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CORRIGENDUM FOR DIFFERENTIAL EQUATIONS FOR INDICATRICES, SPACELIKE AND TIMELIKE CURVES

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ABSTRACT. This article is a corrigendum to AJMAA Volume 20, Issue 2, Article 7, PDF Link: https://ajmaa.org/cgi-bin/paper.pl?string=v20n2/V20I2P7.tex.

Key words and phrases: Helix; Slant helix; Tangent, Binormal, Principal Normal indicatrices; Spacelike curves; and Timelike curves.

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The third section of the paper deals with "DERIVATION OF THE DIFFERENTIAL EQUATIONS". We thank the journal editors and Prof. Yücesan for providing inputs about an important reference [24]. In their article Başak et al. [24] obtained a general differential equation satisfied by the distance function for non-null (and similarly for null) Frenet curves in Minkowski 3-space.

The equations (3.1), (3.7), (3.13), and (3.19) should be replaced as follows:

$$\begin{cases} T' = \kappa N \\ N' = -\kappa T + \ \tau B \\ B' = \tau N \end{cases} \tag{3.1}$$

where $\langle T,T\rangle = 1$, $\langle N,N\rangle = 1$, $\langle B,B\rangle = -1$, $\langle T,N\rangle = \langle T,B\rangle = \langle N,B\rangle = 0$ [14].

$$\begin{cases} T' = \kappa N \\ N' = \kappa T + \tau B \\ B' = \tau N \end{cases} \tag{3.7}$$

where $\langle T,T\rangle = 1$, $\langle N,N\rangle = -1$, $\langle B,B\rangle = 1$, $\langle T,N\rangle = \langle T,B\rangle = \langle N,B\rangle = 0$ [14].

$$\begin{cases} T' = \kappa N \\ N' = \tau N \\ B' = -\kappa T - \tau B \end{cases} \tag{3.13}$$

where $\langle T,T\rangle = 1, \langle N,B\rangle = 1, \langle N,N\rangle = \langle B,B\rangle = \langle T,N\rangle = \langle T,B\rangle = 0$ [14].

$$\begin{cases} T' = \kappa N \\ N' = \kappa T + \tau B \\ B' = -\tau N \end{cases} \tag{3.19}$$

where $\langle T,T\rangle = -1$, $\langle N,N\rangle = 1$, $\langle B,B\rangle = 1$, $\langle T,N\rangle = \langle T,B\rangle = \langle N,B\rangle = 0$ [14].

The equations (3.2), (3.8), (3.20) should be replaced as follows:

$$\begin{cases} \langle \beta,T\rangle' = 1 + \kappa \langle \beta,N\rangle \\ \langle \beta,N\rangle' = -\kappa \langle \beta,T\rangle + \tau \langle \beta,B\rangle \\ \langle \beta,B\rangle' = \tau \langle \beta,N\rangle \end{cases} \quad [24] \tag{3.2}$$

$$\begin{cases} \langle \beta,T\rangle' = 1 + \kappa \langle \beta,N\rangle \\ \langle \beta,N\rangle' = \kappa \langle \beta,T\rangle + \tau \langle \beta,B\rangle \\ \langle \beta,B\rangle' = \tau \langle \beta,N\rangle \end{cases} \quad [24] \tag{3.8}$$

$$\begin{cases} \langle \beta,T\rangle' = -1 + \kappa \langle \beta,N\rangle \\ \langle \beta,N\rangle' = \kappa \langle \beta,T\rangle + \tau \langle \beta,B\rangle \\ \langle \beta,B\rangle' = -\tau \langle \beta,N\rangle \end{cases} \quad [24] \tag{3.20}$$

Moreover, the proof of the theorems (3.4), (3.5), (3.7) follows on the pattern of Başak et al. [24].

An addition of reference

■ B. ÖZÜLKÜ, A. YÜCESAN, The characterizations of some special Frenet curves in Minkowski 3-space, Malaya J. Matematik, 8 (2020), No. 4, pp. 2137-2143;

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