1. Record Nr. UNINA9910134930303321 Autore Andersen Lars Nørvang Titolo Lévy Matters V : Functionals of Lévy Processes / / by Lars Nørvang Andersen, Søren Asmussen, Frank Aurzada, Peter W. Glynn, Makoto Maejima, Mats Pihlsgård, Thomas Simon Cham:,: Springer International Publishing:,: Imprint: Springer,, Pubbl/distr/stampa 2015 3-319-23138-3 ISBN Edizione [1st ed. 2015.] 1 online resource (XVI, 224 p. 8 illus., 7 illus. in color.) Descrizione fisica Collana Lévy Matters, A Subseries on Lévy Processes, , 2190-6637 ; ; 2149 Disciplina 519.282 Soggetti **Probabilities** Probability Theory and Stochastic Processes Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Bibliographic Level Mode of Issuance: Monograph Nota di bibliografia Includes bibliographical references. Nota di contenuto Makoto Maejima: Classes of infinitely divisible distributions and examples -- Lars Nørvang Andersen, Søren Asmussen, Peter W. Glynn and Mats Pihlsgard: Lévy processes with two-sided reflection --Persistence probabilities and exponents -- Frank Aurzada and Thomas Simon: Persistence probabilities and exponents. Sommario/riassunto This three-chapter volume concerns the distributions of certain functionals of Lévy processes. The first chapter, by Makoto Maejima, surveys representations of the main sub-classes of infinitesimal distributions in terms of mappings of certain Lévy processes via stochastic integration. The second chapter, by Lars Nørvang Andersen, Søren Asmussen, Peter W. Glynn and Mats Pihlsgård, concerns Lévy processes reflected at two barriers, where reflection is formulated à la Skorokhod. These processes can be used to model systems with a finite capacity, which is crucial in many real life situations, a most important quantity being the overflow or the loss occurring at the upper barrier. If a process is killed when crossing the boundary, a natural question concerns its lifetime. Deep formulas from fluctuation theory are the key to many classical results, which are reviewed in the third chapter by Frank Aurzada and Thomas Simon. The main part, however,

discusses recent advances and developments in the setting where the process is given either by the partial sum of a random walk or the