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Create New Blocking Set (97,2) On Projective Plane (2,17)

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Abstract:
The intersection points of the lines of the projective plane PG(2,17) were used to create new blocking set (97,2) In this research Four lines of the plane PG(2,17) were used, including four common points, and the points were then substituted in the equation of the straight line to form the blocking set (97,2) A projective plane PG(2,q) which consists of $q^2 + q + 1$ points and $q^2 + q + 1$ lines every line contains $1 + q$ points and every point is on $1 + q$ lines One point of the form (1,0,0) exists There are q points with the form (x,1,0) that exist and Similar to the lines and there exist q2 points of the type (x,y,1) A point $p(x_1,x_2,x_3)$ is incident with the line $L[a_1,a_2,a_3]$ if and only if $a_1x_1 + a_2x_2 + a_3x_3 = 0$ and The general equation of the conic $a_1{x^2}_1 + a_2{x^2}_2 + a_3{x^2}_3 + a_4x_1x_2 + a_5x_1x_3 + a_6x_2x_3$
Keywords: Blocking Set, Conic, PG(2,17), Projective Plane, minimal codes, graphs theory

1-Introduction Section

A projective plane PG(2,17) which consists of $q^2 + q + 1$ points and $q^2 + q + 1$ lines every line contains $1 + q$ points and every point is on $1 + q$ lines One point of the form (1,0,0) exists There are q points with the form (x,1,0) [1] that exist and Similar to the lines and there exist q2 points of the type (x,y,1) A point $p(x_1,x_2,x_3)$ is incident with the line $L[a_1,a_2,a_3]$ if and only if $a_1x_1 + a_2x_2 + a_3x_3 = 0$ [2] [6]
" A (k, r) –arc " A (k, r) –arc K in PG (2, q) is a set of k points with condition no line of the plane contains more than k points and there exist at least one line of the plane which contains k points. A (k, r) –arc is called complete arc if is not contained in a (k+1, r)- arc [8].
" The Linear [n, k, d] q Codes " The Linear [n, k, d] q Codes in PG (2, q) where n is the length of codes and k is the dimension of the codes, and minimum Hamming distance between the codes is called d over the Galois field GF(q).

2- Related Work Section

A double blocking set in a projective plane PG (2, q) is a set S of points with the property that every line contains at least two points of S. In this research Four lines of the plane PG (2,17) were used, including four common points, and the points were then substituted in the equation of the straight line to form the blocking set (97,2) In contrast to earlier studies that depended on choosing six algorithmic points, when selecting the common points from which the equation of the conic.

3- Methodology Section

The Conics in PG (2,17) As Observed by the Unit and Reference Points (1)
The general equation of the conic is [3, 8]:

$a_1x^2{}_1 + a_2x^2{}_2 + a_3x^2{}_3 + a_4x_1x_2 + a_5x_1x_3 + a_6x_2x_3 = 0$ ... (1)
By substituting the points of the arc A in (1) [7], then:
1 = (1,0,0) implies that $a_1 = 0$, 2 = (0,1,0), then $a_2 = 0$, 3 = (0,0,1), then $a_3 = 0$,
$a_1 = a_2 = a_3 = 0$
and from 254 = (1,1,1), then
$a_4 + a_5 + a_6 = 0$.
Hence, from equation (1)
$a_4x_1 x_2 + a_5x_1 x_3 + a_6 x_2 x_3 = 0$ … (2)
If $a_4 = 0$, then the conic is degenerated, therefore for $a_4 \neq 0$, similarly $a_5 \neq 0$ and $a_6 \neq 0$,
Dividing equation [2] by a4, one can get:
$x_1 x_2 + \alpha x_1 x_3 + \beta x_2 x_3 = 0$
where $\alpha = a_5/a_4$, $\beta = a_6/a_4$
since $1+\alpha+\beta=0$ (mod 17), then $\beta = -(1+\alpha)$
where $\alpha \neq 0$ and $\alpha \neq 16$, for if $\alpha = 0$ or $\alpha = 16$, then degenerated conics, thus α = 1, 2, 3, 4, 5, 6, 7, 8, 9,10,11,12,13,14,15 and can be written (2) as:
$x_1x_2 + \alpha x_1x_3 - (1+\alpha)x_2x_3 = 0$ ... (3)

4- Results Section

The Equation and the Points of the Conics of PG(2,17) Through the Reference and Unit Points (1)

1. If α= 1, then the equation of the conic [4, 5]
$x_1x_2 + 1x_1x_3 - 2x_2x_3 = 0$ ... (3)
1=(1,0,0)
2=(0,1,0)
3=(0,0,1)
254=(1,1,1)

2. If α= 2, then the equation of the conic
$x_1x_2 + 2x_1x_3 - 3x_2x_3 = 0$ ... (3)
1= (1,0,0)
2= (0,1,0)
3= (0,0,1)
254= (1,1,1)

3. If α= 3, then the equation of the conic
$x_1x_2 + 3x_1x_3 - 4x_2x_3 = 0$ ... (3)
1= (1,0,0)
2= (0,1,0)
3= (0,0,1)
254= (1,1,1)

4. If α= 4, then the equation of the conic
$x_1x_2 + 4x_1x_3 - 5x_2x_3 = 0$ ... (3)
1= (1,0,0)
2= (0,1,0)
3= (0,0,1)
254= (1,1,1)

5. If α= 5, then the equation of the conic
$x_1x_2 + 5x_1x_3 - 6x_2x_3 = 0$ ... (3)
1= (1,0,0)
2= (0,1,0)

3= (0,0,1)
254= (1,1,1)
6. If α= 6, then the equation of the conic
$x_1x_2 + 6x_1x_3 - 7x_2x_3 = 0$ ... (3)
1= (1,0,0)
2= (0,1,0)
3 = (0,0,1)
254 = (1,1,1)
7. If α= 7, then the equation of the conic
$x_1x_2 + 7x_1x_3 - 8x_2x_3 = 0$ ... (3)
1= (1,0,0)
2= (0,1,0)
3= (0,0,1)
254= (1,1,1)
8. If α= 8, then the equation of the conic
$x_1x_2 + 8x_1x_3 - 9x_2x_3 = 0$ ... (3)
1= (1,0,0)
2= (0,1,0)
3= (0,0,1)
254= (1,1,1)
9. If α= 9, then the equation of the conic
$x_1x_2 + 9x_1x_3 - 10x_2x_3 = 0$ ... (3)
1= (1,0,0)
2= (0,1,0)
3= (0,0,1)
254 = (1,1,1)
10. If α= 10, then the equation of the conic
$x_1x_2 + 10x_1x_3 - 11x_2x_3 = 0$ ... (3)
1= (1,0,0)
2 = (0,1,0)
3 = (0,0,1)
254 = (1,1,1)
11. If α= 11, then the equation of the conic
$x_1x_2 + 11x_1x_3 - 12x_2x_3 = 0$ ... (3)
1= (1,0,0)
2= (0,1,0)
3= (0,0,1)
254 = (1,1,1)
12. If α= 12, then the equation of the conic
$x_1x_2 + 12x_1x_3 - 13x_2x_3 = 0$ ... (3)
1= (1,0,0)
2= (0,1,0)
3= (0,0,1)
254 = (1,1,1)
13. If α= 13, then the equation of the conic
$x_1x_2 + 13x_1x_3 - 14x_2x_3 = 0$ ... (3)
1= (1,0,0)

