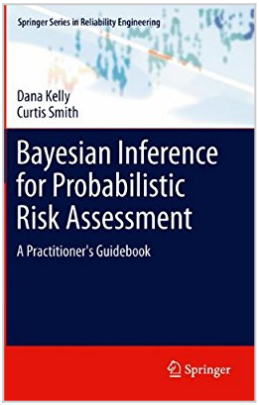

Bayesian Inference for Probabilistic Risk Assessment: A Practitioner's Guidebook (Springer Series in Reliability Engineering)

By Dana Kelly, Curtis Smith

Bayesian Inference for Probabilistic Risk Assessment: A Practitioner's Guidebook (Springer Series in Reliability Engineering) By Dana Kelly, Curtis Smith

Bayesian Inference for Probabilistic Risk Assessment provides a Bayesian foundation for framing probabilistic problems and performing inference on these problems. Inference in the book employs a modern computational approach known as Markov chain Monte Carlo (MCMC). The MCMC approach may be implemented using custom-written routines or existing general purpose commercial or open-source software. This book uses an open-source program called OpenBUGS (commonly referred to as WinBUGS) to solve the inference problems that are described. A powerful feature of OpenBUGS is its automatic selection of an appropriate MCMC sampling scheme for a given problem. The authors provide analysis “building blocks” that can be modified, combined, or used as-is to solve a variety of challenging problems.

The MCMC approach used is implemented via textual scripts similar to a macro-type programming language. Accompanying most scripts is a graphical Bayesian network illustrating the elements of the script and the overall inference problem being solved. *Bayesian Inference for Probabilistic Risk Assessment* also covers the important topics of MCMC convergence and Bayesian model checking.

Bayesian Inference for Probabilistic Risk Assessment is aimed at scientists and engineers who perform or review risk analyses. It provides an analytical structure for combining data and information from various sources to generate estimates of the parameters of uncertainty distributions used in risk and reliability models.

Bayesian Inference for Probabilistic Risk Assessment: A Practitioner's Guidebook (Springer Series in Reliability Engineering)

By Dana Kelly, Curtis Smith

Bayesian Inference for Probabilistic Risk Assessment: A Practitioner's Guidebook (Springer Series in Reliability Engineering) By Dana Kelly, Curtis Smith

Bayesian Inference for Probabilistic Risk Assessment provides a Bayesian foundation for framing probabilistic problems and performing inference on these problems. Inference in the book employs a modern computational approach known as Markov chain Monte Carlo (MCMC). The MCMC approach may be implemented using custom-written routines or existing general purpose commercial or open-source software. This book uses an open-source program called OpenBUGS (commonly referred to as WinBUGS) to solve the inference problems that are described. A powerful feature of OpenBUGS is its automatic selection of an appropriate MCMC sampling scheme for a given problem. The authors provide analysis “building blocks” that can be modified, combined, or used as-is to solve a variety of challenging problems.

The MCMC approach used is implemented via textual scripts similar to a macro-type programming language. Accompanying most scripts is a graphical Bayesian network illustrating the elements of the script and the overall inference problem being solved. *Bayesian Inference for Probabilistic Risk Assessment* also covers the important topics of MCMC convergence and Bayesian model checking.

Bayesian Inference for Probabilistic Risk Assessment is aimed at scientists and engineers who perform or review risk analyses. It provides an analytical structure for combining data and information from various sources to generate estimates of the parameters of uncertainty distributions used in risk and reliability models.

Bayesian Inference for Probabilistic Risk Assessment: A Practitioner's Guidebook (Springer Series in Reliability Engineering) By Dana Kelly, Curtis Smith Bibliography

- Sales Rank: #2783681 in Books
- Published on: 2011-08-31
- Original language: English
- Number of items: 1
- Dimensions: 9.20" h x .70" w x 6.10" l, 1.05 pounds
- Binding: Hardcover
- 228 pages

Editorial Review

From the Back Cover

Bayesian Inference for Probabilistic Risk Assessment provides a Bayesian foundation for framing probabilistic problems and performing inference on these problems. Inference in the book employs a modern computational approach known as Markov chain Monte Carlo (MCMC). The MCMC approach may be implemented using custom-written routines or existing general purpose commercial or open-source software. This book uses an open-source program called OpenBUGS (commonly referred to as WinBUGS) to solve the inference problems that are described. A powerful feature of OpenBUGS is its automatic selection of an appropriate MCMC sampling scheme for a given problem. The authors provide analysis “building blocks” that can be modified, combined, or used as-is to solve a variety of challenging problems.

The MCMC approach used is implemented via textual scripts similar to a macro-type programming language. Accompanying most scripts is a graphical Bayesian network illustrating the elements of the script and the overall inference problem being solved. *Bayesian Inference for Probabilistic Risk Assessment* also covers the important topics of MCMC convergence and Bayesian model checking.

Bayesian Inference for Probabilistic Risk Assessment is aimed at scientists and engineers who perform or review risk analyses. It provides an analytical structure for combining data and information from various sources to generate estimates of the parameters of uncertainty distributions used in risk and reliability models.

