Dospra, Petroula

**PH curves with non-primitive hodographs.** (English) Zbl 1440.65030

The author presents a necessary and sufficient condition under which a PH curve generated by a primitive quaternion polynomial has a non-positive hodograph. The paper consists of seven sections. In Section 2, there are presented the Euler-Rodrigues frame and RRMF curves. Sections 3 and 4 are about the complex roots of quaternion polynomials, respectively the characterization of non-primitive hodographs. In Section 6, there are investigated some RRMF-curves of degree 5 and 7. In conclusion, the paper is interesting and worth to be studied by those interested in the theory of curves.

Reviewer: Laurian Ioan Piscoran (Baia Mare)

**MSC:**
65D17 Computer-aided design (modeling of curves and surfaces)
68U07 Computer science aspects of computer-aided design
53A04 Curves in Euclidean and related spaces

**Keywords:**
Pythagorean-hodograph curves; rotation-minimizing frame; curves with rational rotation minimizing frame; non-primitive hodograph

**Full Text:** Link

**References:**

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