2= (0,1,0)
3= (0,0,1)
254 = (1,1,1)
14. If α= 14, then the equation of the conic
$x_1x_2 + 14x_1x_3 - 15x_2x_3 = 0$ ... (3)
1= (1,0,0)
2= (0,1,0)
3= (0,0,1)
254 = (1,1,1)
15. If α= 15, then the equation of the conic
$x_1x_2 + 15x_1x_3 - 16x_2x_3 = 0$ ... (3)
1= (1,0,0)
2= (0,1,0)
3= (0,0,1)
254 = (1,1,1)

The Geometrical Contraction Method In PG(2,17).

Let A= (1,2,3,254) be the set of reference unit and reference points in PG(2,17) where: 1= (1,0,0), 2=(0,1,0), 3 = (0,0,1), 254= (1,1,1)
A is(4,2)-arc, since no three points of A are collinear,
[1,2]=[1, 2, 4, 46, 59, 63, 74, 97, 111, 123, 143, 150, 179, 197, 268, 278, 287, 303]
[1,3]=[307, 1, 3, 45, 58, 62, 73, 96, 110, 122, 142, 149, 178, 196, 267, 277, 286, 302]
[1,254]=[112, 113, 115, 157, 170, 174, 185, 208, 222, 234, 254, 261, 290, 1, 72, 82, 91, 107]
[2,3]=[2, 3, 5, 47, 60, 64, 75, 98, 112, 124, 144, 151, 180, 198, 269, 279, 288, 304]
[2,254]=[251, 252, 254, 296, 2, 6, 17, 40, 54, 66, 86, 93, 122, 140, 211, 221, 230, 246]
[3,254]=[132, 133, 135, 177, 190, 194, 205, 228, 242, 254, 274, 281, 3, 21, 92, 102, 111, 127]
Four lines of the plane PG (2,17) were used, including four common points, The diagonal points of A are the points (2,73,112) where,
$L_1 \cap L_6 = 2$; $L_2 \cap L_5 = 73$; $L_3 \cap L_4 = 112$

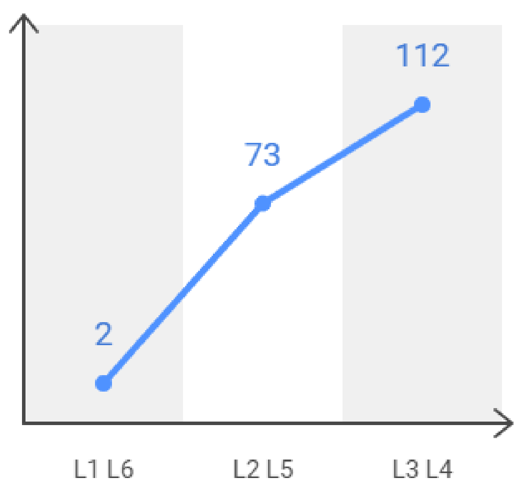

Figure 1: The diagonal points of A are the points (2,73,112)

We have (97,2)-blocking set there exists a projective $[97,3,87]_{17}$ code of the projective plane PG (2,17), A projective plane PG (2,q) which consists of $q^2 + q + 1$ points and $q^2 + q + 1$ lines every line contains $1 + q$ points and every point is on $1 + q$ lines

Table (1): Points of (L1, L2, L3, L4, L5, L6)

Number of point	Points of (L1, L2, L3, L4, L5, L6)
1.	1
2.	2
3.	3
4.	4
5.	5
6.	6
7.	17
8.	21
9.	40
10.	45
11.	46
12.	47
13.	54
14.	58
15.	59
16.	60
17.	62
18.	63
19.	64
20.	66
21.	72
22.	73
23.	74
24.	75
25.	82
26.	86
27.	91
28.	92
29.	93
30.	96
31.	97
32.	98
33.	102
34.	107
35.	110
36.	111
37.	112
38.	113
39.	115
40.	122
41.	123
42.	124
43.	127
44.	132
45.	133
46.	135
47.	140
48.	142
49.	143

50.	144
51.	149
52.	150
53.	151
54.	157
55.	170
56.	174
57.	177
58.	178
59.	179
60.	180
61.	185
62.	190
63.	194
64.	196
65.	197
66.	198
67.	205
68.	208
69.	211
70.	221
71.	222
72.	228
73.	230
74.	234
75.	242
76.	246
77.	251
78.	252
79.	254
80.	261
81.	267
82.	268
83.	269
84.	274
85.	277
86.	278
87.	279
88.	281
89.	286
90.	287
91.	288
92.	290
93.	296
94.	302
95.	303
96.	304
97.	307

5- Evaluations and Discussion Section

In this research Four lines of the plane PG(2,17) were used, including four common points, and the points were then substituted in the equation of the straight line to form the blocking set (97,2) The Points and Line of PG (2,17) must satisfy the following:

i. K intersects any line of Line of PG (2,17) in at most 18 points.

ii. Every point not in PG (2,17) is on at least one 18

Table (2): Points and Line of PG(2,17)

