Risk Analysis Of Complex And Uncertain Systems

Preface.- Goals and challenges for quantitative risk assessment.- Introduction to engineering risk analysis.- Introduction to health risk analysis.- Limitations of risk assessment using risk matrices.- Limitations of quantitative risk assessment using aggregate exposure and risk models.- Identifying nonlinear causal relations in large data sets.- Overcoming preconceptions and confirmation biases using data mining.- Estimating the fraction of disease caused by one component of a complex mixture: bounds for lung cancer.- Bounding resistance risks for penicillin.- Confronting uncertain causal mechanisms portfolios of possibilities.- Determining what can be predicted identifiability.- Predicting effects of changes: could removing arsenic from tobacco smoke significantly reduce smoker risks of lung cancer.- Simplifying complex dynamic networks: a mathematical model of protease imbalance and COPD dynamic dose-response.- Value of information (VOI) in risk management policies for tracking and testing imported cattle for BSE.- Improving anti-terrorist risk analysis.- Designing resilient telecommunications networks.- References.- Index. EAN/ISBN : 9780387890142 Publisher(s): Springer, Berlin, Springer US Format: ePub/PDF Author(s): Cox, Louis A.

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