

Review on non uniform rational B-spline (NURBS): concept and optimization

Abstract

This paper is to provide literature review of the Non Uniform Rational B-Splines (NURBS) formulation in the curve and surface constructions. NURBS curves and surfaces have a wide application in Computer Aided Geometry Design (CAGD), Computer Aided Design (CAD), image processing and etc. The formulation of NURBS showing that NURBS curves and surfaces requires three important parameters in controlling the curve and also modifying the shape of the curves and surfaces. Yet, curves and surfaces fitting are still the major problems in the geometrical modeling. With this, the researches that have been conducted in optimizing the parameters in order to construct the intended curves and surfaces are highlighted in this paper.

Keywords; B-Spline, Computer Aided Design, NURBS