Pi	Li																		
(1, 0, 0)	L1	1	2	4	46	59	63	74	97	111	123	143	150	179	197	268	278	287	303
(0, 1, 0)	L2	2	3	5	47	60	64	75	98	112	124	144	151	180	198	269	279	288	304
(0, 0, 1)	L3	3	4	6	48	61	65	76	99	113	125	145	152	181	199	270	280	289	305
(14, 1, 0)	L4	4	5	7	49	62	66	77	100	114	126	146	153	182	200	271	281	290	306
(0, 14, 1)	L5	5	6	8	50	63	67	78	101	115	127	147	154	183	201	272	282	291	307
(1, 11, 1)	L6	6	7	9	51	64	68	79	102	116	128	148	155	184	202	273	283	292	1
(9, 11, 1)	L7	7	8	10	52	65	69	80	103	117	129	149	156	185	203	274	284	293	2
(9, 4, 1)	L8	8	9	11	53	66	70	81	104	118	130	150	157	186	204	275	285	294	3
(12, 11, 1)	L9	9	10	12	54	67	71	82	105	119	131	151	158	187	205	276	286	295	4
(9, 12, 1)	L10	10	11	13	55	68	72	83	106	120	132	152	159	188	206	277	287	296	5
(4, 15, 1)	L11	11	12	14	56	69	73	84	107	121	133	153	160	189	207	278	288	297	6
(10, 6, 1)	L12	12	13	15	57	70	74	85	108	122	134	154	161	190	208	279	289	298	7
(8, 16, 1)	L13	13	14	16	58	71	75	86	109	123	135	155	162	191	209	280	290	299	8
(3, 8, 1)	L14	14	15	17	59	72	76	87	110	124	136	156	163	192	210	281	291	300	9
(6, 9, 1)	L15	15	16	18	60	73	77	88	111	125	137	157	164	193	211	282	292	301	10
(11, 14, 1)	L16	16	17	19	61	74	78	89	112	126	138	158	165	194	212	283	293	302	11
(1, 13, 1)	L17	17	18	20	62	75	79	90	113	127	139	159	166	195	213	284	294	303	12
(5, 8, 1)	L18	18	19	21	63	76	80	91	114	128	140	160	167	196	214	285	295	304	13
(6, 5, 1)	L19	19	20	22	64	77	81	92	115	129	141	161	168	197	215	286	296	305	14
(13, 15, 1)	L20	20	21	23	65	78	82	93	116	130	142	162	169	198	216	287	297	306	15
(10, 10, 1)	L21	21	22	24	66	79	83	94	117	131	143	163	170	199	217	288	298	307	16
(15, 13, 1)	L22	22	23	25	67	80	84	95	118	132	144	164	171	200	218	289	299	1	17
(5, 13, 1)	L23	23	24	26	68	81	85	96	119	133	145	165	172	201	219	290	300	2	18
(5, 7, 1)	L24	24	25	27	69	82	86	97	120	134	146	166	173	202	220	291	301	3	19
(2, 13, 1)	L25	25	26	28	70	83	87	98	121	135	147	167	174	203	221	292	302	4	20
(5, 12, 1)	L26	26	27	29	71	84	88	99	122	136	148	168	175	204	222	293	303	5	21
(4, 9, 1)	L27	27	28	30	72	85	89	100	123	137	149	169	176	205	223	294	304	6	22
(11, 10, 1)	L28	28	29	31	73	86	90	101	124	138	150	170	177	206	224	295	305	7	23
(15, 8, 1)	L29	29	30	32	74	87	91	102	125	139	151	171	178	207	225	296	306	8	24
(6, 2, 1)	L30	30	31	33	75	88	92	103	126	140	152	172	179	208	226	297	307	9	25
(7, 12, 1)	L31	31	32	34	76	89	93	104	127	141	153	173	180	209	227	298	1	10	26

(4, 12, 1)	L32	32	33	35	77	90	94	105	128	142	154	174	181	210	228	299	2	11	27
(4, 16, 1)	L33	33	34	36	78	91	95	106	129	143	155	175	182	211	229	300	3	12	28
(3, 12, 1)	L34	34	35	37	79	92	96	107	130	144	156	176	183	212	230	301	4	13	29
(4, 6, 1)	L35	35	36	38	80	93	97	108	131	145	157	177	184	213	231	302	5	14	30
(8, 15, 1)	L36	36	37	39	81	94	98	109	132	146	158	178	185	214	232	303	6	15	31
(10, 4, 1)	L37	37	38	40	82	95	99	110	133	147	159	179	186	215	233	304	7	16	32
(12, 7, 1)	L38	38	39	41	83	96	100	111	134	148	160	180	187	216	234	305	8	17	33
(2, 14, 1)	L39	39	40	42	84	97	101	112	135	149	161	181	188	217	235	306	9	18	34
(1, 16, 1)	L40	40	41	43	85	98	102	113	136	150	162	182	189	218	236	307	10	19	35
(3, 15, 1)	L41	41	42	44	86	99	103	114	137	151	163	183	190	219	237	1	11	20	36
(10, 15, 1)	L42	42	43	45	87	100	104	115	138	152	164	184	191	220	238	2	12	21	37
(10, 3, 1)	L43	43	44	46	88	101	105	116	139	153	165	185	192	221	239	3	13	22	38
(16, 15, 1)	L44	44	45	47	89	102	106	117	140	154	166	186	193	222	240	4	14	23	39
(10, 0, 1)	L45	45	46	48	90	103	107	118	141	155	167	187	194	223	241	5	15	24	40
(9, 1, 0)	L46	46	47	49	91	104	108	119	142	156	168	188	195	224	242	6	16	25	41
(0, 9, 1)	L47	47	48	50	92	105	109	120	143	157	169	189	196	225	243	7	17	26	42
(11, 2, 1)	L48	48	49	51	93	106	110	121	144	158	170	190	197	226	244	8	18	27	43
(7, 6, 1)	L49	49	50	52	94	107	111	122	145	159	171	191	198	227	245	9	19	28	44
(8, 7, 1)	L50	50	51	53	95	108	112	123	146	160	172	192	199	228	246	10	20	29	45
(2, 11, 1)	L51	51	52	54	96	109	113	124	147	161	173	193	200	229	247	11	21	30	46
(9, 8, 1)	L52	52	53	55	97	110	114	125	148	162	174	194	201	230	248	12	22	31	47
(6, 14, 1)	L53	53	54	56	98	111	115	126	149	163	175	195	202	231	249	13	23	32	48
(1, 9, 1)	L54	54	55	57	99	112	116	127	150	164	176	196	203	232	250	14	24	33	49
(11, 4, 1)	L55	55	56	58	100	113	117	128	151	165	177	197	204	233	251	15	25	34	50
(12, 3, 1)	L56	56	57	59	101	114	118	129	152	166	178	198	205	234	252	16	26	35	51
(16, 10, 1)	L57	57	58	60	102	115	119	130	153	167	179	199	206	235	253	17	27	36	52
(15, 0, 1)	L58	58	59	61	103	116	120	131	154	168	180	200	207	236	254	18	28	37	53
(3, 1, 0)	L59	59	60	62	104	117	121	132	155	169	181	201	208	237	255	19	29	38	54
(0, 3, 1)	L60	60	61	63	105	118	122	133	156	170	182	202	209	238	256	20	30	39	55
(16, 6, 1)	L61	61	62	64	106	119	123	134	157	171	183	203	210	239	257	21	31	40	56
(8, 0, 1)	L62	62	63	65	107	120	124	135	158	172	184	204	211	240	258	22	32	41	57
(11, 1, 0)	L63	63	64	66	108	121	125	136	159	173	185	205	212	241	259	23	33	42	58
(0, 11, 1)	L64	64	65	67	109	122	126	137	160	174	186	206	213	242	260	24	34	43	59
(9, 14, 1)	L65	65	66	68	110	123	127	138	161	175	187	207	214	243	261	25	35	44	60
(1, 8, 1)	L66	66	67	69	111	124	128	139	162	176	188	208	215	244	262	26	36	45	61
(6, 13, 1)	L67	67	68	70	112	125	129	140	163	177	189	209	216	245	263	27	37	46	62
(5, 11, 1)	L68	68	69	71	113	126	130	141	164	178	190	210	217	246	264	28	38	47	63
(9, 16, 1)	L69	69	70	72	114	127	131	142	165	179	191	211	218	247	265	29	39	48	64
(3, 7, 1)	L70	70	71	73	115	128	132	143	166	180	192	212	219	248	266	30	40	49	65
(2, 3, 1)	L71	71	72	74	116	129	133	144	167	181	193	213	220	249	267	31	41	50	66

