

## Application of the Geometry of Curves in 3-dimensional Euclidean Space

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In this article the so called spin velocities are studied, which were recently introduced by the author, using the geometry of curves. Some of their essential properties are given and they are rather different than the ordinary velocities. Indeed, the spin velocities are non-inertial, they are not constrained by the velocity of light  $c$ , instead of the Lorentz transformations for them the Galilean transformations should be used, and while in case of inertial velocities the components  $\{F_{ij}\}$  of the electromagnetic field transform as a tensor with respect to the Lorentz transformations, in case of spin velocities the components  $\{F_{ij}\}$  remain unchanged. Also, the method of calculation of the spin velocities, by using the curvatures and torsions of curves in 3-dimensional Euclidean space is given. Some important applications of the spin velocities are given as well.