing Strategies; UAV Propulsion; UAV Control; UAV Communication Issues; UAV Architectures; UAV Health Management Issues; UAV Modeling, Simulation, Estimation and Identification; MAVs and Bio-Inspired UAVs; UAV Mission and Path Planning; UAV Autonomy; UAV Sense, Detect and Avoid Systems; Networked UAVs and UAV Swarms; UAV Integration into the National Airspace; UAV-Human Interfaces and Decision Support Systems; Human Factors and Training; UAV Logistics Support; UAV Applications; Social and Ethical Implications; The Future of UAVs. Each part is written by internationally renowned authors who are authorities in their respective fields. The contents of the Handbook supports its unique character as a thorough and comprehensive reference book directed to a diverse audience of technologists, businesses, users and potential users, managers and decision makers, novices and experts, who seek a holistic volume of information that is not only a technical

treatise but also a source for answers to several questions on UAV manufacturers, users, major players in UAV research, costs, training required and logistics issues.

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Editorial Review

From the Back Cover
Comprehensive, exhaustive and up-to-date. The main goal of this reference work is to be a comprehensive resource for the academic and research communities, industry, and governmental organizations that use Unmanned Aerial Vehicles (UAVs) in a wide spectrum of applications. The Handbook covers all aspects of UAVs, from design to users. The Handbook is arranged in a user-friendly format divided into easily accessible subject-specific parts. Each part contains thematic chapters written by internationally renowned authors who are authorities in their respective fields. It contains material that addresses the needs and know how of all of the above sectors targeting a very diverse audience. The handbook is an exhaustive reference to the literature for a wide spectrum of people and will be covering aspects such as science, engineering, development, design and modeling, applications, military and civilian use, who 's who, who 's doing what, manufacturers, etc. The handbook will be suitable for not only those who need just information about UAVs but also to the scientists, engineers and practitioners who work in the area of UAVs. The handbook also targets academics and graduate students who conduct research in the area and industry, manufacturers and users in the UAV area. Federal/Government Agencies (FAA, DHS, ESA, EASA), Law Enforcement Agencies and the military, including the Coast Guard.Content Level Research Keywords control - dynamics - fixed wing - hybrid design - kinematics Related subjects Electronics & Electrical Engineering - Mathematics - Space Exploration and Astronautics

About the Author
Editors-in-Chief: Dr. Kimon P. Valavanis, Professor and Chair, ECE and CS University of Denver, USA. Dr. Valavanis' research interests are focused in the areas of Unmanned Systems, Distributed Intelligence Systems, Robotics and Automation. He has published over 300 book chapters, technical journal / transaction and conference papers. Dr. Valavanis has authored/co-authored many books and papers, and served as the Editor-in-Chief of the IEEE Robotics and Automation Magazine for ten years (1996-2005), and he currently serves as the Editor-in-Chief of the Journal of Intelligent and Robotic Systems. He is the General Chair of the 2011 IEEE Multi-Conference on Systems and Control and has been Vice President – Administration of the IEEE Mediterranean Control Association (MCA) since 1998. He was a Distinguished Speaker in the IEEE Robotics and Automation Society (- 2003), he is a senior member of IEEE and a Fellow of the American Association for the Advancement of Science. Dr. George J. Vachtsevanos, Professor Emeritus School of Electrical and Computer Engineering, Georgia Institute of Technology, USA. Dr. Vachtsevanos’ research interests are focused in the areas of Hierarchical/Intelligent control of large-scale industrial processes, Fault-tolerant and mode transitioning control of unmanned aerial vehicles, Vision and IR based inspection technologies for textile, glass and other industrial products, Analysis of EEG signals for detection and prediction of epileptic seizures, Sensor fusion techniques for classification and control. He has published over 250 technical papers and is the recipient of the 2002-2003 Georgia Tech School of ECE Distinguished Professor Award and the 2003-2004 Georgia Institute of Technology Outstanding Interdisciplinary Activities Award. He is the lead author of the book, Intelligent Fault Diagnosis and Prognosis for Engineering Systems, published by Wiley in 2006.

Users Review

From reader reviews:

Mark McCarver:

The particular book Handbook of Unmanned Aerial Vehicles has a lot info on it. So when you check out this book you can get a lot of gain. The book was compiled by the very famous author. This articles author makes

some research prior to write this book. This specific book very easy to read you can find the point easily after reading this article book.

Mary Ayala:

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