FRENET-SERRET TETRAD, FERMI-WALKER TRANSPORTED TETRAD AND THEIR RELATIONSHIP

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We have the general tetrad formalisms with 24 rotation coefficients in paper 1. In this paper, we talk about the Frenet-Serret formulae. In the Frenet-Serret tetrad associated to any point of a timelike curve, we see three curvatures, first curvature K, second curvature τ and the third curvature ρ; Comparing with the general equations, in the first set with the absolute derivative, we have $\lambda = \mu = \sigma = 0$. First we talk about Fermi-walker transported of any nector in the tetrad. In this case too, the equations are compared with the general case and the Frenet-Serret tetrad formulae. If we take the first set of general tetrad formulae with absolute derivative, we will have K, λ, μ nonzero and τ, ρ, σ zero for a Fermi-Walker transported tetrad. We started working with two tetrads S and S and found a general formula for their relationship. Now one is made the Frenet-Serret tetrad and the other Fremi-Walker transported tetrad now the relationship is found between these two tetrads by a transformation matrix. This transformation matrix gives a nice solution in terms of rotation coefficients. There are two ways of finding the solntion, both ways are given.