On the p-Rank of the Incidence Matrix of a Balanced or Partially Balanced Incomplete Block Design and its Applications to Error Correcting Codes

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CONTENTS

	-	bage
0.	Introduction and Summary	154
Part I.	The <i>p</i> -ranks of the incidence matrices of a BIB design and a PBIB	
	design	155
1.	The incidence matrices of a BIB design and a PBIB design	155
2.	A lower bound for the <i>p</i> -rank of the incidence matrix of a BIB design	
		156
3.	A lower bound for the <i>p</i> -rank of the incidence matrix of a PBIB design	
		158
4.	A lower bound for the <i>p</i> -rank of the incidence matrix of a T_m type <i>PBIB</i>	
	design	160
5.	A lower bound for the <i>p</i> -rank of the incidence matrix of an N_m type <i>PBIB</i>	
	design	161
6.	Enumeration of nonisomorphic solutions of BIB designs and their p -	
	ranks	163
Part II	1. The <i>p</i> -rank of the incidence matrix of a <i>BIB</i> design derived from a	
	finite geometry	
7.	The <i>p</i> -rank of the incidence matrix of points and μ -flats in PG(t, q)	. 172
8.	The <i>p</i> -rank of the incidence matrix of points and certain sets in	
	PG(t, q)	. 179
9.	The <i>p</i> -rank of the incidence matrix of all points and all μ -flats	
	in EG(t , q)	. 183
Part II	II. The <i>p</i> -rank of the incidence matrix of a <i>PBIB</i> design derived from a	
	finite geometry	. 193
10.	The <i>p</i> -rank of the incidence matrix of points and μ -flats with a cycle θ	
	in PG(t , q)	. 193
11.	The <i>p</i> -rank of the incidence matrix of points and μ -flats not passing	
	through the origin in $EG(t, q)$	
12.	The dual of the <i>BIB</i> design $PG(t, q)$: μ and its <i>p</i> -rank	
Part I		
13.	Applications to BIBD codes and PBIBD codes	
14.	Applications to geometric codes	
	14.1. Projective Geometry codes	
	14.2. Affine Geometry codes	
	14.3. Euclidean Geometry codes	
15.	Applications to polynomial codes and Reed Muller codes	.218