(Mobile pdf) The Jungles of Randomness: A Mathematical Safari

The Jungles of Randomness: A Mathematical Safari

Ivars Peterson
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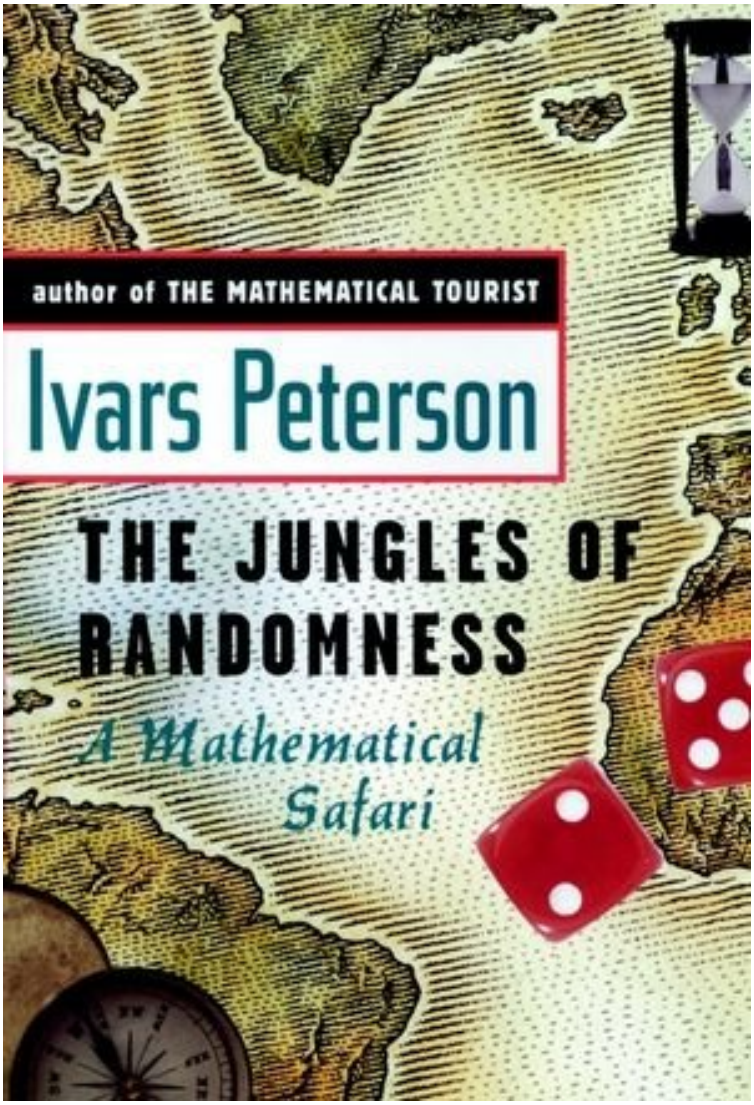

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Ivars Peterson : The Jungles of Randomness: A Mathematical Safari before purchasing it in order to gage whether or not it would be worth my time, and all praised The Jungles of Randomness: A Mathematical Safari:

0 of 0 people found the following review helpful. Really Well Received, Nicely DoneBy CustomerIf you like to think beyond normality, I highly suggest this book. It brings you into a different world, exploring examples you can personally relate to to prove the idea that randomness does not exist, but it can all be explained by simple arithmetic. It discusses examples from Geometry to Sneeze Germs. I also really enjoyed how it was chaptered and how each chapter has sections that discuss different topics and examples. It was a well received topic and concept through well written

examples and mathematics. I think the title is also brilliant considering this concept is like you walk deeper and deeper into a jungle, getting surrounded by unfamiliar things, but the more time you spend there, the more you understand it. Read this book, you wont regret it.10 of 10 people found the following review helpful. Snapshots of probability topics by science journalistBy David J. AldousConsists of 2-3 page sections on topics (e.g. Chutes and Ladders as a Markov chain; Ramsey theory; coupled oscillators; error-correcting codes; Brownian motion and Levy flights) in probability and related areas of mathematics. The individual sections are clearly and interestingly explained by science journalist author who understands the mathematics. But compiling such magazine articles into a book gives it an overall choppy feel, jumping from topic to topic without sustained logical thread.2 of 3 people found the following review helpful. Of general interest, but off topic (of "randomness")By Chris EdwardsThis book was ok but I was a bit disappointed in its lack of material specifically devoted to the topic of the title's keyword, randomness. There were many interesting topics discussed but many seemed to be more about aesthetic attractiveness than actual randomness. For example, a lengthy analysis of drum heads and fractals didn't seem to be too related to randomness specifically. Maybe I just didn't understand the connection. The same lack of attention to randomness also annoyed me when he talked about protein folding and firefly synchronization. If protein folding were random, we'd all be piles of jelly. It's true that protein folding is very, very complicated, but that does not random make it. Towards the end he did get around to talking about randomness per se and spent some time talking about the quirks of the entire notion of randomness and how that relates to sources of randomness, pseudo and natural. That was what I was interested in. To have to go through a big book of stuff to get to that wasn't so good since, despite being interesting, it wasn't what I was interested in. If you want a book that randomly explores complex mathematical curiosities in an accessible way, this is a fine book. If you're really keen to know a lot about the current thinking of randomness, this book may not be a good use of your time.

