❚ Results in Mathematics

ERRATUM

Erratum to: Representation Formulas of Curves in a Two- and Three-Dimensional Lightlike Cone

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In the original publication of the article, Case 3 in Theorem 2.4 has been inadvertently missed out. The complete Theorem 2.4 is given below.

Theorem 2.4. *Let $x : \mathbf{I} \to \mathbb{Q}^2 \subset \mathbb{E}_1^3$ be a spacelike curve in $\mathbb{Q}^2$ with arc length parameter s and structure function $f(s)$. If the curve x is a non planar helix, the structure function $f(s)$ satisfies*

$$[(\log f_s)_s]^2 - 2(\log f_s)_{ss} = 2\kappa(s) = a(s+b)^{-2} \qquad (0.1)$$

and can be written as (by an appropriate parameter transformation)

    Case 1. $f(s) = s^c$ or $f(s) = s^{-c}$, for $c \neq 0, \pm 1$ and $a = c^2 - 1$;
    Case 2. $f(s) = \frac{c}{\log s}$ or $f(s) = \frac{\log s}{c}$, for $c \neq 0$ and $a = -1$;
    Case 3. $f(s) = \frac{2}{c}\tan\left(\frac{c}{2}\log s\right)$ or $f(s) = -\frac{2}{c}\tan^{-1}\left(\frac{c}{2}\log s\right)$, for $c \neq 0$ *and* $a + 1 = -c^2$.

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