

Block Designs: A Randomization Approach

Volume II: Design

The book is composed of two volumes, each consisting of five chapters. In Volume I, following some statistical motivation based on a randomization model, a general theory of the analysis of experiments in block designs has been developed. In the present Volume II, the primary aim is to present methods of that satisfy the statistical requirements described in constructing block designs Volume I, particularly those considered in Chapters 3 and 4, and also to give some catalogues of plans of the designs. Thus, the constructional aspects are of predominant interest in Volume II, with a general consideration given in Chapter 6. The main design investigations are systematized by separating the material into two contents, depending on whether the designs provide unit efficiency factors for some contrasts of treatment parameters (Chapter 7) or not (Chapter 8). This distinction in classifying block designs may be essential from a practical point of view. In general, classification of block designs, whether proper or not, is based here on efficiency balance (EB) in the sense of the new terminology proposed in Section 4.4 (see, in particular, Definition 4.4.2). Most of the attention is given to connected proper designs because of their statistical advantages as described in Volume I, particularly in Chapter 3. When all contrasts are of equal importance, either the class of $(v-1; 0; 0)$ -EB designs, i. e.

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