Aspects of risk theory.

This is a research monograph that has been written for theoretically-minded actuaries (who will appreciate the illustrations and numerical examples) and for probabilists who want to get acquainted with certain aspects of modern risk theory and who will like the rigorous use of martingales. Chapter 1 presents the results concerning the probability of ultimate ruin for the classical model, where the claim number process is a Poisson process. In Chapters 2–5 the theory is extended to the case where the Poisson process is replaced by a more general point process, for example by a renewal, Cox, or stationary model. Finally, an appendix contains several results about finite-time ruin probabilities. The included surveys of martingales, weak convergence and of various point processes are of independent interest.

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