

عنوان مقاله:

A Real-time NURBS Curve Trajectory Generator for High-Speed CNC Machining

محل انتشار:

اولین کنفرانس بین المللی و هفتمین کنفرانس ملی مهندسی ساخت و تولید (سال: 1384)

تعداد صفحات اصل مقاله: 11

نویسندگان:

M.M Emami - *Department of Mechanical Engineering, Amirkabir University of Technology (Tehran Polytechnic), Tehran, Iran*

B Arezoo - *Dep. of Mechanical Engineering, Assistant Professor*

خلاصه مقاله:

The impossibility of exact arc length computation for NURBS curves makes it difficult to generate a trajectory with desired profiles in real-time. This paper presents a new trajectory generation method that estimates an admissible path increment and determines the initiation of the final deceleration stage according to the distance left to travel estimated at every sampling time, resulting in exact feedrate trajectory generation through jerk-limited acceleration profiles for the NURBS curves. The proposed approach allows the feedrate profile to be dynamically adjusted according to chord error which is a geometrical path constraint for the curved path.

کلمات کلیدی:

CAD/CAM; CNC machine tools; NURBS interpolation

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