

## <<文化遗产的数字化保护>>

### 图书基本信息

书名：<<文化遗产的数字化保护>>

13位ISBN编号：9783642048616

10位ISBN编号：3642048617

出版时间：2009-10

出版时间：潘云鹤、鲁东明 浙江大学出版社 (2009-10出版)

版权说明：本站所提供下载的PDF图书仅提供预览和简介，请支持正版图书。

更多资源请访问：<http://www.tushu007.com>

## <<文化遗产的数字化保护>>

### 前言

Cultural heritages include rich information related to social, historical and cultural values. Affected by climate, environmental and other factors, some valuable heritage information is threatened through destruction or disappearance, and some is still not utilized sufficiently. How to investigate and utilize such information effectively is a significant scientific and technological issue. Archaeologists, museologists and conservators are working on issues such as the excavation of precious heritage items, the exhibiting of this valuable information and the strengthening of their outline structure, which aims to conserve and utilize the heritage items as well as their values. The development of information technology has shown its significant role in large and fast digitalization, personalization and so on. Information technology is more and more important in heritage preservation, including, but not limited to, digitalization, digitally-aided research, conservation, exhibition and utilization. First introduced in the 1980s, information technology was initially used to store information about relics, and then some digitalization and exhibition applications were implemented. Currently, information technology is applied in many different aspects in heritage information preservation.

## <<文化遗产的数字化保护>>

### 内容概要

《文化遗产的数字化保护:技术与应用(英文版)》内容简介: Digital Preservation for Heritages Technologies and Applications provides a comprehensive and up-to-date coverage of digital technologies in the area of cultural heritage preservation, including digitalization, research aiding, conservation aiding, digital exhibition, and digital utilization. Processes, technical frameworks, key technologies, as well as typical systems and applications are discussed in the book. It is intended for researchers and students in the fields of computer science and technology, museology, and archaeology.

## <<文化遗产的数字化保护>>

### 作者简介

Dr. Dongming Lu is a professor at College of Computer Science and Technology, Zhejiang University, China. His research area includes digital preservation for cultural heritages and digital media networks. Prof. Yunhe Pan is a member of Chinese Academy of Engineering, and also a professor at College of Computer Science and Technology, Zhejiang University, China. His research area includes digital preservation for cultural heritages, digital library, and intelligent human animation.

## 书籍目录

1 Introduction1.1 Cultural Heritage, the Crystallization of History1.2 Cultural Heritage Preservation and Its Objectives1.3 New Requirements of Digital Technologies for Heritage PreservationReferences2 The Basis of Digital Technologies for Cultural Heritage Preservation2.1 Basis of Information Acquisition and Perception2.1.1 Digital Photography and Processing2.1.2 3D Scanning and Processing2.1.3 3S Technology2.1.4 Sensing and Wireless Transmission2.2 Basis of Information Analysis and Recognition2.2.1 Image Processing2.2.2 Intelligent Information Processing2.3 Basis of Digital Exhibition and Interaction2.3.1 Animation2.3.2 Real-time Rendering2.3.3 Stereo Display2.3.4 Natural Interaction2.4 SummaryReferences3 Digitalization of Cultural Heritage3.1 Information Acquisition from Archaeological Excavation Sites3.1.1 Preventing Loss of Information from Archaeological Sites3.1.2 Process and Technical Framework of Information Acquisition from Archaeological Excavation Sites3.1.3 Key Technologies for Information Acquisition from Archaeological Excavation Sites3.1.4 Typical System for Information Acquisition from Archaeological Excavation Sites and Applications3.2 Information Acquisition of Museum Preserved Sculptures and Artifacts3.2.1 Digital Technology Makes Sculptures and Artifacts Remain "Young Forever"3.2.2 Information Acquisition Process and Technical Framework for Museum Preserved Sculptures and Artifacts3.2.3 Key Technologies for Information Acquisition of Museum Preserved Sculptures and Artifacts3.2.4 Devices and Applications3.3 Information Acquisition from Large Scenes3.3.1 Process and Technical Framework of Large Scene Information Acquisition3.3.2 Key Technologies of Large Scene Information Acquisition3.3.3 Typical Applications3.4 Information Acquisition of Large Paintings and Murals3.4.1 Process and Technical Framework of Acquisition of Large Paintings and Murals3.4.2 Key Technologies for Information Acquisition of Large Paintings and Murals3.4.3 Typical Devices and Applications3.5 Summary and ProspectsReferences4 Archaeological Research Aiding Technologies4.1 Digital Technology and Archaeological Research4.2 Process and Technical Framework of Archaeological Research Aiding4.2.1 Process of Archaeological Research Aiding Technologie4.2.2 Technical Framework of Archaeological Research Aiding Technologies4.3 Typical Applications4.3.1 Utilization of RS4.3.2 Digital Measurement of Large-size Archaeological Sites4.3.3 Computer Aided Bronze Ware Identification Expert System4.3.4 Reconstruction Simulation of Stilt Style Buildings of the Hemudu Site4.4 Summary and ProspectsReferences5 Digitally Aided Conservation and Restoration of Cultural Heritages5.1 Digitally Aided Investigation5.1.1 Current Situation Investigation by Digitally Aided Technologies5.1.2 Process and Technical Framework of Digitally Aided Current Situation Investigation5.1.3 Key Technologies of Digitally Aided Investigation5.1.4 Typical Digitally Aided Current Situation Investigation System5.2 Dynamic Environmental Monitoring of Cultural Heritages 5.2.1 Process and Technical Framework of Dynamic Environmental Monitoring5.2.2 Key Technologies of Dynamic Environmental Monitoring5.2.3 Typical Dynamic Environmental Monitoring System 5.3 Digitally Aided Restoration of Cultural Heritages5.3.1 Process and Technical Framework of Digitally Aided Restoration5.3.2 Key Technologies in Digitally Aided Restoration5.3.3 An Introduction to Typical Application of Digitally Aided Conservation and Virtual Restoration5.4 Summary and ProspectsReferences6 The Impact of Digital Technologies on the Exhibition of Cultural Heritages6.1 Online Heritage Exhibition6.1.1 Online Exhibitions Breaking Constraints of Time and Space6.1.2 Process and Technical Framework of Online Heritage Exhibitions6.1.3 Key Technologies for Online Heritage Browsing6.1.4 Typical Online Heritage Exhibition Applications6.2 Digital Exhibitions of Reconstructed Archaeological Sites6.2.1 Archaeological Sites Exhibition of Reconstructed Original Appearance6.2.2 Process and Technical Framework of a Digital Reconstruction Exhibition6.2.3 Key Technologies of Digital Reconstruction Exhibition6.2.4 Typical Applications for Digitized Reconstruction and Exhibition of Sites6.3 Interactive Experience in the Exhibition Hall6.3.1 Interactive Experience that Enhances a Sense of Participation6.3.2 Process and Technical Framework of the Interactive Experience in the Exhibition Hall6.3.3 Key Technologies of Interactive Experience in Exhibition Hall6.3.4 Typical Application of Interactive Experience System6.4 Summary and ProspectsReferences7 Digital Development and Utilization of Cultural Heritages' Information7.1 Culture Heritages' Value7.2 Process and Technical Framework of Digital Development and Utilization7.3 Key