(16, 1, 1)	L72	72	73	75	117	130	134	145	168	182	194	214	221	250	268	32	42	51	67
(14, 0, 1)	L73	73	74	76	118	131	135	146	169	183	195	215	222	251	269	33	43	52	68
(10, 1, 0)	L74	74	75	77	119	132	136	147	170	184	196	216	223	252	270	34	44	53	69
(0, 10, 1)	L75	75	76	78	120	133	137	148	171	185	197	217	224	253	271	35	45	54	70
(15, 12, 1)	L76	76	77	79	121	134	138	149	172	186	198	218	225	254	272	36	46	55	71
(4, 7, 1)	L77	77	78	80	122	135	139	150	173	187	199	219	226	255	273	37	47	56	72
(2, 8, 1)	L78	78	79	81	123	136	140	151	174	188	200	220	227	256	274	38	48	57	73
(6, 11, 1)	L79	79	80	82	124	137	141	152	175	189	201	221	228	257	275	39	49	58	74
(9, 13, 1)	L80	80	81	83	125	138	142	153	176	190	202	222	229	258	276	40	50	59	75
(5, 6, 1)	L81	81	82	84	126	139	143	154	177	191	203	223	230	259	277	41	51	60	76
(8, 1, 1)	L82	82	83	85	127	140	144	155	178	192	204	224	231	260	278	42	52	61	77
(14, 9, 1)	L83	83	84	86	128	141	145	156	179	193	205	225	232	261	279	43	53	62	78
(11, 13, 1)	L84	84	85	87	129	142	146	157	180	194	206	226	233	262	280	44	54	63	79
(5, 14, 1)	L85	85	86	88	130	143	147	158	181	195	207	227	234	263	281	45	55	64	80
(1, 15, 1)	L86	86	87	89	131	144	148	159	182	196	208	228	235	264	282	46	56	65	81
(10, 16, 1)	L87	87	88	90	132	145	149	160	183	197	209	229	236	265	283	47	57	66	82
(3, 6, 1)	L88	88	89	91	133	146	150	161	184	198	210	230	237	266	284	48	58	67	83
(8, 12, 1)	L89	89	90	92	134	147	151	162	185	199	211	231	238	267	285	49	59	68	84
(4, 5, 1)	L90	90	91	93	135	148	152	163	186	200	212	232	239	268	286	50	60	69	85
(13, 1, 1)	L91	91	92	94	136	149	153	164	187	201	213	233	240	269	287	51	61	70	86
(14, 14, 1)	L92	92	93	95	137	150	154	165	188	202	214	234	241	270	288	52	62	71	87
(1, 12, 1)	L93	93	94	96	138	151	155	166	189	203	215	235	242	271	289	53	63	72	88
(4, 3, 1)	L94	94	95	97	139	152	156	167	190	204	216	236	243	272	290	54	64	73	89
(16, 13, 1)	L95	95	96	98	140	153	157	168	191	205	217	237	244	273	291	55	65	74	90
(5, 0, 1)	L96	96	97	99	141	154	158	169	192	206	218	238	245	274	292	56	66	75	91
(8, 1, 0)	L97	97	98	100	142	155	159	170	193	207	219	239	246	275	293	57	67	76	92
(0, 8, 1)	L98	98	99	101	143	156	160	171	194	208	220	240	247	276	294	58	68	77	93
(6, 15, 1)	L99	99	100	102	144	157	161	172	195	209	221	241	248	277	295	59	69	78	94
(10, 5, 1)	L100	100	101	103	145	158	162	173	196	210	222	242	249	278	296	60	70	79	95
(13, 9, 1)	L101	101	102	104	146	159	163	174	197	211	223	243	250	279	297	61	71	80	96
(11, 11, 1)	L102	102	103	105	147	160	164	175	198	212	224	244	251	280	298	62	72	81	97
(9, 15, 1)	L103	103	104	106	148	161	165	176	199	213	225	245	252	281	299	63	73	82	98
(10, 12, 1)	L104	104	105	107	149	162	166	177	200	214	226	246	253	282	300	64	74	83	99
(4, 8, 1)	L105	105	106	108	150	163	167	178	201	215	227	247	254	283	301	65	75	84	100
(6, 7, 1)	L106	106	107	109	151	164	168	179	202	216	228	248	255	284	302	66	76	85	101
(2, 1, 1)	L107	107	108	110	152	165	169	180	203	217	229	249	256	285	303	67	77	86	102
(14, 3, 1)	L108	108	109	111	153	166	170	181	204	218	230	250	257	286	304	68	78	87	103
(16, 5, 1)	L109	109	110	112	154	167	171	182	205	219	231	251	258	287	305	69	79	88	104
(13, 0, 1)	L110	110	111	113	155	168	172	183	206	220	232	252	259	288	306	70	80	89	105
(1, 1, 0)	L111	111	112	114	156	169	173	184	207	221	233	253	260	289	307	71	81	90	106

