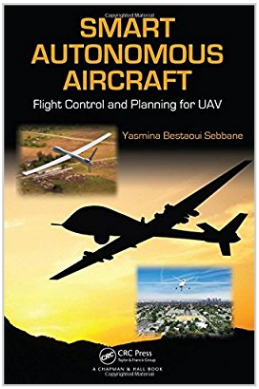

Smart Autonomous Aircraft: Flight Control and Planning for UAV

By Yasmina Bestaoui Sebbane

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With the extraordinary growth of Unmanned Aerial Vehicles (UAV) in research, military, and commercial contexts, there has been a need for a reference that provides a comprehensive look at the latest research in the area. Filling this void, **Smart Autonomous Aircraft: Flight Control and Planning for UAV** introduces the advanced methods of flight control, planning, situation awareness, and decision making.

This book is among the first to emphasize the theoretic and algorithmic side of control and planning in dynamic and uncertain environments. Focused on the latest theory that informs flight planning and control, it describes the use of computational intelligence modeling, control, and planning.

Providing background information on fixed-wing unmanned aerial vehicles, the book proceeds from the basics to advanced methods, from classical to the most innovative. It examines the current state of the art and covers the topics required to assess the autonomy of UAVs.

An ideal resource for researchers and practitioners working on solutions for implementing advanced capabilities in UAVs, the book details the mathematical underpinnings of each concept and includes illustrative case studies to reinforce understanding.

Providing an interdisciplinary point of view on autonomous aircraft, the book reviews the different methodologies of control and planning used to create smart autonomous aircraft. The topics covered in this book have been derived from the author’s research and teaching duties in smart aerospace and autonomous systems and from literature survey.

Assuming an understanding of engineering at the undergraduate level, this book is suitable for advanced-level graduate students and PhD students enrolled in UAV or aerial robotics courses.

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Editorial Review

Review

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?*SirReadaLot.org*, February 2, 2016

About the Author

Yasmina Bestaoui Sebbane earned her PhD in Control and Computer engineering from Ecole Nationale Superieure de Mecanique, Nantes, France, in 1989 (Currently Ecole Centrale de Nantes) and the Habilitation to Direct Research in Robotics, from the University of Evry, France, in 2000.

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