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Random Vibration

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ABSTRACT

The dynamic analysis of structures subjected to excitations which were known as a function of time. Such an analysis is said to be deterministic. When an excitation function appiied to a structure has an irregular shape that is described indirectly by statistical means, we speak of a random vibration. Such a function is usually described as a continuous or discrete function of the exciting frequencies, in a manner similar to the description of a function by Fourier series. In structural dynamics, the random excitations most often encountered are either motion transmitted through the foundation or acoustic pressure. In structural dynamics, the random excitations most often encountered are either motion transmitted through the foundation or acoustic pressure.

Keywords: *RANDOM VIBRATION, STATISTICAL DESCRIPTION OF RANDOM FUNCTIONS, PROBABILITY DENSITY FUNCTION, RAYLEIGH DISTRIBUTION*

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