About the Author
Dana Kelly and Curtis Smith are both specialists in Bayesian inference for risk and reliability analysis, working at the Idaho National Laboratory, USA. They provide support to the Nuclear Regulatory Commission, NASA, the Joint Research Centre in Pettern, and others. They are the authors of numerous refereed publications in the field.

Users Review

From reader reviews:

Eva Sexton:

Why don't make it to be your habit? Right now, try to ready your time to do the important work, like looking for your favorite publication and reading a book. Beside you can solve your long lasting problem; you can add your knowledge by the guide entitled Bayesian Inference for Probabilistic Risk Assessment: A Practitioner's Guidebook (Springer Series in Reliability Engineering). Try to make the book Bayesian Inference for Probabilistic Risk Assessment: A Practitioner's Guidebook (Springer Series in Reliability Engineering) as your pal. It means that it can for being your friend when you sense alone and beside associated with course make you smarter than before. Yeah, it is very fortuned in your case. The book makes you far more confidence because you can know everything by the book. So , we should make new experience as well as knowledge with this book.

Chris Holmes:

This Bayesian Inference for Probabilistic Risk Assessment: A Practitioner's Guidebook (Springer Series in Reliability Engineering) are reliable for you who want to be considered a successful person, why. The explanation of this Bayesian Inference for Probabilistic Risk Assessment: A Practitioner's Guidebook (Springer Series in Reliability Engineering) can be one of several great books you must have is actually giving you more than just simple reading food but feed anyone with information that maybe will shock your previous knowledge. This book is usually handy, you can bring it almost everywhere and whenever your conditions throughout the e-book and printed versions. Beside that this Bayesian Inference for Probabilistic Risk Assessment: A Practitioner's Guidebook (Springer Series in Reliability Engineering) giving you an enormous of experience including rich vocabulary, giving you test of critical thinking that we understand it useful in your day pastime. So , let's have it and revel in reading.

Beverly Hill:

Bayesian Inference for Probabilistic Risk Assessment: A Practitioner's Guidebook (Springer Series in Reliability Engineering) can be one of your beginning books that are good idea. All of us recommend that straight away because this reserve has good vocabulary that will increase your knowledge in vocab, easy to understand, bit entertaining but nevertheless delivering the information. The copy writer giving his/her effort to set every word into joy arrangement in writing Bayesian Inference for Probabilistic Risk Assessment: A Practitioner's Guidebook (Springer Series in Reliability Engineering) yet doesn't forget the main place, giving the reader the hottest as well as based confirm resource data that maybe you can be considered one of it. This great information can certainly drawn you into new stage of crucial considering.

Jesus Allgood:

Beside this particular Bayesian Inference for Probabilistic Risk Assessment: A Practitioner's Guidebook (Springer Series in Reliability Engineering) in your phone, it could possibly give you a way to get more close to the new knowledge or data. The information and the knowledge you will got here is fresh from the oven so don't end up being worry if you feel like an outdated people live in narrow commune. It is good thing to have Bayesian Inference for Probabilistic Risk Assessment: A Practitioner's Guidebook (Springer Series in Reliability Engineering) because this book offers to your account readable information. Do you oftentimes have book but you would not get what it's all about. Oh come on, that won't happen if you have this within your hand. The Enjoyable option here cannot be questionable, similar to treasuring beautiful island. Techniques you still want to miss the idea? Find this book along with read it from right now!

Read Bayesian Inference for Probabilistic Risk Assessment: A Practitioner's Guidebook (Springer Series in Reliability Engineering) By Dana Kelly, Curtis Smith for online ebook

Bayesian Inference for Probabilistic Risk Assessment: A Practitioner's Guidebook (Springer Series in Reliability Engineering) By Dana Kelly, Curtis Smith Free PDF d0wnl0ad, audio books, books to read, good books to read, cheap books, good books, online books, books online, book reviews epub, read books online, books to read online, online library, greatbooks to read, PDF best books to read, top books to read Bayesian Inference for Probabilistic Risk Assessment: A Practitioner's Guidebook (Springer Series in Reliability Engineering) By Dana Kelly, Curtis Smith books to read online.

Online Bayesian Inference for Probabilistic Risk Assessment: A Practitioner's Guidebook (Springer Series in Reliability Engineering) By Dana Kelly, Curtis Smith ebook PDF download

Bayesian Inference for Probabilistic Risk Assessment: A Practitioner's Guidebook (Springer Series in Reliability Engineering) By Dana Kelly, Curtis Smith Doc

Bayesian Inference for Probabilistic Risk Assessment: A Practitioner's Guidebook (Springer Series in Reliability Engineering) By Dana Kelly, Curtis Smith Mobipocket

Bayesian Inference for Probabilistic Risk Assessment: A Practitioner's Guidebook (Springer Series in Reliability Engineering) By Dana Kelly, Curtis Smith EPub