

The determining of alpha value for alpha-cut operation by using triangular polygon centroid

ABSTRACT

Fuzzy geometric modeling is a model that incorporates two major fields: fuzzy set theory and also geometric modeling. This idea is utilized in fuzzy set theory to define uncertainty data using the definitions of a fuzzy number. This method is then used for geometric modeling to generate a curve or surface using any parametric function such as Spline, Bezier, and B-spline. These two primary areas can be combined since they share similar features of defining and modeling a set of data points. Several steps have to be completed to produce the crisp fuzzy output, including defining, fuzzification, and defuzzification. The triangular polygon centroid will be used to determine the alpha value of the fuzzification process (alpha-cut operation).