COMMENTS ON:
THE ALGEBRA AND GEOMETRY OF STEINER AND OTHER
QUADRATICALLY PARAMETRIZABLE SURFACES

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1. ERRATA

The following typos appear in the published paper, [CSS].

• (p. 270) The derivative, equation (34), should read
\[
\frac{\partial f_3}{\partial x} = [x_2(x_3^2 + x_4^2) - 2x_1x_4^2, x_1(x_3^2 + x_4^2),
2x_1x_2x_3 - 4x_3(x_3^2 + x_4^2), 2x_1x_2x_4 - 2x_1^2x_4 - 4(x_3^2 + x_4^2)x_4].
\]
This corrects the lower right 2 \times 2 block of the Hessian, equation (35), to
\[
\begin{vmatrix}
2x_1x_2 - 12x_3^2 - 4x_4^2 & -8x_3x_4 \\
-8x_3x_4 & 2x_1x_2 - 2x_1^2 - 12x_4^2 - 4x_3^2
\end{vmatrix}.
\]

• (p. 273) Below equation (58) should read “As in the case of \(\Sigma_7\) and \(\Sigma_8\)”

• (p. 279) **Theorem 7.** should read “The order of \(\Sigma\) is \(4 - \nu\Sigma\).”

• (p. 281) Above equation (105) should read “Since \(P(\Sigma) \notin \mathbb{M}_2\), \(e \neq 0\).”

• (p. 284) Step (2) in Section 6. should read “\(\det(\lambda \mathbf{M} + \mu \mathbf{N})\).”

2. UPDATES

Since publication, the following related article has come to our attention: [D].
The topic of projections of the real Veronese variety has more recently been considered in [C_2].
Also see Coffman’s web site on Steiner surfaces.

In addition to the unpublished notes of A. Schwartz and C. Stanton mentioned in
the References, some of the details of the matrix calculations leading to the
classification theorem appear in [C_1]. It should also be pointed out that Coffman’s
research was supported in part by a National Science Foundation Research Experience for Undergraduates program in
the summer of 1990.

3. CITATIONS

Our article is cited in these academic papers: [A_1], [A_2], [A_3], [ABB], [AMT],
[AS_1], [AS_2], [BJKL], [BCF], [BEG], [CFRV], [EGL_1], [EGL_2], [GS], [G], [H],
[H_1W], [HK], [HW_2], [HW_3], [L], [PA], [PO], [POS], [PR], [PT], [P], [RJ], [S],
[SPS], [WG], [WC], [WCD], [Zanella], [Z_1], [Z_2], [Z_3], as well as these books: [F],
[KI], and this computer technical manual: [T].
References


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