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Abstract

Today, imaging techniques are internationally on the cutting edge of non-destructive diagnostics of movable and immovable cultural heritage monuments and constitute a valuable research tool, at the service of expert scientists and professionals in the field. The aim of the book is to present, in a systematic and organized manner, the methodology of applying a series of "popular" imaging techniques, which has been adopted and evaluated in practice by the authors during the study of various objects of cultural heritage. Particular emphasis is placed on the critical presentation of the application requirements, the type of information that these techniques provide in different fields and the interpretative approach to visual information. This book is a practical guide that investigates problems and proposes updated and reliable solutions for dealing in an effective and optimal way with the various issues that arise in the continuous and comprehensive diagnostic process of examination, evaluation and documentation of cultural heritage objects. It is addressed to both specialist and non-specialist readers, as well as scientists and professionals in the field who wish to familiarize

themselves with non-destructive imaging methodologies and are interested in delving into issues of preservation and protection of cultural heritage. The book is structured in two parts: the first part consists of three chapters, where the basic principles of non-destructive testing and the necessary theoretical knowledge to understand both the operating principle of imaging techniques and the interpretation of acquired images are presented. Furthermore, the specific methodology, instrumentation, special characteristics and requirements for the application of each method, are described, as well as the importance of the standards. The second part consists of four chapters that discuss the particularities, capabilities and limitations of the techniques in the study of a series of cultural heritage objects such as panel paintings and paintings on canvas, archival material, books and works of art on paper, sculpture and ceramics, archaeological objects, monuments and wall paintings. Finally, at the end of the book the reader is offered the opportunity to evaluate his or her understanding of the chapters with questions which guide towards a synthetic and critical way of thinking.