(0, 1, 1)	L112	112	113	115	157	170	174	185	208	222	234	254	261	290	1	72	82	91	107
(14, 1, 1)	L113	113	114	116	158	171	175	186	209	223	235	255	262	291	2	73	83	92	108
(14, 15, 1)	L114	114	115	117	159	172	176	187	210	224	236	256	263	292	3	74	84	93	109
(10, 1, 1)	L115	115	116	118	160	173	177	188	211	225	237	257	264	293	4	75	85	94	110
(14, 11, 1)	L116	116	117	119	161	174	178	189	212	226	238	258	265	294	5	76	86	95	111
(9, 6, 1)	L117	117	118	120	162	175	179	190	213	227	239	259	266	295	6	77	87	96	112
(8, 13, 1)	L118	118	119	121	163	176	180	191	214	228	240	260	267	296	7	78	88	97	113
(5, 2, 1)	L119	119	120	122	164	177	181	192	215	229	241	261	268	297	8	79	89	98	114
(7, 3, 1)	L120	120	121	123	165	178	182	193	216	230	242	262	269	298	9	80	90	99	115
(16, 14, 1)	L121	121	122	124	166	179	183	194	217	231	243	263	270	299	10	81	91	100	116
(1, 0, 1)	L122	122	123	125	167	180	184	195	218	232	244	264	271	300	11	82	92	101	117
(7, 1, 0)	L123	123	124	126	168	181	185	196	219	233	245	265	272	301	12	83	93	102	118
(0, 7, 1)	L124	124	125	127	169	182	186	197	220	234	246	266	273	302	13	84	94	103	119
(2, 5, 1)	L125	125	126	128	170	183	187	198	221	235	247	267	274	303	14	85	95	104	120
(13, 4, 1)	L126	126	127	129	171	184	188	199	222	236	248	268	275	304	15	86	96	105	121
(12, 12, 1)	L127	127	128	130	172	185	189	200	223	237	249	269	276	305	16	87	97	106	122
(4, 11, 1)	L128	128	129	131	173	186	190	201	224	238	250	270	277	306	17	88	98	107	123
(9, 2, 1)	L129	129	130	132	174	187	191	202	225	239	251	271	278	307	18	89	99	108	124
(7, 5, 1)	L130	130	131	133	175	188	192	203	226	240	252	272	279	1	19	90	100	109	125
(13, 5, 1)	L131	131	132	134	176	189	193	204	227	241	253	273	280	2	20	91	101	110	126
(13, 13, 1)	L132	132	133	135	177	190	194	205	228	242	254	274	281	3	21	92	102	111	127
(5, 5, 1)	L133	133	134	136	178	191	195	206	229	243	255	275	282	4	22	93	103	112	128
(13, 8, 1)	L134	134	135	137	179	192	196	207	230	244	256	276	283	5	23	94	104	113	129
(6, 6, 1)	L135	135	136	138	180	193	197	208	231	245	257	277	284	6	24	95	105	114	130
(8, 4, 1)	L136	136	137	139	181	194	198	209	232	246	258	278	285	7	25	96	106	115	131
(12, 15, 1)	L137	137	138	140	182	195	199	210	233	247	259	279	286	8	26	97	107	116	132
(10, 2, 1)	L138	138	139	141	183	196	200	211	234	248	260	280	287	9	27	98	108	117	133
(7, 14, 1)	L139	139	140	142	184	197	201	212	235	249	261	281	288	10	28	99	109	118	134
(1, 3, 1)	L140	140	141	143	185	198	202	213	236	250	262	282	289	11	29	100	110	119	135
(16, 12, 1)	L141	141	142	144	186	199	203	214	237	251	263	283	290	12	30	101	111	120	136
(4, 0, 1)	L142	142	143	145	187	200	204	215	238	252	264	284	291	13	31	102	112	121	137
(13, 1, 0)	L143	143	144	146	188	201	205	216	239	253	265	285	292	14	32	103	113	122	138
(0, 13, 1)	L144	144	145	147	189	202	206	217	240	254	266	286	293	15	33	104	114	123	139
(5, 4, 1)	L145	145	146	148	190	203	207	218	241	255	267	287	294	16	34	105	115	124	140
(12, 10, 1)	L146	146	147	149	191	204	208	219	242	256	268	288	295	17	35	106	116	125	141
(15, 3, 1)	L147	147	148	150	192	205	209	220	243	257	269	289	296	18	36	107	117	126	142
(16, 11, 1)	L148	148	149	151	193	206	210	221	244	258	270	290	297	19	37	108	118	127	143
(9, 0, 1)	L149	149	150	152	194	207	211	222	245	259	271	291	298	20	38	109	119	128	144
(15, 1, 0)	L150	150	151	153	195	208	212	223	246	260	272	292	299	21	39	110	120	129	145
(0, 15, 1)	L151	151	152	154	196	209	213	224	247	261	273	293	300	22	40	111	121	130	146

