

Perceptual Organization in Vision

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About the Book

Understanding visual perceptual organization remains a challenge for vision science. *Perceptual Organization in Vision: Behavioral and Neural Perspectives* explores ideas emanating from behavioral, developmental, neuropsychological, neurophysiological, and computational approaches to the problem of perceptual organization. The growing body of research on perceptual organization has converged on a number of critical issues, most of which are addressed in this volume. These include issues concerning the nature and order of organizational processes, the stimulus factors that engage the mechanisms of organization, the developmental stage at which the mechanisms of organization are available, the role of past experience and learning in organization, the neural mechanisms underlying perceptual organization, and the relations between perceptual organization and other cognitive processes, in particular, object recognition and visual attention. Divided into four parts, the book is designed not only to detail the current state of the art in the field but also to promote an interdisciplinary approach to the study of perceptual organization. Part I presents an overview of the problem of perceptual organization, different frameworks for understanding perceptual organization, and a state-of-the-art summary of the domain. Part II details which organizational processes are hardwired in the perceptual system, which are acquired through experience, and how object perception relates to other aspects of cognition. Part III describes various attempts to understand the neural mechanisms underlying perceptual organization using two different approaches--neurophysiological and neuropsychological. Part IV offers a computational approach to the problem. This book is intended for cognitive psychologists, neuroscientists, computational vision scientists, and developmental psychologists.

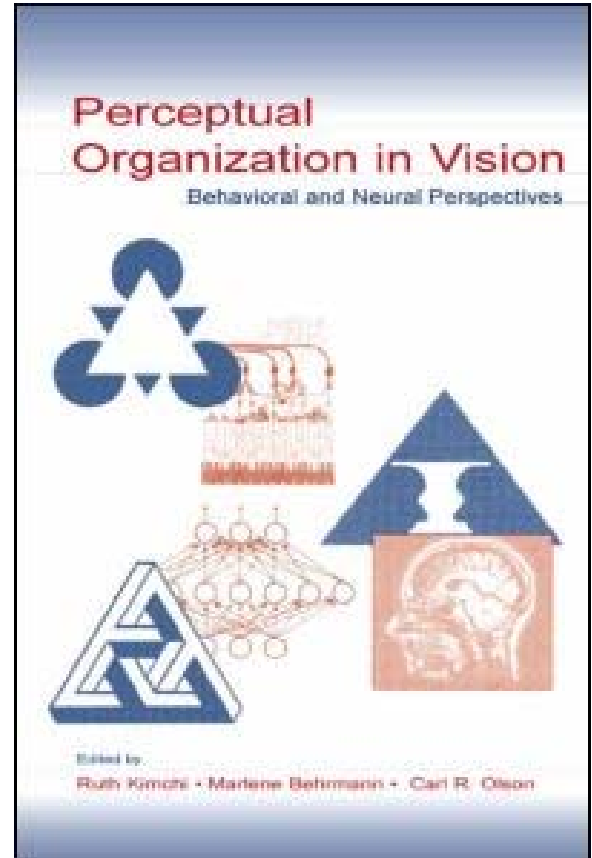


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