

1. Record Nr.	UNINA9910299780303321
Titolo	Architecture and Mathematics from Antiquity to the Future : Volume I: Antiquity to the 1500s // edited by Kim Williams, Michael J. Ostwald
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Birkhäuser, , 2015
ISBN	3-319-00137-X
Edizione	[1st ed. 2015.]
Descrizione fisica	1 online resource (723 p.)
Disciplina	510 510.9 519
Soggetti	Mathematics History Mathematics in Art and Architecture History of Mathematical Sciences
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references at the end of each chapters and indexes.
Nota di contenuto	Part I: Introduction -- Part II: From 2000 BC to 300AD -- Part III: Theories of Measurement and Structure -- Part IV: From 1100 AD to 1400 AD -- Part V: Theories of Proportion, Symmetry, Periodicity -- Part VI: From 1500 AD to 1600 AD -- Index -- Acknowledgements.
Sommario/riassunto	The aim of this collection of essays is to present a broad portrait of the ways in which two seemingly different disciplines are interconnected. The diversity and varied texture of the essays richly illustrates the affinity between architecture and mathematics. As the almost 100 papers presented in this two-volume publication show, every age and every culture has relied on principles of mathematics incorporated in their works of architecture to imbue their built environment with meaning and order. Included are discussions of geometry, proportional systems, linear algebra, periodic and aperiodic tilings, fractals, perspective, computer science and mechanics. Western architecture of every period is examined: Egyptian, Roman, Medieval, Renaissance, Baroque, Enlightenment, twentieth-century and beyond, as is the

architecture of Turkey, China, India, Japan, Australia and Islam. The mathematical nature of the architecture of Leon Battista Alberti, Andrea Palladio and Frank Lloyd Wright is examined, and the philosophical background behind Renaissance architecture is explored. Contributors come from a wide range of disciplines and cultural backgrounds: architects, mathematicians, historians, theoreticians, scientists and educators from the world over. Architecture may be seen and understood in a new light, by professionals as well as non-professionals.
