
ON CONFORMABLE CURVES IN MINKOWSKI 3-SPACE

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ABSTRACT

This work investigates the effect of curves in Lorentz-Minkowski space, an essential idea in physics and geometry, using the fractional derivative. The conformable fractional derivative is chosen in the analysis of this effect because it most closely fits the algebraic structure of differential geometry. Thus, several special curves including the Frenet frame that were originally determined using classical derivatives have been reinterpreted in Lorentz-Minkowski 3-space thanks to conformable fractional derivatives.

Keywords Conformable curve · Fractional calculus · Conformal derivative

References

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