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Sommario/riassunto	Although scientific computing is very often associated with numeric computations, the use of computer algebra methods in scientific computing has obtained considerable attention in the last two decades. Computer algebra methods are especially suitable for parametric analysis of the key properties of systems arising in scientific computing. The expression-based computational answers generally provided by these methods are very appealing as they directly relate properties to parameters and speed up testing and tuning of mathematical models through all their possible behaviors. This book contains 8 original research articles dealing with a broad range of topics, ranging from algorithms, data structures, and implementation techniques for high-performance sparse multivariate polynomial arithmetic over the integers and rational numbers over methods for certifying the isolated zeros of polynomial systems to computer algebra problems in quantum computing.