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Soggetti	Optical data processing User interfaces (Computer systems) Experiential research Computer simulation Image Processing and Computer Vision User Interfaces and Human Computer Interaction Psychology Research Simulation and Modeling
Lingua di pubblicazione	Inglese
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Livello bibliografico	Monografia
Nota di contenuto	Introduction -- Part 1: Background Overview -- Crowds and Groups of People -- Emotion, Personality and Cultural Aspects in Crowds -- A State-of-the-Art Review -- Part II: Data Extraction, Crowd Types and Video Similarity -- Tracking and Data Extraction -- Video Similarity and Crowd Types -- Part III: Emotion, Personality and Cultural Aspects Analysis -- Detecting Personality and Emotion Traits -- Detecting Hofstede Cultural Dimensions -- Fundamental Diagram Analysis -- Part IV: Dataset, Software and Computer Simulation Applications -- Video Analysis Dataset and Applications -- Simulating Personality and Cultural Aspects in Crowds -- Generating NPCs Motion Based on Crowd Videos -- .
Sommario/riassunto	This practically-focused book presents a computational model for detection and analysis of pedestrian features in crowds from video

sequences. The study of human behavior is a subject of great scientific interest and probably an inexhaustible source of research. The analysis of pedestrians and groups in crowds is relevant in several areas of application, such as security, entertainment, environmental and public spaces planning and social sciences. Cultural and personality aspects are attributes that can influence personal behavior and affect the group in which individuals belong. In this sense, we consider different ways of characterizing individuals and groups in crowds with respect to their relationship with the geometrical space and time. We discuss and describe an approach to extract and analyse, from the Computer Science point of view, emotions, personalities and cultural aspects from crowds and groups of pedestrians, using Computer Vision techniques. Extracting characteristics from real pedestrians and crowds, benefits other areas, such as: architecture and design (planning spaces to maximize pedestrian and group-environment fit); security and surveillance (design of evacuation plans considering characteristics of the crowds and detection of abnormal events); entertainment (more realistic crowds in movies and games reproducing characteristics from real pedestrians and crowds); social sciences (understanding of human behavior), among others. A big challenge in this area of research is the comparison with real life data. In this book, we successfully compared the results of the proposed approach with Psychology literature, where several studies aimed to analysis human behavior.