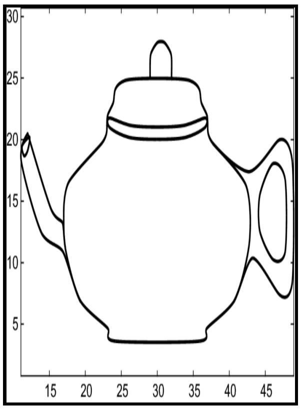
Geometric control of rational cubic B-splines

University of Birmingham - Fine Tuning of Rational B



Description: -
-Geometric control of rational cubic B-splines
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Tags: #Offsets #of #curves #on #rational #B

Rational b

You compute one of these by solving a system of linear equations to get its control points, as explained by LutzL and. The term geometric modeling which includes curve modeling, surface modeling, and solid modeling is often used as the synonym of computer aided geometric design, although some authors argue that geometric modeling means the building up of computer representations of complex shapes from representations of similar components.

Fine Tuning of Rational B

This property follows from the fact that all pieces have the same continuity properties, within their individual range of support, at the knots. A more general but also more complex insertion algorithm permitting insertion of several possibly multiple knots into a B-spline knot vector, known as the Oslo algorithm, was developed by Cohen et al.

Rational B

Bezier and B-splines are approximating curves.

eScience Lectures Notes : Spline Curves, Bezier, B

However, the exchange formats IGES and DXF are more limited - hence, the original model can become somewhat distorted in transfering from one program to another.

numerical methods

I had read that in image registration they used B-splines to dorm the deformation field.

1.4.2 B

Non-uniform rational B-spline is a bit of a mouthful and so it is generally abbreviated to NURBS. .

1.4.3 Algorithms for B

To make curvature-continuous G2 or C2 surfaces, use. If the slope of the curve or the first derivative of the function is continuous, then the function has first order continuity.

numerical methods

There is an example at the bottom of , which explains how repeating knot values will cause a b-spline curve to pass through one of its control points. For a curve of degree d, the influence of any control point is only nonzero in d+1 intervals knot spans of the parameter space.

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