

## عنوان مقاله:

Development of a Pythagorean-hodograph interpolator for high speed CNC machining

## محل انتشار:

دهمین کنفرانس ملی مهندسی ساخت و تولید (سال: 1388)

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## خلاصه مقاله:

Methodologies for parametric interpolation for NURBS curves have been proposed in the past. However, the errors caused by the approximate nature of the NURBS interpolator were often neglected. This paper proposes an integrated look-ahead algorithm which combines the NURBS interpolation with the exact Pythagorean-hodograph (PH) interpolation to take into account geometric and interpolator approximation errors simultaneously. The algorithm consists of four different modules: a sharp corner detection module, a PH construction module, a jerk-limited module, and an interpolation module. Simulations and experiments are performed to validate the proposed algorithm. It is shown that the developed interpolator improves tracking and contour accuracies significantly compared to adaptive-feedrate and curvature-feedrate algorithms

## کلمات کلیدی:

Numerical Control – Parametric Interpolation – PH Curve

## لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/81785>

