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Titolo	Stochastic Optimization in Insurance : A Dynamic Programming Approach / / by Pablo Azcue, Nora Muler
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Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Stability Criteria for Insurance Companies -- Reinsurance and Investment -- Viscosity Solutions -- Characterization of Value Functions -- Optimal Strategies -- Numerical Examples -- References -- Appendix A. Probability Theory and Stochastic Processes -- Index.
Sommario/riassunto	The main purpose of the book is to show how a viscosity approach can be used to tackle control problems in insurance. The problems covered are the maximization of survival probability as well as the maximization of dividends in the classical collective risk model. The authors consider the possibility of controlling the risk process by reinsurance as well as by investments. They show that optimal value functions are characterized as either the unique or the smallest viscosity solution of the associated Hamilton-Jacobi-Bellman equation; they also study the structure of the optimal strategies and show how to find them. The viscosity approach was widely used in control problems related to mathematical finance but until quite recently it was not used to solve control problems related to actuarial mathematical science. This book is designed to familiarize the reader on how to use this approach. The intended audience is graduate students as well as researchers in this area.