(10, 8, 1)	L152	152	153	155	197	210	214	225	248	262	274	294	301	23	41	112	122	131	147
(6, 12, 1)	L153	153	154	156	198	211	215	226	249	263	275	295	302	24	42	113	123	132	148
(4, 2, 1)	L154	154	155	157	199	212	216	227	250	264	276	296	303	25	43	114	124	133	149
(7, 11, 1)	L155	155	156	158	200	213	217	228	251	265	277	297	304	26	44	115	125	134	150
(9, 10, 1)	L156	156	157	159	201	214	218	229	252	266	278	298	305	27	45	116	126	135	151
(15, 1, 1)	L157	157	158	160	202	215	219	230	253	267	279	299	306	28	46	117	127	136	152
(14, 16, 1)	L158	158	159	161	203	216	220	231	254	268	280	300	307	29	47	118	128	137	153
(3, 2, 1)	L159	159	160	162	204	217	221	232	255	269	281	301	1	30	48	119	129	138	154
(7, 2, 1)	L160	160	161	163	205	218	222	233	256	270	282	302	2	31	49	120	130	139	155
(7, 4, 1)	L161	161	162	164	206	219	223	234	257	271	283	303	3	32	50	121	131	140	156
(12, 2, 1)	L162	162	163	165	207	220	224	235	258	272	284	304	4	33	51	122	132	141	157
(7, 15, 1)	L163	163	164	166	208	221	225	236	259	273	285	305	5	34	52	123	133	142	158
(10, 13, 1)	L164	164	165	167	209	222	226	237	260	274	286	306	6	35	53	124	134	143	159
(5, 10, 1)	L165	165	166	168	210	223	227	238	261	275	287	307	7	36	54	125	135	144	160
(15, 4, 1)	L166	166	167	169	211	224	228	239	262	276	288	1	8	37	55	126	136	145	161
(12, 4, 1)	L167	167	168	170	212	225	229	240	263	277	289	2	9	38	56	127	137	146	162
(12, 16, 1)	L168	168	169	171	213	226	230	241	264	278	290	3	10	39	57	128	138	147	163
(3, 4, 1)	L169	169	170	172	214	227	231	242	265	279	291	4	11	40	58	129	139	148	164
(12, 1, 1)	L170	170	171	173	215	228	232	243	266	280	292	5	12	41	59	130	140	149	165
(14, 13, 1)	L171	171	172	174	216	229	233	244	267	281	293	6	13	42	60	131	141	150	166
(5, 9, 1)	L172	172	173	175	217	230	234	245	268	282	294	7	14	43	61	132	142	151	167
(11, 12, 1)	L173	173	174	176	218	231	235	246	269	283	295	8	15	44	62	133	143	152	168
(4, 1, 1)	L174	174	175	177	219	232	236	247	270	284	296	9	16	45	63	134	144	153	169
(14, 5, 1)	L175	175	176	178	220	233	237	248	271	285	297	10	17	46	64	135	145	154	170
(13, 3, 1)	L176	176	177	179	221	234	238	249	272	286	298	11	18	47	65	136	146	155	171
(16, 16, 1)	L177	177	178	180	222	235	239	250	273	287	299	12	19	48	66	137	147	156	172
(3, 0, 1)	L178	178	179	181	223	236	240	251	274	288	300	13	20	49	67	138	148	157	173
(12, 1, 0)	L179	179	180	182	224	237	241	252	275	289	301	14	21	50	68	139	149	158	174
(0, 12, 1)	L180	180	181	183	225	238	242	253	276	290	302	15	22	51	69	140	150	159	175
(4, 10, 1)	L181	181	182	184	226	239	243	254	277	291	303	16	23	52	70	141	151	160	176
(15, 9, 1)	L182	182	183	185	227	240	244	255	278	292	304	17	24	53	71	142	152	161	177
(11, 15, 1)	L183	183	184	186	228	241	245	256	279	293	305	18	25	54	72	143	153	162	178
(10, 11, 1)	L184	184	185	187	229	242	246	257	280	294	306	19	26	55	73	144	154	163	179
(9, 1, 1)	L185	185	186	188	230	243	247	258	281	295	307	20	27	56	74	145	155	164	180
(14, 10, 1)	L186	186	187	189	231	244	248	259	282	296	1	21	28	57	75	146	156	165	181
(15, 10, 1)	L187	187	188	190	232	245	249	260	283	297	2	22	29	58	76	147	157	166	182
(15, 5, 1)	L188	188	189	191	233	246	250	261	284	298	3	23	30	59	77	148	158	167	183
(13, 10, 1)	L189	189	190	192	234	247	251	262	285	299	4	24	31	60	78	149	159	168	184
(15, 15, 1)	L190	190	191	193	235	248	252	263	286	300	5	25	32	61	79	150	160	169	185
(10, 9, 1)	L191	191	192	194	236	249	253	264	287	301	6	26	33	62	80	151	161	170	186

(11, 5, 1)	L192	192	193	195	237	250	254	265	288	302	7	27	34	63	81	152	162	171	187
(13, 16, 1)	L193	193	194	196	238	251	255	266	289	303	8	28	35	64	82	153	163	172	188
(3, 3, 1)	L194	194	195	197	239	252	256	267	290	304	9	29	36	65	83	154	164	173	189
(16, 7, 1)	L195	195	196	198	240	253	257	268	291	305	10	30	37	66	84	155	165	174	190
(2, 0, 1)	L196	196	197	199	241	254	258	269	292	306	11	31	38	67	85	156	166	175	191
(16, 1, 0)	L197	197	198	200	242	255	259	270	293	307	12	32	39	68	86	157	167	176	192
(0, 16, 1)	L198	198	199	201	243	256	260	271	294	1	13	33	40	69	87	158	168	177	193
(3, 16, 1)	L199	199	200	202	244	257	261	272	295	2	14	34	41	70	88	159	169	178	194
(3, 13, 1)	L200	200	201	203	245	258	262	273	296	3	15	35	42	71	89	160	170	179	195
(5, 16, 1)	L201	201	202	204	246	259	263	274	297	4	16	36	43	72	90	161	171	180	196
(3, 11, 1)	L202	202	203	205	247	260	264	275	298	5	17	37	44	73	91	162	172	181	197
(9, 5, 1)	L203	203	204	206	248	261	265	276	299	6	18	38	45	74	92	163	173	182	198
(13, 2, 1)	L204	204	205	207	249	262	266	277	300	7	19	39	46	75	93	164	174	183	199
(7, 7, 1)	L205	205	206	208	250	263	267	278	301	8	20	40	47	76	94	165	175	184	200
(2, 6, 1)	L206	206	207	209	251	264	268	279	302	9	21	41	48	77	95	166	176	185	201
(8, 9, 1)	L207	207	208	210	252	265	269	280	303	10	22	42	49	78	96	167	177	186	202
(11, 1, 1)	L208	208	209	211	253	266	270	281	304	11	23	43	50	79	97	168	178	187	203
(14, 12, 1)	L209	209	210	212	254	267	271	282	305	12	24	44	51	80	98	169	179	188	204
(4, 14, 1)	L210	210	211	213	255	268	272	283	306	13	25	45	52	81	99	170	180	189	205
(1, 4, 1)	L211	211	212	214	256	269	273	284	307	14	26	46	53	82	100	171	181	190	206
(12, 9, 1)	L212	212	213	215	257	270	274	285	1	15	27	47	54	83	101	172	182	191	207
(11, 9, 1)	L213	213	214	216	258	271	275	286	2	16	28	48	55	84	102	173	183	192	208
(11, 7, 1)	L214	214	215	217	259	272	276	287	3	17	29	49	56	85	103	174	184	193	209
(2, 9, 1)	L215	215	216	218	260	273	277	288	4	18	30	50	57	86	104	175	185	194	210
(11, 6, 1)	L216	216	217	219	261	274	278	289	5	19	31	51	58	87	105	176	186	195	211
(8, 2, 1)	L217	217	218	220	262	275	279	290	6	20	32	52	59	88	106	177	187	196	212
(7, 13, 1)	L218	218	219	221	263	276	280	291	7	21	33	53	60	89	107	178	188	197	213
(5, 15, 1)	L219	219	220	222	264	277	281	292	8	22	34	54	61	90	108	179	189	198	214
(10, 14, 1)	L220	220	221	223	265	278	282	293	9	23	35	55	62	91	109	180	190	199	215
(1, 2, 1)	L221	221	222	224	266	279	283	294	10	24	36	56	63	92	110	181	191	200	216
(7, 1, 1)	L222	222	223	225	267	280	284	295	11	25	37	57	64	93	111	182	192	201	217
(14, 8, 1)	L223	223	224	226	268	281	285	296	12	26	38	58	65	94	112	183	193	202	218
(6, 4, 1)	L224	224	225	227	269	282	286	297	13	27	39	59	66	95	113	184	194	203	219
(12, 6, 1)	L225	225	226	228	270	283	287	298	14	28	40	60	67	96	114	185	195	204	220
(8, 5, 1)	L226	226	227	229	271	284	288	299	15	29	41	61	68	97	115	186	196	205	221
(13, 12, 1)	L227	227	228	230	272	285	289	300	16	30	42	62	69	98	116	187	197	206	222
(4, 4, 1)	L228	228	229	231	273	286	290	301	17	31	43	63	70	99	117	188	198	207	223
(12, 14, 1)	L229	229	230	232	274	287	291	302	18	32	44	64	71	100	118	189	199	208	224
(1, 7, 1)	L230	230	231	233	275	288	292	303	19	33	45	65	72	101	119	190	200	209	225
(2, 10, 1)	L231	231	232	234	276	289	293	304	20	34	46	66	73	102	120	191	201	210	226

