

1. Record Nr.	UNINA9910299970403321
Titolo	The Art of Science : From Perspective Drawing to Quantum Randomness // edited by Rossella Lupacchini, Annarita Angelini
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2014
ISBN	3-319-02111-7
Edizione	[1st ed. 2014.]
Descrizione fisica	1 online resource (220 p.)
Disciplina	363.69 501 509.03 510
Soggetti	Mathematics Physics History Cultural property Philosophy and science Quantum theory Mathematics in Art and Architecture History and Philosophical Foundations of Physics History of Mathematical Sciences Cultural Heritage Philosophy of Science Quantum Physics
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 and index at the end of each chapters.
Nota di contenuto	From Perspective Drawing to the Eighth Dimension -- Seeing Reality in Perspective: The "Art of Optics" and the "Science of Painting" -- The Role of Perspective in the Transformation of European Culture -- Visual Differential Geometry and Beltrami's Hyperbolic Plane.- All Done by Mirrors: Symmetries, Quaternions, Spinors, and Clifford Algebras -- Artists & Gamblers on the Way to Quantum Physics -- Radices

Sophisticae, Racines Imaginaires: The Origins of Complex Numbers in the Late Renaissance -- Random, Complex, and Quantum.

Sommario/riassunto

Like linear perspective, complex numbers and probability are notable discoveries of the Renaissance. History has been quick to recognize the crucial impact of linear perspective on painting, but reluctant to acknowledge the importance of complex numbers and probability. Both were treated with a great deal of suspicion by the scientific establishment and overlooked for many years. It was only in the twentieth century, when quantum theory defined the notion of "complex probability amplitude", that complex numbers merged with probability and transformed the image of the physical world. From a theoretical point of view, however, the space opened to painting by linear perspective and the space opened to science by complex numbers are equally valuable and share significant characteristics. By exploring that common ground, The Art of Science will lead the reader to complement Leonardo's vision of painting as a science and to see science as an art. Its aim is to restore a visual dimension to mathematical sciences – an element dulled, if not obscured, by historians, philosophers, and scientists themselves.
