1. Record Nr. UNINA9910457121903321

Autore	Bose Mausumi
Titolo	Optimal crossover designs [[electronic resource] /] / Mausumi Bose, Aloke Dey
Pubbl/distr/stampa	Singapore ; ; Hackensack, NJ, : World Scientific, c2009
ISBN	1-282-44158-2 9786612441585 981-281-843-X
Descrizione fisica	1 online resource (238 p.)
Altri autori (Persone)	DeyAloke
Disciplina	519.5/7
Soggetti	Experimental design Optimal designs (Statistics) Electronic books.
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 (p. 209-222) and index.
Nota di contenuto	Contents; Preface; 1. Introduction; 1.1 Prologue; 1.2 Notation, Terminology and Models; 1.3 Information Matrices; 1.4 Optimality Criteria and Tools; 1.5 Outline of the Book; 2. Optimality of Balanced and Strongly Balanced Designs; 2.1 Introduction; 2.2 Definitions and Some Basic Results; 2.3 Optimality of Balanced Uniform Designs; 2.4 Optimality of Strongly Balanced Designs; 2.5 Some More Optimal Designs; 2.6 Constructions; 3. Some Optimal Designs with p < t; 3.1 Introduction; 3.2 Designs with p t; 3.3 Two-period Designs; 3.4 Optimality of Patterson Designs; 3.5 Constructions 4. Optimal Designs via Approximate Theory4.1 Introduction; 4.2 Notation and Information matrices; 4.3 Quadratic Function for Direct Effects Associated with a Sequence; 4.4 Determining a, b and S; 4.5 Optimality Equations; 4.6 Optimal Symmetric Designs for Direct Effects; 4.7 Optimal Designs for Carryover Effects; 4.8 Design Efficiency; 5. Optimality under Some Other Additive Models; 5.1 Introduction; 5.2 A Model with Self and Mixed Carryover Effects; 5.3 A Model with Carryover Effects Proportional to Direct Effects and Optimal Designs; 6. Optimality under Non-additive Models; 6.1 Introduction 6.2 Correspondence with a Factorial Experiment6.3 Optimality Results;

6.4 Optimality Under a Non-additive Random Subject Effects Model; 6.5 Optimality in the Presence of Higher Order Carryover Effects and Interaction; 7. Some Further Developments; 7.1 Introduction; 7.2 Optimal Two-treatment Designs; 7.2.1 Optimal Designs under Uncorrelated Errors; 7.2.2 Optimal Designs under Correlated Errors; 7.2.3 Optimal Designs under Autoregressive Errors; 7.3 Optimal Designs under Correlated Errors for an Arbitrary Number of Treatments; 7.4 Optimal Designs for Test-Control Comparisons 7.4.1 Optimal Designs with p > t + 17.4.2 Optimal Designs with p = 2; 7.4.3 Optimal Designs with 3 p t +1; 7.5 Optimal Designs with Subject Dropout; 7.6 Some Additional Comments; References; Index

Sommario/riassunto

This monograph presents a comprehensive and up-to-date account of the developments in optimality aspects of crossover designs. Crossover designs are immensely useful in various areas of human investigation including agriculture, animal nutrition, clinical trials, pharmaceutical studies, biological assays, weather modification experiments, sensory evaluation of food products and learning experiments. Research on the optimality aspects of crossover designs has developed only in the last three decades, and it has now emerged as a potential field for further investigation. This book is the first c