

The elements $\hat{x}$ of the space ID of dual numbers have the form $\hat{x} + \varepsilon x^*$ where x, x^* are real numbers and $\varepsilon^2 = 0$. The refereed paper is devoted to the study of the curves in 3-dimensional dual space ID³. The author introduces the Frenet triple $\vec{t}, \vec{n}, \vec{b}$ for such a curve and proves the Frenet-type formula analogous to the usual Frenet formula for a curve in the 3-dimensional Euclidean space.

The two curves $\hat{\alpha}$ and $\hat{\alpha}_*$ in ID³, parameterized by the arc-length parameters, are called similar if they have the same unit tangent vectors. The author studies the case when a similar curve $\hat{\alpha}_*$ can be obtained from $\hat{\alpha}$ by the change of parameterization. For that it is necessary and sufficient that any one of the following three conditions should be satisfied:

- (1) their principal normal vectors coincide;
- (2) their binormals coincide;
- (3) the ratios curvature/torsion of these curves coincide.

As an application of these results the author proves that the Euler spirals form a family of similar curves related by the change of parameterization.

The proofs of all results are elementary and do not add something new compared to the classical case of curves in the 3-dimensional Euclidean space.

I think that if this paper may be published then only in a specialized geometric journal or a journal dealing with the history of mathematics. But even in this case its English language should be considerably improved and the places pointed out below should be corrected.

Here are some concrete remarks on the text of the paper.

- (1) p.3, after the 3rd off-line formula: It is not clear what the author means by pure duality (precise definition is absent). The author requires that the curvature $\hat{\kappa}$ should never be pure dual while after the formula (2) it is said that $\hat{\kappa}$ is a pure dual curvature.
- (2) p.3, Def.1: Where this Definition ends? After the words " $\hat{s}$ and $\hat{s}^*$ "?
- (3) p.3-4, formula (3): How to understand the following sentence: "If we integrate the equality

$$(3) \quad \vec{t} = \vec{t}_*$$

we obtain the equation (3)..."

- (4) p.4, before formula (4): This sentence even hard to understand: "Let be derivatives given in (2) according to φ ".