Record Nr. UNINA9910672435203321 Autore Stroock Daniel W. Titolo Gaussian Measures in Finite and Infinite Dimensions / / Daniel W. Stroock Pubbl/distr/stampa Cham, Switzerland: ,: Springer Nature Switzerland AG, , [2023] ©2023 9783031231223 **ISBN** 9783031231216 Edizione [1st ed. 2023.] Descrizione fisica 1 online resource (152 pages) Universitext Series Collana Disciplina 515.42 Soggetti Gaussian measures Mesures gaussianes Llibres electrònics Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Includes bibliographical references and index. Nota di bibliografia Nota di contenuto Preface -- 1. Characteristic Functions -- 2. Gaussian Measures and Families -- 3. Gaussian Measures on a Banach Space -- 4. Further Properties and Examples of Abstract Wiener Spaces -- References --Index. Sommario/riassunto This text provides a concise introduction, suitable for a one-semester special topics course, to the remarkable properties of Gaussian measures on both finite and infinite dimensional spaces. It begins with a brief resumé of probabilistic results in which Fourier analysis plays an essential role, and those results are then applied to derive a few basic facts about Gaussian measures on finite dimensional spaces. In anticipation of the analysis of Gaussian measures on infinite dimensional spaces, particular attention is given to those properties of Gaussian measures that are dimension independent, and Gaussian processes are constructed. The rest of the book is devoted to the study of Gaussian measures on Banach spaces. The perspective adopted is the one introduced by I. Segal and developed by L. Gross in which the Hilbert structure underlying the measure is emphasized. The contents of this book should be accessible to either undergraduate or graduate

students who are interested in probability theory and have a solid

background in Lebesgue integration theory and a familiarity with basic functional analysis. Although the focus is on Gaussian measures, the book introduces its readers to techniques and ideas that have applications in other contexts.