<<文化遗产的数字化保护>>

Technologies for Development and Utilization7.3.1 Source Material Extraction7.3.2 Expression and Extraction of Ancient Murals' Artistic Style7.3.3 Artistic Style Learning Based Re-creation7.3.4 Computer-aided Imitation of Murals7.4 Introduction of Typical System for the Development and Utilization7.4.1 Computer Aided Art Design and Creating System 7.4.2 Semantic Modeling for Chinese Ancient Buildings 7.5 Summary and ProspectsReferences8 Applications of Digital Preservation Technologies for Cultural Heritages8.1 Digital Preservation Project for the Mogao Grottoes8.1.1 Digital Acquisition of the Dunhuang Grottoes8.1.2 Microclimate Monitoring in the Mogao Grottoes8.1.3 Digitally-Aided Imitation of the Dunhuang Murals 8.1.4 Color Simulation of the Dunhuang Murals8.1.5 Dunhuang-style Pattern Creation and Product Development8.2 Digital Preservation Project for the Jinsha Site8.2.1 Information Management and Sharing for Archaeological Sites8.2.2 Acquisition and Exhibition of the Excavation Field 8.3 Digital Reconstruction Project of the Hemudu Site8.4 Digital Exhibition of the Liangzhu Relics8.5 SummaryReferences9 Summary and ProspectIndex

## 章节摘录

插图：Developed in 1960s, RS has its broad sense and narrow sense. In a broad sense, it is a detection technology that remotely senses objects and natural phenomena using electromagnetic waves, gravitational fields, electric fields, mechanical waves ( sound waves, seismic waves ) , and so on, without direct contact. In a narrow sense, it is a technology that is used to study the shapes, sizes, locations, and properties of objects on the earth and their correlations with the environment. The radiation features of electromagnetic waves, from ultraviolet to microwave, of various objects on the earth are obtained using various sensors placed on aerospace carriers ( including near-earth carriers ) at different heights. Those features are then formed into images, which are then transmitted and processed. Through such procedures, the attributes of objects on the earth are identified, and their temporal and spatial changing rules are explored. Multi-sensors, high-resolution, and multi-temporal data are the distinctive features of contemporary development of RS technology. The application and analysis of RS information is currently undergoing a number of changes from the analysis of single remote sensing data to the analysis of fused information from multiple data sources, from static analysis to dynamic monitoring analysis, from qualitative investigation to computer-aided automatic quantitative investigation. Aerial RS has become an important aspect of RS development for the reason of its mobility and high-resolution. RS archaeology, as its name suggests, is the nondestructive detection of objects on the ground, underground, or underwater using RS technology. To be specific, we detect, record, and analyze archaeological sites and their regional environments from four levels, namely aerospace, aviation, ground and underground, using geophysical means such as electromagnetic and seismic waves, and gravitational, magnetic, and electric fields. Using RS archaeology, the information obtained is no longer limited by visible light and audible sound waves detected by human eyes and ears. Any trivial changes or abnormalities in attributes detectable by the instruments can be recorded; therefore, RS technology can provide much more detailed archaeological information.

## <<文化遗产的数字化保护>>

### 编辑推荐

《文化遗产的数字化保护:技术与应用(英文版)》由浙江大学出版社出版。



## <<文化遗产的数字化保护>>

### 版权说明

本站所提供下载的PDF图书仅提供预览和简介，请支持正版图书。

更多资源请访问:<http://www.tushu007.com>