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Nota di contenuto	Introduction -- Intelligent Reasoning Elements -- Philosophy and Engineering -- Logic and Engineering -- Science and Engineering -- Education and Engineering -- Future Trends.
Sommario/riassunto	This book highlights and explains the significance of philosophical, logical, and scientific principles for engineering education/training and engineering works. In so doing, it aims to help to rectify the neglect of philosophy and logic in current education and training programs, which emphasize analytical and numerical methods at the expense of the innovative practical and creative abilities so important for engineering in the past. Individual chapters examine the relation of philosophy, logic, and science to engineering, drawing attention to, for example, the significance of ethics, the relevance of the philosophy of science, and the increasing importance of application of fuzzy logic to engineering. Modeling principles and philosophy in engineering are discussed, and the impact of different education systems, examined. Too often engineers have become reliant on readily available formulations and software; this book offers an antidote, promoting the recognition of artistic and humanitarian aspects and their integration in engineering works.