Record Nr. UNINA9910828571403321 Autore Jacob Niels Titolo Generators and their potential theory / / N. Jacob Pubbl/distr/stampa London, : Imperial College Press, c2002 **ISBN** 1-86094-956-8 Edizione [1st ed.] Descrizione fisica 1 online resource (476 p.) Pseudo differential operators & Markov processes;; v. 2 Collana 519.233 Disciplina Semigroups of operators Soggetti Pseudodifferential operators Potential theory (Mathematics) Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Nota di bibliografia Includes bibliographical references and index. "": ""Preface "": ""Notation Nota di contenuto ""Contents ""; ""Functions and Distributions ""General Notation ""; ""Measures and Integrals ""; ""Spaces of Functions ""; ""Some Measures and Distributions "": ""Norms Scalar Products Families of Functions and Seminorms ""Notation from Functional Analysis Operators """Notations related to Pseudo-Differential Operators "": ""Notations related to Potential Theory and Harmonic Analysis "": ""Introduction: Pseudo-Differential Operators and Markov Processes "": ""II Generators and Their Potential Theory ""1 Introduction """"2 Generators of Feller and Sub-Markovian Semigroups Second Order Elliptic Differential Operators as Generators of Feller and Sub-Markovian Semigroups ""2.2 Some Second Order Differential Operators with Non-Negative Characteristic Form as Generators of Sub-Markovian Semigroups """2.3 Some Properties of Pseudo-Differential Operators with Negative **Definite Symbols** 

""2.4 Hoh's Symbolic Calculus for Pseudo-Differential Operators with

**Negative Definite Symbols** 

"""2.5 Estimates for Pseudo-Differential Operators with Negative Definite Symbols Using the Symbolic Calculus

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## Sommario/riassunto

In this volume two topics are discussed: the construction of Feller and Lp-sub-Markovian semigroups by starting with a pseudo-differential operator, and the potential theory of these semigroups and their generators. The first part of the text essentially discusses the analysis of pseudo-differential operators with negative definite symbols and develops a symbolic calculus; in addition, it deals with special approaches, such as subordination in the sense of Bochner. The second part handles capacities, function spaces associated with continuous negative definite functions, Lp -sub-Markovian sem