

عنوان مقاله:

Geometry of submanifolds of all classes of third-order ODEs as a Riemannian manifold

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خلاصه مقاله:

In this paper, we prove that any surface corresponding to linear second-order ODEs as a submanifold is minimal in the class of third-order ODEs $y'''=f(x, y, p, q)$ as a Riemannian manifold where $y'=p$ and $y''=q$, if and only if $q_{yy}=0$. Moreover, we will see the linear second-order ODE with general form $y''=\pm y+\beta(x)$ is the only case that is defined a minimal surface and is also totally geodesic.

کلمات کلیدی:

Levi-Civita connection, minimal surface, moving frame, Riemannian manifold, Riemann curvature tensor, totally geodesic

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