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Soggetti	Computational intelligence Robotics Automation Artificial intelligence Optical data processing Pattern recognition Computational Intelligence Robotics and Automation Artificial Intelligence Image Processing and Computer Vision Pattern Recognition
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Nota di bibliografia	Includes bibliographical references at the end of each chapters.
Nota di contenuto	Introduction -- Background -- Bottom-up Audio-Visual Attention for Scene Exploration -- Multimodal Attention with Top-Down Guidance -- Conclusion -- Applications -- Dataset Overview.
Sommario/riassunto	This book presents state-of-the-art computational attention models that have been successfully tested in diverse application areas and can build the foundation for artificial systems to efficiently explore, analyze, and understand natural scenes. It gives a comprehensive overview of the most recent computational attention models for processing visual and acoustic input. It covers the biological background of visual and auditory attention, as well as bottom-up and top-down attentional mechanisms and discusses various applications.

In the first part new approaches for bottom-up visual and acoustic saliency models are presented and applied to the task of audio-visual scene exploration of a robot. In the second part the influence of top-down cues for attention modeling is investigated. .