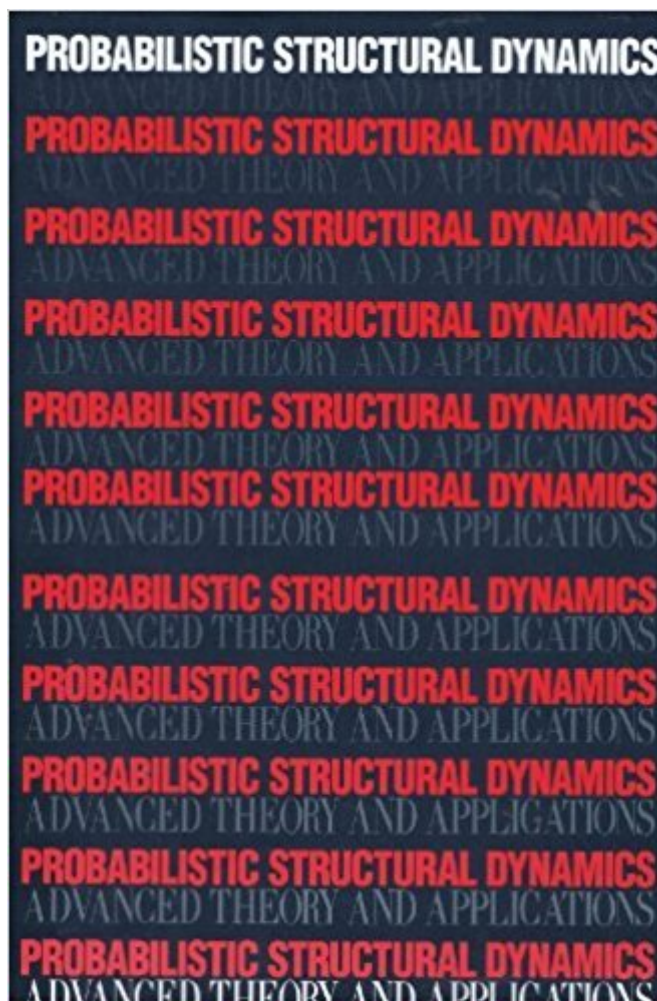


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Probabilistic Structural Dynamics: Advanced Theory And Applications



Synopsis

This graduate-level text, ideal for such courses as the random vibrations course offered to civil, mechanical and aerospace engineers, includes theories on topics such as earthquake engineering, offshore engineering and vehicle engineering.

Book Information

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POWERFUL NEW MATHEMATICAL TOOLS FOR STRUCTURAL DYNAMICS Presenting powerful new methods for analyzing uncertainties in the performance of designed systems, Probabilistic Structural Dynamics offers unparalleled tools for predicting the performance of new designs with new materials. In this text, pioneering engineers Y.K. Lin and G.Q. Cai demonstrate innovative mathematical techniques and explain how they can both improve safety and drive new efficiencies in contemporary structures. Employing spectral analysis, Markov processes, and other stochastic tools, Lin and Cai show you step-by-step how to:

- * Perform dynamic analyses of linear and nonlinear systems
- * Apply evolutionary spectral analysis
- * Approximate solutions for multidimensional nonlinear systems
- * Use insights from first-excursion failures
- * Find answers for disordered structures
- * Employ stochastics to achieve safer, more efficient design

--This text refers to an out of print or unavailable edition of this title.

Y. K. Lin holds the Charles E. Schmidt Eminent Scholar Chair in Engineering at Florida Atlantic

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