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Sommario/riassunto	<p>The charm of Mathematical Physics resides in the conceptual difficulty of understanding why the language of Mathematics is so appropriate to formulate the laws of Physics and to make precise predictions. Citing Eugene Wigner, this "unreasonable appropriateness of Mathematics in the Natural Sciences" emerged soon at the beginning of the scientific thought and was splendidly depicted by the words of Galileo: "The grand book, the Universe, is written in the language of Mathematics." In this marriage, what Bertrand Russell called the supreme beauty, cold and austere, of Mathematics complements the supreme beauty, warm and engaging, of Physics. This book, which consists of nine articles, gives a flavor of these beauties and covers an ample range of mathematical subjects that play a relevant role in the study of physics and engineering. This range includes the study of free probability measures associated with p-adic number fields, non-commutative measures of quantum discord, non-linear Schrodinger equation analysis, spectral operators related to holomorphic extensions of series expansions, Gibbs phenomenon, deformed wave equation analysis, and optimization methods in the numerical study of material properties.</p>