Approximation of Intersection Curves of Two Parametric Surfaces

Authors : Misbah Irshad, Faiza Sarfraz

Abstract : The problem of approximating surface to surface intersection is considered to be very important in computer aided geometric design and computer aided manufacturing. Although it is a complex problem to handle, its continuous need in the industry makes it an active topic in research. A technique for approximating intersection curves of two parametric surfaces is proposed, which extracts boundary points and turning points from a sequence of intersection points and interpolate them with the help of rational cubic spline functions. The proposed approach is demonstrated with the help of examples and analyzed by calculating error.

Keywords : approximation, parametric surface, spline function, surface intersection

Conference Title : ICMSSC 2016 : International Conference on Mathematics, Statistics and Scientific Computing
Conference Location : Vancouver, Canada
Conference Dates : August 04-05, 2016