Oleg Sergiyenko · Wendy Flores-Fuentes · Paolo Mercorelli   *Editors*

Machine Vision and Navigation

This book presents a variety of perspectives on vision-based applications. These contributions are focused on optoelectronic sensors, 3D & 2D machine vision technologies, robot navigation, control schemes, motion controllers, intelligent algorithms and vision systems. The authors focus on applications of unmanned aerial vehicles, autonomous and mobile robots, industrial inspection applications and structural health monitoring. Recent advanced research in measurement and others areas where 3D & 2D machine vision and machine control play an important role, as well as surveys and reviews about vision-based applications. These topics are of interest to readers from diverse areas, including electrical, electronics and computer engineering, technologists, students and non-specialist readers.

- Presents current research in image and signal sensors, methods, and 3D & 2D technologies in vision-based theories and applications;
- Discusses applications such as daily use devices including robotics, detection, tracking and stereoscopic vision systems, pose estimation, avoidance of objects, control and data exchange for navigation, and aerial imagery processing;
- Includes research contributions in scientific, industrial, and civil applications.

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