

CHARACTERIZATIONS OF QUATERNIONIC SOME SURFACES IN
MINKOWSKI 3-SPACE

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Abstract

In this paper, we study the bisector of split quaternionic curves in Minkowski 3-space. Moreover, given two rational split quaternionic curves, we show that the bisector surface is rational.

Keywords: Bisector surface, Split quaternion, Minkowski space

References

- [1] G. Elber, The Bisector Surface of Rational Space Curves, Korean Ministry of Science and Technology, 96-NS-01-05-A-02-A.
- [2] R.T. Farouki and J.K. Johnstone, The Bisector of a Point and a Plane Parametric Curve.
- [3] B. O'Neil, Semi Riemannian Geometry with Applications to Relativity, Academic Press, London,1983.
- [4] M. Ozdemir and A.A. Ergin, The Roots of a Split Quaternion, Applied Mathematics Letters, **22** (2009) 258-263.
- [5] M. Peternell, Geometric Properties of Bisector Surfaces, Graphical Models, **62** (2000) 202-236.
- [6] Muhammed Talat Sariaydin, 3 Boyutlu Minkowski Uzaynda Kuaterniyonik Bazi Yuzeylelerin Karakterizasyonu, Firat Universitesi, Fen Bilimleri Enstitusu, Doktora Tezi.

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