SOFIA PESCARIN

RECONSTRUCTING ANCIENT LANDSCAPE

BUDAPEST 2009

Front Cover Illustration:

Different views of ancient and archaeological landscape in Rome
(3d reconstruction by VHLab of CNR ITABC; cover design by M. Pescarin)

Back Cover Illustration:

Virtual Rome VR webGIS: fly through exploration of the Imperial Forums area in Rome and of its mindscape during Roman times (CNR ITABC VHLab, aerial images provided by Seat Yellow Pages)

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To my family,
for their patience, their support, their critique

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Preface

The world's cultural and natural heritage is vanishing at an alarming rate, as everything from development to tourism, conflict to looting, and climate to disasters threaten our past. Yet technology and processes now exist that can help us document, interpret, and communicate our heritage, helping save this disappearing world.

This book is an important new milestone in the developing field of Archaeological Landscapes. As our understanding of heritage and archaeology have evolved, the need to work in context beyond the individual site has grown. The UNESCO Convention Concerning the Protection of the World's Cultural and Natural Heritage, or World Heritage Convention as it is more commonly known, brought the idea of internationally protected sites of outstanding universal value to the world in 1972. Twenty years later, it became the first international legal instrument to recognize and protect a broader sphere, incorporating the idea of cultural landscapes. To date 55 properties have been identified and protected for the values of their cultural landscapes.

Archaeology encompasses more than just the individual site, and digital tools have the potential to help us document, interpret, and 'see' this broader context. From the early days of computer graphics and virtual reality, there has been an interest in communicating the past and seeing the unseen. Early visualizations of ancient sites, such as those done by Taisei Corporation in the late 1980s for Japanese public television, helped open our eyes to the possibilities. In my own work, helping develop one of the first long-range 3d laser scanners in the early 1990s, it was clear that emerging sensing technologies we and others were developing could bridge the 'local' and the 'remote', and play a useful role in helping capture the broader reality of heritage, from site to landscape and beyond. By the mid-1990s, pioneering work by Canadian media artist Dr. Charlotte Davies helped us see landscape in a new light, using evocative 3d graphics, transparency, and a novel "immersive" interface. Yet despite the early progress, much remains to be done. Only a small subset of the archaeological and heritage communities have yet tapped the full power of technology to document, interpret, communicate, and thus ultimately conserve, our heritage.

From its "ten golden rules for landscape reconstruction", to explanation of the spectrum from landscape to 'mapscape', 'pastscape', 'mindscape', and 'webscape', this book helps break a complex subject into clear components and

easily understood processes. Using the pioneering projects of Italy's National Research Council Lab in Virtual Heritage as examples, the tools and processes of modern digital landscape reconstruction are illuminated.

A rich resource for both heritage managers, researchers, and students, it is my hope that this book will inspire and guide a new generation of Virtual Heritage and reconstructions of the ancient world. It is a great pleasure to welcome this important new work by my colleague and friend, Dr. Sofia Pescarin.

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