"Peterson's knowledge of and affection for mathematics comes through with every word."--San Diego Union Tribune. "Peterson is, in short, the math teacher everyone wishes they had in high school."--Publishers Weekly. "Peterson has honed his explanatory skills finely. He is a readable guide through the tangles of probability and random chance. The Jungles of Randomness will give some insight into one of the most fruitful areas where math meets practical living."--Christian Science Monitor. The delightful trek through the exotic and powerful world of randomness. Popular math author Ivars Peterson leads readers on an exciting foray into the wilds of randomness, introducing exciting new discoveries--from hidden rules governing games of chance to how the first molecules of life formed and how random numbers can protect sensitive information on the Internet. Along the way, he charts the ambiguous boundary between order and chaos, revealing the astonishing patterns so often hidden in apparent randomness as well as the startling randomness often embedded in apparent order. Ivars Peterson (Washington, D.C.) is the mathematics and physics editor at Science News and the author of four previous trade books, including The Mathematical Tourist and Islands of Truth: A Mathematical Mystery Cruise.

.com We use the word random as though we understood what it meant, but, of course, its superficial meaning only betrays our deep ignorance of what is really going on. Random is mostly used to label anything we can't predict, from the roll of a die to our spouse's next major purchase, but what's actually happening to cause the unanticipated results? Ivars Peterson makes this complexity simple in The Jungles of Randomness. As the mathematics and physics editor of Science News, Peterson knows his topic thoroughly and writes with a flair that stimulates the imagination. Whether telling about snowflake-shaped drums; brilliant, eccentric Paul Erds's geometrical fantasies; or unbreakable and nearly unbreakable codes, he knows just when and where to open a topic a bit further to provoke greater insights. The eight gorgeous color plates and dozens of illustrations are well chosen and complement the text without overwhelming it. Inevitably, The Jungles of Randomness touches on subjects as diverse as molecular biology, engineering, and entomology, but it stays rooted in the field from which our understanding of complexity first arose: mathematics. A fascinating and underreported field, math is finally getting the mainstream attention it has always deserved, and it's not hard to understand why with exciting books like this pointing the way. Where this will lead us is anyone's guess, but the die is cast. --Rob LightnerFrom Scientific AmericanFrom a purely operational point of view, mathematician Mark Kac once said, "the concept of randomness is so elusive as to cease to be viable." Peterson examines a number of processes that seem random but may not be. In flipping a coin, he points out, "we know from experience (or theory) that we're likely to obtain an equal number of heads and tails in a long sequence of tosses. So if we see twenty-five heads in a row, it might be the legitimate though improbable result of a random process. However, it might also be advisable to check whether the coin is fair and to find out something about the fellow who's doing the flipping." Peterson looks at randomness in rolling dice, human concourse, slot machines, the synchronous flashing of fireflies in Southeast Asia and several other fields, presenting the mathematics imaginatively and clearly. Discussing the electronically manufactured random numbers that govern the operation of slot machines and other casino games, he says: "The trouble is, just as no real die, coin, or roulette wheel is ever likely to be perfectly fair, no numerical recipe produces truly random numbers. The mere existence of a formula suggests some sort of predictability or pattern."From

the PublisherNow the best-selling author of "The Mathematical Tourist" and "Islands of Truth" takes readers on an enlightening journey into the thrilling world of randomness in mathematics. Along the way, he explores how abstract mathematics can yield solutions to real-world problems and generate precise predictions and provides a connoisseur's selection of new and important theories and discoveries in everyday life. Includes 50 illustrations, including 8 pages of striking color images.