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Sommario/riassunto	At the current time of writing, the American Society of Civil Engineers (ASCE) has awarded American infrastructure a grade of D+, meaning poor and at risk. Part of the reason for the low grade is due to the rapid deterioration of structural integrity and the inability of most places to safely meet future demands. Deficiencies in these areas may be remediated by advancements in structural health monitoring (SHM) technologies that provide sensing systems to automatically and economically diagnose structural integrity. In a sense, SHM technologies will help pave the way to intelligent structures that are able to detect damage by themselves and even warn occupants of any danger due to impending structural failure. Engineering sensors and developing smart algorithms for SHM often involves the close collaboration of a surprisingly large breadth of specialties. In this book, we have collected a thin but representative slice of the most recent research in SHM, and hope that the reader will gain an inspiring view of today's research landscape and a notion of what is to come.