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Nota di contenuto	Table of Contents -- Chapter 1Introduction -- Chapter 2Fundamentals of Probability and Random Variables -- Chapter 3Expected Values of Random Variables -- Chapter 4Analysis of Stochastic Processes -- Chapter 5Time Domain Linear Vibration Analysis -- Chapter 6Frequency Domain Analysis -- Chapter 7Frequency, bandwith, and Amplitude -- Chapter 8Matrix Analysis of Linear Systems -- Chapter 9Direct Stochastic Analysis of Linear Systems -- Chapter 10Introduction to Nonlinear Stochastic -- Vibration -- Chapter 11 Failure Analysis -- Chapter 12 Effect of Parameter Uncertainty -- Appendices A and B.
Sommario/riassunto	The topic of Introduction to Random Vibrations is the behavior of structural and mechanical systems when they are subjected to unpredictable, or random, vibrations. These vibrations may arise from natural phenomena such as earthquakes or wind, or from human-controlled causes such as the stresses placed on aircraft at takeoff and landing. Study and mastery of this topic enables engineers to design and maintain structures capable of withstanding random vibrations, thereby protecting human life. Introduction to Random Vibrations will lead readers in a user-friendly fashion to a thorough understanding of

vibrations of linear and nonlinear systems that undergo stochastic random excitation. Provides over 150 worked out example problems and, along with over 225 exercises, illustrates concepts with true-to-life engineering design problems. Offers intuitive explanations of concepts within a context of mathematical rigor and relatively advanced analysis techniques. Essential for self-study by practicing engineers, and for instruction in the classroom
