

# Preface

The research book is a continuation of our previous book, which is focused on the recent advances in computer vision methodologies and technical solutions using conventional and intelligent paradigms. The contemporary solutions based on advanced mathematical achievements emphasize more information and visual monitoring in natural and human environment. The real challenge of designing such observation models is to make them close to realistic visualization and interpretation of events in our world.

This book presents some of the research results from some of the most respectable researchers in the field of computer vision including some innovative applications in practice. The contributions include the recent methodologies for human action recognition, real-time audience analysis system, panorama construction from multiview cameras in outdoor scenes, real-time applications in robot navigation and intelligent control, adaptive surveillance algorithms, vision technologies for civil aviation, navigation of autonomous underwater vehicles, denoising algorithms for intelligent recognition systems, and image segmentation based on 2D Markov chains.

The book is directed to professors, researchers, and software developers working in the areas of digital video processing and computer vision technologies.

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