

# SOME RELATIONS BETWEEN THE SHAPE CURVATURES OF A THREE-DIMENSIONAL FRENET CURVE AND ITS ASSOCIATED FOUR-DIMENSIONAL FRENET CURVE

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**Abstract.** *In this research, we discuss differential-geometric invariants of a Frenet curve with respect to the group of direct similarities in a fourdimensional Euclidean space. In terms of the arc-length parameter, the relations between the shape curvatures of a three-dimensional Frenet curve and the shape curvatures of its associated four-dimensional Frenet curve are obtained.*

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