

Reliability and Risk

A Bayesian Perspective

By NOZER D. SINGPURWALLA
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This book sets out to change the way in which we think about reliability and survival analysis by casting them in the broader context of decision-making. This is achieved by:

- Providing a broad coverage of the diverse aspects of reliability, including: multivariate failure models, dynamic reliability, event history analysis, non-parametric Bayes, competing risks, co-operative and competing systems, and signature analysis.
- Covering the essentials of Bayesian statistics and exchangeability, enabling readers who are unfamiliar with Bayesian inference to benefit from the book.
- Introducing the notion of "composite reliability", or the collective reliability of a population of items.
- Discussing the relationship between notions of reliability and survival analysis and econometrics and financial risk.

Reliability and Risk can most profitably be used by practitioners and research workers in reliability and survivability as a source of information, reference, and open problems.

It can also form the basis of a graduate level course in reliability and risk analysis for students in statistics, biostatistics, engineering (industrial, nuclear, systems), operations research, and other mathematically oriented scientists, wherein the instructor could supplement the material with examples and problems.

"As the author mentions in his preface, the book can be read in several different ways, as a text for a graduate level course on reliability or as a source book for "information and open problems." This book has been a joy to read for this reviewer." (International Statistical Review)

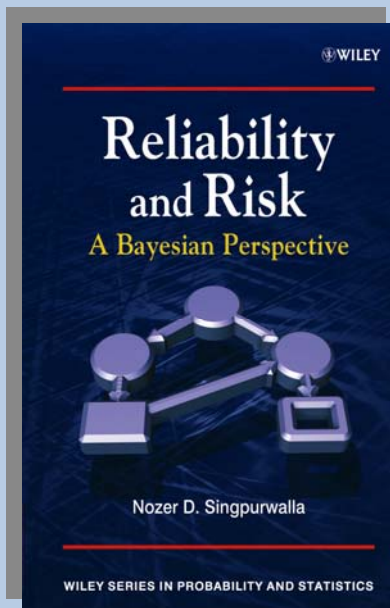
"...a cornucopia of probability models and inference methods for different problems ...[that] serve as a rich taxonomy that statisticians can use to fit models...works as both an educational tool and as a reference." (MAA Reviews)

"This is a very interesting, provocative, and worthwhile book." (Biometrics)

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