List of Figures  p. xiii
Preface  p. xv
Basic Concepts  p. 1
Combinatorial Designs  p. 1
Some Examples of Designs  p. 4
Block Designs  p. 6
Systems of Distinct Representatives  p. 11
Balanced Designs  p. 15
Pairwise Balanced Designs  p. 15
Balanced Incomplete Block Designs  p. 20
Another Proof of Fisher's Inequality  p. 29
t-Designs  p. 31
Finite Geometries  p. 35
Finite Affine Planes  p. 35
Finite Fields  p. 38
Construction of Finite Affine Geometries  p. 45
Finite Projective Geometries  p. 49
Some Properties of Finite Geometries  p. 55
Ovals in Projective Planes  p. 55
The Desargues Configuration  p. 58
Difference Sets and Difference Methods  p. 63
Difference Sets  p. 63
Construction of Difference Sets  p. 65
Properties of Difference Sets  p. 71
General Difference Methods  p. 73
Singer Difference Sets  p. 79
More about Block Designs  p. 85
Residual and Derived Designs  p. 85
Resolvability  p. 89
The Main Existence Theorem  p. 97
Sums of Squares  p. 97
The Bruck-Ryser-Chowla Theorem  p. 105
Another Proof  p. 112
Latin Squares  p. 117
Latin Squares and Subsquares  p. 117
Orthogonality  p. 121
Idempotent Latin Squares  p. 126
Transversal Designs  p. 130
More about Orthogonality  p. 137
Spouse-Avoiding Mixed Doubles Tournaments  p. 137
Three Orthogonal Latin Squares  p. 140