(15, 2, 1)	L232	232	233	235	277	290	294	305	21	35	47	67	74	103	121	192	202	211	227
(7, 8, 1)	L233	233	234	236	278	291	295	306	22	36	48	68	75	104	122	193	203	212	228
(6, 1, 1)	L234	234	235	237	279	292	296	307	23	37	49	69	76	105	123	194	204	213	229
(14, 7, 1)	L235	235	236	238	280	293	297	1	24	38	50	70	77	106	124	195	205	214	230
(2, 7, 1)	L236	236	237	239	281	294	298	2	25	39	51	71	78	107	125	196	206	215	231
(2, 15, 1)	L237	237	238	240	282	295	299	3	26	40	52	72	79	108	126	197	207	216	232
(10, 7, 1)	L238	238	239	241	283	296	300	4	27	41	53	73	80	109	127	198	208	217	233
(2, 4, 1)	L239	239	240	242	284	297	301	5	28	42	54	74	81	110	128	199	209	218	234
(12, 5, 1)	L240	240	241	243	285	298	302	6	29	43	55	75	82	111	129	200	210	219	235
(13, 6, 1)	L241	241	242	244	286	299	303	7	30	44	56	76	83	112	130	201	211	220	236
(8, 8, 1)	L242	242	243	245	287	300	304	8	31	45	57	77	84	113	131	202	212	221	237
(6, 16, 1)	L243	243	244	246	288	301	305	9	32	46	58	78	85	114	132	203	213	222	238
(3, 10, 1)	L244	244	245	247	289	302	306	10	33	47	59	79	86	115	133	204	214	223	239
(15, 14, 1)	L245	245	246	248	290	303	307	11	34	48	60	80	87	116	134	205	215	224	240
(1, 6, 1)	L246	246	247	249	291	304	1	12	35	49	61	81	88	117	135	206	216	225	241
(8, 6, 1)	L247	247	248	250	292	305	2	13	36	50	62	82	89	118	136	207	217	226	242
(8, 10, 1)	L248	248	249	251	293	306	3	14	37	51	63	83	90	119	137	208	218	227	243
(15, 6, 1)	L249	249	250	252	294	307	4	15	38	52	64	84	91	120	138	209	219	228	244
(8, 14, 1)	L250	250	251	253	295	1	5	16	39	53	65	85	92	121	139	210	220	229	245
(1, 14, 1)	L251	251	252	254	296	2	6	17	40	54	66	86	93	122	140	211	221	230	246
(1, 5, 1)	L252	252	253	255	297	3	7	18	41	55	67	87	94	123	141	212	222	231	247
(13, 14, 1)	L253	253	254	256	298	4	8	19	42	56	68	88	95	124	142	213	223	232	248
(1, 1, 1)	L254	254	255	257	299	5	9	20	43	57	69	89	96	125	143	214	224	233	249
(14, 2, 1)	L255	255	256	258	300	6	10	21	44	58	70	90	97	126	144	215	225	234	250
(7, 16, 1)	L256	256	257	259	301	7	11	22	45	59	71	91	98	127	145	216	226	235	251
(3, 9, 1)	L257	257	258	260	302	8	12	23	46	60	72	92	99	128	146	217	227	236	252
(11, 8, 1)	L258	258	259	261	303	9	13	24	47	61	73	93	100	129	147	218	228	237	253
(6, 10, 1)	L259	259	260	262	304	10	14	25	48	62	74	94	101	130	148	219	229	238	254
(15, 16, 1)	L260	260	261	263	305	11	15	26	49	63	75	95	102	131	149	220	230	239	255
(3, 1, 1)	L261	261	262	264	306	12	16	27	50	64	76	96	103	132	150	221	231	240	256
(14, 4, 1)	L262	262	263	265	307	13	17	28	51	65	77	97	104	133	151	222	232	241	257
(12, 8, 1)	L263	263	264	266	1	14	18	29	52	66	78	98	105	134	152	223	233	242	258
(6, 8, 1)	L264	264	265	267	2	15	19	30	53	67	79	99	106	135	153	224	234	243	259
(6, 3, 1)	L265	265	266	268	3	16	20	31	54	68	80	100	107	136	154	225	235	244	260
(16, 8, 1)	L266	266	267	269	4	17	21	32	55	69	81	101	108	137	155	226	236	245	261
(6, 0, 1)	L267	267	268	270	5	18	22	33	56	70	82	102	109	138	156	227	237	246	262
(2, 1, 0)	L268	268	269	271	6	19	23	34	57	71	83	103	110	139	157	228	238	247	263
(0, 2, 1)	L269	269	270	272	7	20	24	35	58	72	84	104	111	140	158	229	239	248	264
(7, 9, 1)	L270	270	271	273	8	21	25	36	59	73	85	105	112	141	159	230	240	249	265
(11, 16, 1)	L271	271	272	274	9	22	26	37	60	74	86	106	113	142	160	231	241	250	266

