Contents

Preface: Looking B	ack, Looking Forward: Ancient Egypt—New
Technology 1X	
Acknowledgments	XII

- 1 Ethics of Digital Representation in Egyptology 1
 Willeke Wendrich
- 2 The Contribution of Photogrammetry and Computer Graphics to the Study and Preservation of Monuments in Alexandria, Egypt 33 Mohammed Abdelaziz and Mohamed Elsayed
- 3 The Digital Rosetta Stone Project 58
 Miriam Amin, Angelos Barmpoutis, Monica Berti, Eleni Bozia,
 Josephine Hensel and Franziska Naether
- 4 Mythological Landscapes and Real Places: Using Virtual Reality to Investigate the Perception of Sacred Space in the Ancient City of Memphis 85

Nevio Danelon and David J. Zielinski

- 5 "МҮТНОРНОR": A Digital Tool for the Collection and Analysis of Mythical Metaphor in Ancient Egypt 118 *Katja Goebs*
- 6 Mapping the Ancient Mind: *iClassifier*, a New Platform for Systematic Analysis of Classifiers in Egyptian and Beyond 130 Haleli Harel, Orly Goldwasser and Dmitry Nikolaev
- 7 Not Just Another Photogrammetry Report: Using Modern Technology to Help Solve an Ancient Riddle at Karnak Temple 159 Mark D. Janzen and Terrence J. Nichols
- 8 The 3D Digital Documentation of Shaft K24 in Saqqara 186

 Matthias Lang, Ramadan Hussein, Philippe Kluge
- 9 Digital Archaeology and Ancient Egypt: Reflections on the Results of the 2017 el-Hibeh Digital Archaeology Project 213 Jean Li, with contributions by Jimmy Tran and Devin Ostrom

VI CONTENTS

Digitizing and Annotating Ancient Egyptian Coffins: The Book of the Dead in 3D 245
Rita Lucarelli and Mark-Jan Nederhof

Photogrammetry and Face Carvings: Exploring the 'Face' of the Egyptian Anthropoid Coffins by 3D Modelling 261

Stefania Mainieri

12 VÉgA (Vocabulaire de l'Égyptien Ancien): A New Definition of a Dictionary 281

Anaïs Martin

13 The Egyptian Road Most Taken: Mapping the Least Cost Path Routes from the Nile to the Red Sea Coast 298
Morgan E. Moroney

14 Secondary Epigraphy in Egypt: A Case for a Research Infrastructure 322 Hana Navratilova

15 SIGSaqqâra: A Digital Project to Understand the Spatial Occupation of Saqqara 345
Éloïse Noc

16 'Where Did THAT Come From?!' The Giza Project's Development of Citation and Referencing Documentation for 3D Archaeological Visualizations 374

Nicholas Picardo

17 All Words and No Play: Identifying Paronomasia in New Kingdom Texts with Pattern Matching 429

Julia Viani Puglisi and Daniel Dakota

18 Gaining New Perspectives on the Hypostyle Hall at Karnak through the Use of an Unmanned Aerial Vehicle (UAV) and Other Emerging Techniques 476

Jean Revez, Peter J. Brand, Emmanuel Laroze and Owen Murray

CONTENTS VII

19 Representing Ancient Egyptian Inscriptions of the Old Kingdom Digitally: Dynamic Visualizations of Poetic Form and Inscriptional Layout 512 Julie Stauder-Porchet

- Puzzling Tombs: Virtual Reconstruction of the Middle Kingdom Elite
 Necropolis at Dayr al-Barsha (Middle Egypt) 532
 Toon Sykora, Roberto De Lima, Marleen De Meyer, Maarten
 Vergauwen and Harco Willems
- 21 Project Croato-Aegyptica (2002–2020) 551 Mladen Tomorad and Goran Zlodi
- 22 Virtual Reality Storytelling: Pedagogy and Applications 572 *Julia Troche and Eve Weston*
- 23 Cleo—the Artificial Intelligence Egyptology Platform 592 Heleen Wilbrink and Joshua Aaron Roberson

General Index 605