## DESIGNS AND THEIR CODES

(1992 Hardback Edition, ISBN 0-521-41361-3)

## E. F. Assmus, Jr and J. D. Key

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Line

```
    -12 for "simply a complete graph" read
        "a partition of the 6-set into 2-subsets"
    -11 delete "also"
    16 for " }r-\lambda=2m" read " r+\lambda=2m
-13, -8, -2 for "Tac(\mathcal{P})" read "Tac(\mathcal{B})"
    -12 for " Tac(\mathcal{B})" read " Tac(\mathcal{P})"
    6 for " }\operatorname{Tac}(\mathcal{B})" read "Tac(\mathcal{P})
    18 for " Tac(\mathcal{P})" read " Tac(\mathcal{B})"
    -16 for "occured" read "occurred"
    6 remove space before comma
    2 for " }\mathcal{B}\mathrm{ that is" read " }\mathcal{B}\mathrm{ ; that is"
    12 insert space between " }\mathcal{P}\mathrm{ " " and "there"
    -2 for " 13" read " 14"
    -3 for "precisely the" read "a"
    -1 remove "precisely the set of"
    -2 for "by the" read "by"
    -12 remove fullstop at end of display
    2 remove first occurrence of "matrix"
    20 read "parity-"
    4 insert fullstop at end of sentence
    15 for "quadratic-" read "quadratic"
    5-6 insert another line with the entry " }\mp@subsup{A}{25}{}=1379700
    -6 for " }37\mathrm{ " read " }36\mathrm{ "
    -4 for "codes" read "code"
    2 for " }\mp@subsup{W}{C}{\perp}(Z)=\mp@subsup{B}{i}{}\mp@subsup{Z}{}{i}\mathrm{ " read " }\mp@subsup{W}{\mp@subsup{C}{}{\perp}}{}(Z)=\mp@subsup{\sum}{i}{}\mp@subsup{B}{i}{}\mp@subsup{Z}{}{i}\mathrm{ "
    for " }\mp@subsup{W}{C}{\perp}(Z)\mathrm{ " read " }\mp@subsup{W}{C}{\perp}(Z)
    13 remove "or"
    -7 for " 0\leqk" read " 0<k"
    16 for " }x\mathrm{ ' }\in\mp@subsup{Q}{}{\prime}\mathrm{ " read " }\mp@subsup{y}{}{\prime}\inQ'\mathrm{ '"
    17 for " }y-y\mathrm{ '" read " }y\mathrm{ ' - y" (twice)
    9,10 for "a (q+" read "an ( n+"
    10 for "fixed" read "a fixed"
    -2 read "Furthermore"
    14 for "Fix (g)" read " }|\operatorname{Fix}(g)|
    13 quote marks wrong
    -15 for "the the" read "the"
    18 for "the Lemma" read "Lemma"
    -4 read "projective-"
    -4 read "geometry"
    -1 read "projective-"
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$$
\begin{aligned}
& 20 \text { remove space between } 8 \text { and comma } \\
& -5 \text { include name Hall before [117] } \\
& \text {-9 "a generator" } \\
& 11 \text { for " } m-r-1 \text { " read " } m-r \text { " } \\
& 16 \quad q \text { should not be bold-face } \\
& 12 \text { insert } \square \text { at end of line } \\
& 21 \text { for "and the" read "and" } \\
& 11 \text { read "positions" } \\
& -13 \text { for " } \sum_{j=0}^{v-1} \text { " read " } \sum_{j=0}^{v-1} c_{j} Z^{j} \text { " } \\
& -6 \text { for " } \mathcal{N}_{\nu}(m, q) \text { " read " } \mathcal{N}_{E}(\nu, m) \text { " } \\
& 3,5 \text { for " } 8 \text { " read " } 7 \text { " } \\
& -12 \text { for " } \mathcal{N}_{\nu / b}(m, q) \text { " read " } \mathcal{N}_{E}^{b}(\nu, m) \text { " } \\
& -12 \text { for " } \mathcal{N}_{\nu}(m, q) \text { " read " } \mathcal{N}_{E}(\nu, m) \text { " } \\
& -10 \text { for " } \mathcal{N}_{\nu / b}(m, q) \text { " read " } \mathcal{N}_{E}^{b}(\nu, m) \text { " } \\
& -5 \text { for " }(\nu, m) \text { " read " }(\nu, m)^{*} \text { " } \\
& -5 \text { for " }(k b, m) \text { " read " }(k b, m)^{*} \text { " } \\
& 5 \text { for "root } a \text { " read "root } \omega \text { " } \\
