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Nota di contenuto	3D Object Processing; Contents; About the Contributors; Introduction; 1 Basic Background in 3D Object Processing; 1.1 3D Representation and Models; 1.2 3D Data Source; 1.3 3D Quality Concepts; 1.4 Summary; References; 2 3D Compression; 2.1 Introduction; 2.2 Basic Review of 2D Compression; 2.3 Coding and Scalability Basis; 2.4 Direct 3D Compression; 2.5 Compression Based on Approximation; 2.6 Normative Aspect: MPEG-4; 2.7 Conclusion; 2.8 Summary; 2.9 Questions and Problems; References; 3 3D Indexing and Retrieval; 3.1 Introduction; 3.2 Statistical Shape Retrieval; 3.3 Structural Approaches 3.4 Transform-based Approaches: Spin Images3.5 View-based Approach; 3.6 Normative Aspect: MPEG-7; 3.7 Summary; References; 4 3D Object Watermarking; 4.1 Introduction; 4.2 Basic Review of Watermarking; 4.3 Watermarking Principles Applied to 3D Objects; 4.4 A Guided Tour of 3D Watermarking Algorithms; 4.5 Concluding Remarks; 4.6 Summary; 4.7 Questions and Problems; References;

The arrival, and continuing evolution, of high quality 3D objects has been made possible by recent progress in 3D scanner acquisition and 3D graphics rendering. With this increasing quality comes a corresponding increase in the size and complexity of the data files and the necessity for advances in compression techniques. Effective indexing to facilitate the retrieval of the 3D data is then required to efficiently store, search and recapture the objects that have been compressed. The application of 3D images in fields such as communications, medicine and the military also calls for copyrigh