

Anti-torqued and torqued curves in Riemannian manifolds

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Abstract. In this paper, we introduce the notions of anti-torqued and torqued curves γ in a Riemannian manifold $(\widetilde{M}, \langle \cdot, \cdot \rangle)$, defined as curves for which $\langle N^\gamma, V \rangle$ is constant, where N^γ is the unit principal normal vector field of γ and V is a globally defined anti-torqued or torqued vector field on $\widetilde{M}$. We characterize and classify these curves through systems of differential equations involving their invariants. Several examples are also provided.

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