& -10,-11 \text { for " }(\nu, m) \text { " read " }(\nu, m)^{*} \text { " } \\
& 8 \text { for " } \mathcal{N}_{(r(q-1)) / b}(m, q) \text { " read " } \mathcal{N}_{E}^{b}(r(q-1), m) \text { " } \\
& 14 \text { for ") of" read ") of" } \\
& \text {-4 for "the the" read "the" } \\
& \text {-6 " } T \text { " too small } \\
& \text {-5 for " } \mathcal{P} \text { " read " } \mathcal{A} \text { " } \\
& \text {-12 for " } \mathcal{R}_{F_{q}} \text { " read " } \mathcal{A}_{F_{q} / F_{p}} \text { " } \\
& \text {-12 remove "(over } E \text { )" } \\
& 13 \text { include space before Bagchi } \\
& 16 \text { for "/ge" read " } \geq \text { " } \\
& \text {-14 insert full stop at end of line } \\
& 1 \text { for "the the" read "the" } \\
& 2 \text { read "preceding" } \\
& 2 \text { add "is" at end of line } \\
& 4 \text { for " }(\nu, m) \text { " read " }(\nu, m)^{*} \text { " } \\
& 2 \text { delete "of" } \\
& 21 \text { for "or" read "of" } \\
& \text {-11 for "the (" read "(the" } \\
& 13 \text { This exercise is not correct. Words of weight } q+4 \text { may exist. } \\
& 13 \text { for "it" read "its" } \\
& 14 \text { for "line" read "lines" } \\
& 18 \text { for "Desargues" read "Desargues'" } \\
& \text {-3 replace comma by full stop at end of line } \\
& -14 \text { for " } P G_{2} \text { " read " } \Pi=P G_{2} \text { " } \\
& -14 \text { for " } C\left(\mathbf{F}_{q^{2}}\right) \text { " read " } C(\Pi) \text { " } \\
& -4,-5 \text { for } " \bmod p \text { " read } " \bmod p \text { " } \\
& 2,4 \text { for "code" read "code-" } \\
& 10 \text { for " } p(s-1) \text { " read " } p(s-i) \text { " }
\end{aligned}
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3-6 for "The conjecture....16." read
"The sweeping conjecture of Hamada proved false as Tonchev [280] observed and, in fact, Delsarte and Goethals [105] had noticed the counter-example in 1968 - even before the conjecture was made!"
-7 for "Hamadada" read "Hamada"
17 read "code-"
17 for " $p$ " read " $p \mid(q+1)$ "
-1 read "1. However, "
16,17 for "are" read "is"

for " $D$ " read " $D_{1}$ "
16,18 for " $\sqrt{ }\left(n^{3}-2 n^{2}-1\right) / 2$ " read " $\frac{1}{2}\left(1+\sqrt{ }\left(2 n^{3}-6 n^{2}+9\right)\right)$ "
20 for " $\sqrt{ }\left(2^{3 m}-2^{2 m+1}-1\right) / 2$ " read " $\frac{1}{2}\left(1+\sqrt{ }\left(2^{3 m+1}-2^{2 m+1} 3+9\right)\right)$ "
14 for "did .... is" read "do .... is"
5 read "prime powers"
21 In the last line of the proof, before the final sentence, insert:
"If $p$ divides $m-1$ and does not divide $m+1$ then summing all the blocks shows that $\boldsymbol{\jmath} \in C_{p}(\mathcal{I})$. Further, summing all the blocks through any two distinct points $x$ and $y$, gives a vector with entry $m+1$ at $x$ and $y$ and 1 elsewhere. Since $m+1 \equiv 2(\bmod p)$, this implies that $v^{\{x\}}+v^{\{y\}} \in C_{p}(\mathcal{I})$. Taking a third point $z$ gives $v^{\{x\}}-v^{\{y\}}$, and hence $v^{\{x\}}$, in $C_{p}(\mathcal{I})$ for any $x$, since $p \neq 2$."

Bibliography
[14]: coding-theoretic
[51]: read "Grenzgebiete"
[62]: read "Z."
[85], [90]: read "Grenzgebiete"
[145]: for "Endlichen" read "Endliche"
[272]: for "de" read "di"
Glossary

6 in the right-hand column, delete $"=\sum_{v \in V} "$
Index

8 Hamada-Sachar goes after Hamada-Ohmori
12 line, add 8, 121-2
14 include Mattson-Solomon polynomial, 169
-15 include Mattson-Solomon, 169
21 for "quadriatic" read "quadratic"
May 21, 2005

