

Constrained modification of a quadratic and cubic trigonometric spline curves

Ede Troll^a

Institute of Mathematics and Computer Science
Károly Eszterházy College
e-mail: ede.troll@gmail.com

Abstract

In Computer Aided Geometric Design the most prevalently used curves are B-Spline and NURBS curves. Trigonometric spline curves are another way to define curves above a new function space. Trigonometric curves can produce several important curves explicitly. In this presentation two kind of trigonometric curves, the quadratic [1] and cubic [2] trigonometric curves of Xuli Han have been studied. Both curves have a shape parameter λ . Here we prove that it's geometric effect on the curves is linear. Constrained modification of the curves is also discussed, which is possible with computational-numerical algorithm. Quadratic trigonometric polynomial surface is also presented and studied.

References

- [1] X. HAN: Quadratic trigonometric polynomial curves with a shape parameter, *Computer Aided Geometric Design* 19 (2002), 503–512.
- [2] X. HAN: Cubic trigonometric polynomial curves with a shape parameter, *Computer Aided Geometric Design* 21 (2004), 535–548.

Ede Troll

Institute of Mathematics and Computer Science
Károly Eszterházy College
Leányka str. 4, Eger, Hungary