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Titolo	Shadows of reality [[electronic resource]] : the fourth dimension in relativity, cubism, and modern thought / / Tony Robbin
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Nota di contenuto	The origins of four-dimensional geometry -- Fantasies of four-dimensional space -- The fourth dimension in painting -- The truth -- A very short course in projective geometry -- Patterns, crystals, and projections -- Twistors and projections -- Entanglement, quantum geometry, and projective reality -- Category theory, higher-dimensional algebra, and the dimension ladder -- The computer revolution in four-dimensional geometry -- Conclusion : art, math, and technical drawing.
Sommario/riassunto	In this insightful book, which is a revisionist math history as well as a revisionist art history, Tony Robbin, well known for his innovative computer visualizations of hyperspace, investigates different models of the fourth dimension and how these are applied in art and physics. Robbin explores the distinction between the slicing, or Flatland, model and the projection, or shadow, model. He compares the history of these two models and their uses and misuses in popular discussions. Robbin breaks new ground with his original argument that Picasso used the

projection model to invent cubism, and that Minkowski had four-dimensional projective geometry in mind when he structured special relativity. The discussion is brought to the present with an exposition of the projection model in the most creative ideas about space in contemporary mathematics such as twisters, quasicrystals, and quantum topology. Robbin clarifies these esoteric concepts with understandable drawings and diagrams.Robbin proposes that the powerful role of projective geometry in the development of current mathematical ideas has been long overlooked and that our attachment to the slicing model is essentially a conceptual block that hinders progress in understanding contemporary models of spacetime. He offers a fascinating review of how projective ideas are the source of some of today's most exciting developments in art, math, physics, and computer visualization.