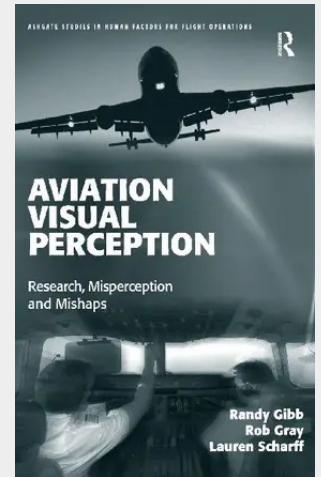


Aviation Visual Perception

Research, Misperception and Mishaps

Vision is the dominant sense used by pilots and visual misperception has been identified as the primary contributing factor in numerous aviation mishaps, resulting in hundreds of fatalities and major resource loss. Despite physiological limitations for sensing and perceiving their aviation environment, pilots can often make the required visual judgments with a high degree of accuracy and precision. At the same time, however, visual illusions and misjudgments have been cited as the probable cause of numerous aviation accidents, and in spite of technological and instructional efforts to remedy some of the problems associated with visual perception in aviation, mishaps of this type continue to occur. Clearly, understanding the role of visual perception in aviation is key to improving pilot performance and reducing aviation mishaps. This book is the first dedicated to the role of visual perception in aviation, and it provides a comprehensive, single-source document encompassing all aspects of aviation visual perception. Thus, this book includes the foundations of visual and vestibular sensation and perception; how visual perceptual abilities are assessed in pilots; the pilot's perspective of visual flying; a summary of human factors research on the visual guidance of flying; examples of specific visual and vestibular illusions and misperceptions; mishap analyses from military, commercial and general aviation; and, finally, how this knowledge is being used to better understand visual perception in aviation's next generation. Aviation Visual Perception: Research, Misperception and Mishaps is intended to be used for instruction in academia, as a resource for human factors researchers, design engineers, and for instruction and training in the pilot community.

Vision is the dominant sense used by pilots and visual misperception has been identified as the primary contributing factor in numerous aviation mishaps, resulting in hundreds of fatalities and major resource loss. Despite physiological limitations for sensing and perceiving their aviation environment, pilots can often make the required visual judgments with a high degree of accuracy and precision. At the same time, however, visual illusions and misjudgments have been cited as the probable cause of numerous aviation accidents, and in spite of technological and instructional efforts to remedy some of the problems associated with visual perception in aviation, mishaps of this type continue to occur. Clearly, understanding the role of visual perception in aviation is key to improving pilot performance and reducing aviation mishaps. This book is the first dedicated to the role of visual perception in aviation, and it provides a comprehensive, single-source document encompassing all aspects of aviation visual perception. Thus, this book includes the foundations of visual and vestibular sensation and perception; how visual perceptual abilities are assessed in pilots; the pilot's perspective of visual flying; a summary of human factors research on the visual guidance of flying; examples of specific visual and vestibular illusions and misperceptions; mishap analyses from military, commercial and general aviation; and, finally, how this knowledge is being used to better understand visual perception in aviation's next generation. Aviation Visual Perception: Research, Misperception and Mishaps is intended to be used for instruction in academia, as a resource for human factors researchers, design engineers, and for instruction and training in the pilot community.



243,80 €

243,80 € (zzgl. MwSt.)

Lieferfrist: bis zu 10 Tage

Artikelnummer: 9780754674979

Medium: Buch

ISBN: 978-0-7546-7497-9

Verlag: Routledge

Erscheinungstermin: 28.03.2010

Sprache(n): Englisch

Auflage: 1. Auflage 2010

Serie: Ashgate Studies in Human Factors for Flight Operations

Produktform: Gebunden

Gewicht: 637 g

Seiten: 312

Format (B x H): 161 x 240 mm

