

Contents

List of Figures	xi
Preface.....	xv
Overview.....	xvii
Introduction.....	1
1. Survey and three-dimensional data for archaeology	3
1.1 The debate in the scientific community	5
1.2 Innovative technologies	6
1.2.1 Photogrammetry	7
1.2.2 Image-based survey	7
1.2.3 Laser scanner.....	11
1.3 Data management.....	12
1.3.1 Metadata	13
1.3.2 Digital Curation.....	13
1.3.3 Provenance and Paradata.....	14
1.3.4 Repository	15
1.3.5 On-line 3D visualization	15
1.3.6 Management systems	16
1.3.7 Building Information Modelling	17
2. Field documentation	19
2.1 3D survey at excavation stage.....	19
2.2 Excavation of San Biagio in Venella.....	20
2.3 The project “Ancient Appia Landscapes”	25
3. Requalification and enhancement	29
3.1 3D design of interventions	29
3.2 Torre del Greco, Villa Sora.....	30
3.3 The so-called <i>Augusteum</i> of Herculaneum.....	36
4. Conservation and preventive maintenance.....	43
4.1 Maintenance of complex sites.....	44
4.2 Pompeii, Domus of Eros Stallius (I,6,13-14).....	46
4.3 Pompei, Domus del Centauro (VI,9,3).....	53
5. Building Information Modelling for Cultural Heritage	61
5.1 ABIM.....	61
5.2 The Solar Temple of Nuserra (Abu Gurab – Egypt)	62
6. Final remarks	69
6.1 Survey for excavation documentation.....	70
6.2 Survey for redevelopment and enhancement	71
6.3 Surveys for conservation and preventive maintenance.....	73
6.4 Final thoughts and future developments	73
References.....	77