

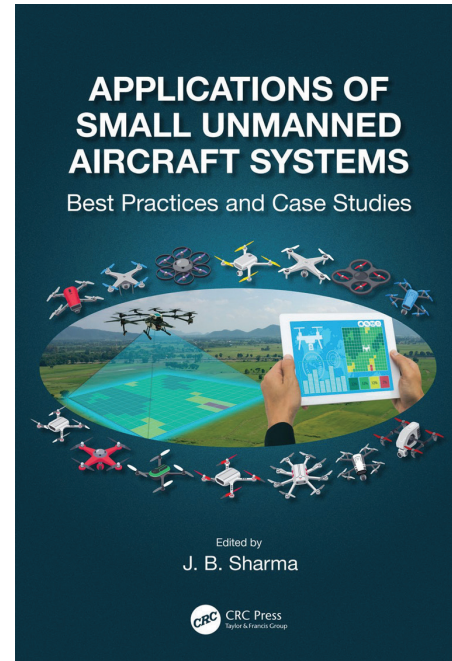
Applications of Small Unmanned Aircraft Systems: Best Practices and Case Studies is edited by J.B. Sharma, Ph.D. Dr. Sharma is a professor and the assistant department head of the Physics Department at the University of North Georgia. One of his research interests is small Unmanned Aerial Systems (sUAS).

Applications of Small Unmanned Aircraft Systems: Best Practices and Case Studies includes a total of 12 sections or chapters. Each chapter covers unique, important topics that are crucial for applying sUAS technology in a correct and efficient manner. Each chapter was written by well-respected, knowledgeable academic; experienced professionals and experts in the field.

The book discusses multiple important topics including sUAS data accuracy in photogrammetry workflows, UAS and thematic map accuracy assessment, multi-user concepts and workflow replicability in sUAS applications, the sUAS educational frontier: mapping and educational pathways for the future workforce, federal government applications of UAS technology, sUAS for wildlife conservation – assessing habitat quality of the endangered black-footed ferret, multi-view, deep learning, and contextual analysis: promising approaches for sUAS land cover classification. UAS for nature conservation—monitoring invasive species, small unmanned aerial systems (sUAS) and structure from motion for identifying, documenting, and monitoring cultural and natural resources, new insights offered by UAS for river monitoring, the campus as a high spatial resolution mapping laboratory – small unmanned aerial systems (sUAS) data acquisition, analytics, and educational issues, and flying UAVs in constrained environments: best practices for flying within complex forest canopies.

The book details how broad the areas are for the application of sUAS. Pictures, tables, and mathematical formulas are provided to help to explain and demonstrate the points of view of the authors. Case studies, real project examples and evaluations, research findings, and the great variety of sUAS applications carry throughout. One of the important sUAS applications discussed is sUAS education. In Chapter 4, the author states the significance of sUAS education and the process of mapping the educational and professional development needs of the sUAS industry. A detailed reference follows each chapter to provide the user with additional information about that chapter's topic.

With the advance of the technology, sUAS is capable of acquiring data with low cost, time efficient and safer ways when compared with other methods for highly accurate mapping production and data analysis. But there is some confusion and misunderstanding about the sUAS



Applications of Small Unmanned Aircraft Systems: Best Practices and Case Studies

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Reviewed by Connie Krampf, CP, CMS/GIS_LIS, Senior Geospatial Analyst, DroneView Technologies, Bloomfield Hills, Michigan.

capabilities, operations, and mapping products accuracies. *Applications of Small Unmanned Aircraft Systems: Best Practices and Case Studies* comes at the right time and is much needed for this evolving industry. As the author of the first chapter points out: "...UAS operators need to understand that utilizing UAS for mapping practices requires a thorough knowledge and appreciation of the photogrammetric process and the factors effecting such processes....." The book provides for complete guidelines from drone mapping project planning to the final data production, analysis and accuracy assessments. Users can also find information about sUAS software and hardware

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such as platforms and cameras in the applications. The book can be used as a textbook for undergraduate and graduate students as well as a reference for practitioners in sUAS applicable fields.

The cover is well designed and catchy is the contents well organized so that the reader can follow along with ease. Case studies and examples presented were selected to support the authors' points of view. The book is published in paperback, hardcover and kindle multiple formats. This particular

review is based on the Ebook (EPUB) format that required a little more effort to follow for one who is used to reading hardcopy. A very minor suggestion is to use sUAS as a term throughout the entirety of the book instead of the terms UAS or UAVs used interchangeably from chapter to chapter. Regardless, the reviewer highly recommends this book for students and sUAS related professionals.

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