(3, 5, 1)	L272	272	273	275	10	23	27	38	61	75	87	107	114	143	161	232	242	251	267
(13, 11, 1)	L273	273	274	276	11	24	28	39	62	76	88	108	115	144	162	233	243	252	268
(9, 9, 1)	L274	274	275	277	12	25	29	40	63	77	89	109	116	145	163	234	244	253	269
(11, 3, 1)	L275	275	276	278	13	26	30	41	64	78	90	110	117	146	164	235	245	254	270
(16, 4, 1)	L276	276	277	279	14	27	31	42	65	79	91	111	118	147	165	236	246	255	271
(12, 0, 1)	L277	277	278	280	15	28	32	43	66	80	92	112	119	148	166	237	247	256	272
(5, 1, 0)	L278	278	279	281	16	29	33	44	67	81	93	113	120	149	167	238	248	257	273
(0, 5, 1)	L279	279	280	282	17	30	34	45	68	82	94	114	121	150	168	239	249	258	274
(13, 7, 1)	L280	280	281	283	18	31	35	46	69	83	95	115	122	151	169	240	250	259	275
(2, 2, 1)	L281	281	282	284	19	32	36	47	70	84	96	116	123	152	170	241	251	260	276
(7, 10, 1)	L282	282	283	285	20	33	37	48	71	85	97	117	124	153	171	242	252	261	277
(15, 11, 1)	L283	283	284	286	21	34	38	49	72	86	98	118	125	154	172	243	253	262	278
(9, 3, 1)	L284	284	285	287	22	35	39	50	73	87	99	119	126	155	173	244	254	263	279
(16, 9, 1)	L285	285	286	288	23	36	40	51	74	88	100	120	127	156	174	245	255	264	280
(11, 0, 1)	L286	286	287	289	24	37	41	52	75	89	101	121	128	157	175	246	256	265	281
(4, 1, 0)	L287	287	288	290	25	38	42	53	76	90	102	122	129	158	176	247	257	266	282
(0, 4, 1)	L288	288	289	291	26	39	43	54	77	91	103	123	130	159	177	248	258	267	283
(12, 13, 1)	L289	289	290	292	27	40	44	55	78	92	104	124	131	160	178	249	259	268	284
(5, 1, 1)	L290	290	291	293	28	41	45	56	79	93	105	125	132	161	179	250	260	269	285
(14, 6, 1)	L291	291	292	294	29	42	46	57	80	94	106	126	133	162	180	251	261	270	286
(8, 11, 1)	L292	292	293	295	30	43	47	58	81	95	107	127	134	163	181	252	262	271	287
(9, 7, 1)	L293	293	294	296	31	44	48	59	82	96	108	128	135	164	182	253	263	272	288
(2, 16, 1)	L294	294	295	297	32	45	49	60	83	97	109	129	136	165	183	254	264	273	289
(3, 14, 1)	L295	295	296	298	33	46	50	61	84	98	110	130	137	166	184	255	265	274	290
(1, 10, 1)	L296	296	297	299	34	47	51	62	85	99	111	131	138	167	185	256	266	275	291
(15, 7, 1)	L297	297	298	300	35	48	52	63	86	100	112	132	139	168	186	257	267	276	292
(2, 12, 1)	L298	298	299	301	36	49	53	64	87	101	113	133	140	169	187	258	268	277	293
(4, 13, 1)	L299	299	300	302	37	50	54	65	88	102	114	134	141	170	188	259	269	278	294
(5, 3, 1)	L300	300	301	303	38	51	55	66	89	103	115	135	142	171	189	260	270	279	295
(16, 2, 1)	L301	301	302	304	39	52	56	67	90	104	116	136	143	172	190	261	271	280	296
(7, 0, 1)	L302	302	303	305	40	53	57	68	91	105	117	137	144	173	191	262	272	281	297
(6, 1, 0)	L303	303	304	306	41	54	58	69	92	106	118	138	145	174	192	263	273	282	298
(0, 6, 1)	L304	304	305	307	42	55	59	70	93	107	119	139	146	175	193	264	274	283	299
(8, 3, 1)	L305	305	306	1	43	56	60	71	94	108	120	140	147	176	194	265	275	284	300
(16, 3, 1)	L306	306	307	2	44	57	61	72	95	109	121	141	148	177	195	266	276	285	301
(16, 0, 1)	L307	307	1	3	45	58	62	73	96	110	122	142	149	178	196	267	277	286	302

4- Conclusion

We have (97,2)-blocking set there exists a projective $[97,3,87]_{17}$ code of the projective plane PG(2,17), A projective plane PG(2,q) which consists of $q^2 + q + 1$ points and $q^2 + q + 1$ lines every line contains 1 +

q points and every point is on 1 + q lines

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REFERENCES
[1] N. Alon, A. Bishnoi, S. Das, and A. Neri. Strong blocking sets and minimal codes from expander graphs. *arXiv preprint arXiv:2305.15297*, 2023. https://doi.org/10.48550/arXiv.2305.15297
[2] D. Bartoli and M. Borello. Small strong blocking sets by concatenation. *SIAM J. Discrete Math*., 37(1):65–82, 2023. https://doi.org/10.1137/21M145032X
[3] A. Bishnoi, J. D'haeseleer, D. Gijswijt, and A. Potukuchi. Blocking sets, minimal codes and trifferent codes. arXiv preprint arXiv:2301.09457, 2023. https://doi.org/10.1112/jlms.12938
[4] G. N. Alfarano, M. Borello, A. Neri, and A. Ravagnani. Three combinatorial perspectives on minimal codes. *SIAM J. Discrete Math*., 36(1):461–489, 2022. https://doi.org/10.1137/21M1391493
[5] G. N. Alfarano, M. Borello, and A. Neri. A geometric characterization of minimal codes and their asymptotic performance. *Adv. in Math. Commun*., 16(1):115–133, 2022. Doi: 10.3934/amc.2020104
[6] D. Bartoli, A. Cossidente, G. Marino, and F. Pavese. On cutting blocking sets and their codes. Forum Math., 34(2):347–368, 2022. https://doi.org/10.1515/forum-2020-0338
[7] D. Bartoli, M. Bonini, and B. G¨une¸s. An inductive construction of minimal codes. *Cryptogr. Commun*., 13(3):439– 449, 2021. https://doi.org/10.1007/s12095-021-00474-2
[8] D. Bartoli, G. Kiss, S. Marcugini, and F. Pambianco. Resolving sets for higher dimensional projective spaces. Finite Fields their Appl., 67:101723, 2020. https://doi.org/10.1016/j.ffa.2020.101723