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1.8.3 Normal Equations; 1.8.4 Some Special Cases; 1.9 Relationships Among Intrablock, Interblock, and Combined Estimation; 1.9.1 General Case; 1.9.2 Case of Proper, Equireplicate Designs; 1.10 Estimation of Weights for the Combined Analysis
1.10.1 Yates Procedure1.10.2 Properties of Combined Estimators; 1.11 Maximum-Likelihood Type Estimation; 1.11.1 Maximum-Likelihood Estimation; 1.11.2 Restricted Maximum-Likelihood Estimation; 1.12 Efficiency Factor of an Incomplete Block Design; 1.12.1 Average Variance for Treatment Comparisons for an IBD; 1.12.2 Definition of Efficiency Factor; 1.12.3 Upper Bound for the Efficiency Factor; 1.13 Optimal Designs; 1.13.1 Information Function; 1.13.2 Optimality Criteria; 1.13.3 Optimal Symmetric Designs; 1.13.4 Optimality and Research; 1.14 Computational Procedures
1.14.1 Intrablock Analysis Using SAS PROC GLM1.14.2 Intrablock Analysis Using the Absorb Option in SAS PROC GLM; 1.14.3 Combined Intra- and Interblock Analysis Using the Yates Procedure; 1.14.4 Combined Intra- and Interblock Analysis Using SAS PROC MIXED; 1.14.5 Comparison of Estimation Procedures; 1.14.6 Testing of Hypotheses; 2 Balanced Incomplete Block Designs; 2.1 Introduction; 2.2 Definition of the BIB Design; 2.3 Properties of BIB Designs; 2.4 Analysis of BIB Designs; 2.4.1 Intrablock Analysis; 2.4.2 Combined Analysis; 2.5 Estimation of ; 2.6 Significance Tests
2.7 Some Special Arrangements2.7.1 Replication Groups Across Blocks; 2.7.2 Grouped Blocks; 2.7.3 -Resolvable BIB Designs with Replication Groups Across Blocks; 2.8 Resistant and Susceptible BIB Designs; 2.8.1 Variance-Balanced Designs; 2.8.2 Definition of Resistant Designs; 2.8.3 Characterization of Resistant Designs; 2.8.4 Robustness and Connectedness; 3 Construction of Balanced Incomplete Block Designs; 3.1 Introduction; 3.2 Difference Methods; 3.2.1 Cyclic Development of Difference Sets; 3.2.2 Method of Symmetrically Repeated Differences; 3.2.3 Formulation in Terms of Galois Field Theory
3.3 Other Methods

Sommario/riassunto

A comprehensive overview of experimental design at the advanced level The development and introduction of new experimental designs in the last fifty years has been quite staggering and was brought about largely by an ever-widening field of applications. Design and Analysis of Experiments, Volume 2: Advanced Experimental Design is the second of a two-volume body of work that builds upon the philosophical foundations of experimental design set forth half a century ago by Oscar Kempthorne, and features the latest developments in the field. Volume 1: An Introduction to Experimental Design intr