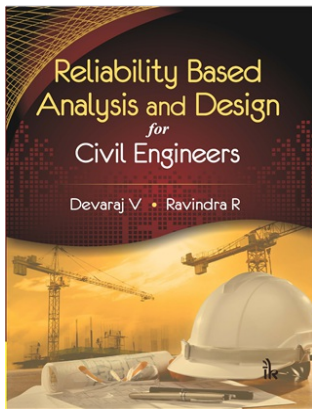


# Reliability Based Analysis and Design for Civil Engineers

Devaraj V & Ravindra R



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## About the Book

**Reliability Analysis and Design for Civil Engineers** is designed for beginners to understand the concepts in reliability engineering. The chapters are well planned beginning with probability and statistics. Application of probability concepts to assess the uncertainties in engineering is presented by different methods, at component level and system level. Design of structures for a specified target reliability to ensure safety and economy is presented.

## Salient Features

- Integrates the uncertainties in geometry, strength, loads and its consequences by reliability theory ensuring safety of a structure.
- Sufficient number of solved problems.
- A large number of examples explaining the concepts.
- Chapters on reliability analysis and design.

## Table of Contents

1. Statistics and Probability
2. Random Variables
3. Functions of Random Variables
4. First Order Second Moment Method
5. Point Estimate Method
6. Reliability Analysis by Taylor Series
7. Reliability Analysis by Hasofer-Lind Method
8. Monte Carlo Simulation
9. System Reliability of Structures
10. Load Resistance Factor Design

## About the Author

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