

1. Record Nr.	UNINA9910139144903321
Autore	Barndorff-Nielsen O.
Titolo	Information and exponential families : in statistical theory / / O. Barndorff-Nielsen
Pubbl/distr/stampa	Chichester, England : , : John Wiley & Sons, , 2014 ©2014
ISBN	1-118-85728-3 1-118-85737-2
Edizione	[2nd ed.]
Descrizione fisica	1 online resource (250 p.)
Collana	Wiley Series in Probability and Statistics
Disciplina	519.5
Soggetti	Exponential families (Statistics) Sufficient statistics Distribution (Probability theory) Exponential functions
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 indexes.
Nota di contenuto	Cover; Title Page; Copyright Page; Contents; CHAPTER 1 INTRODUCTION; 1.1 Introductory remarks and outline; 1.2 Some mathematical prerequisites; 1.3 Parametric models; Part I Lods functions and inferential separation; CHAPTER 2 LIKELIHOOD AND PLAUSIBILITY; 2.1 Universality; 2.2 Likelihood functions and plausibility functions; 2.3 Complements; 2.4 Notes; CHAPTER 3 SAMPLE-HYPOTHESIS DUALITY AND LODS FUNCTIONS; 3.1 Lods functions; 3.2 Prediction functions; 3.3 Independence; 3.4 Complements; 3.5 Notes; CHAPTER 4 LOGIC OF INFERRENTIAL SEPARATION. ANCILLARITY AND SUFFICIENCY 4.1 On inferential separation. Ancillarity and sufficiency 4.2 B-sufficiency and B-ancillarity; 4.3 Nonformation; 4.4 S-, G-, and M-ancillarity and -sufficiency; 4.5 Quasi-ancillarity and Quasi-sufficiency; 4.6 Conditional and unconditional plausibility functions; 4.7 Complements; 4.8 Notes; Part II Convex analysis, unimodality, and Laplace transforms; CHAPTER 5 CONVEX ANALYSIS; 5.1 Convex sets; 5.2 Convex functions; 5.3 Conjugate convex functions; 5.4 Differential theory; 5.5 Complements; CHAPTER 6 LOG-CONCAVITY AND

UNIMODALITY; 6.1 Log-concavity
6.2 Unimodality of continuous-type distributions6.3 Unimodality of discrete-type distributions; 6.4 Complements; CHAPTER 7 LAPLACE TRANSFORMS; 7.1 The Laplace transform; 7.2 Complements; Part III Exponential families; CHAPTER 8 INTRODUCTORY THEORY OF EXPONENTIAL FAMILIES; 8.1 First properties; 8.2 Derived families; 8.3 Complements; 8.4 Notes; CHAPTER 9 DUALITY AND EXPONENTIAL FAMILIES; 9.1 Convex duality and exponential families; 9.2 Independence and exponential families; 9.3 Likelihood functions for full exponential families; 9.4 Likelihood functions for convex exponential families
9.5 Probability functions for exponential families9.6 Plausibility functions for full exponential families; 9.7 Prediction functions for full exponential families; 9.8 Complements; 9.9 Notes; CHAPTER 10 INFERRENTIAL SEPARATION AND EXPONENTIAL FAMILIES; 10.1 Quasi-ancillarity and exponential families; 10.2 Cuts in general exponential families; 10.3 Cuts in discrete-type exponential families; 10.4 S-ancillarity and exponential families; 10.5 M-ancillarity and exponential families; 10.6 Complement; 10.7 Notes; References; Author index; Subject index

Sommario/riassunto

First published by Wiley in 1978, this book is being re-issued with a new Preface by the author. The roots of the book lie in the writings of RA Fisher both as concerns results and the general stance to statistical science, and this stance was the determining factor in the author's selection of topics. His treatise brings together results on aspects of statistical information, notably concerning likelihood functions, plausibility functions, ancillarity, and sufficiency, and on exponential families of probability distributions.
