A topological view on Shape deformation

Shizuo KAJI
Department of Mathematical Sciences, Yamaguchi University, Japan / JST PRESTO

Manipulating shapes with computer has now become ubiquitous; Computer graphics (CG) is essential to film making, and so is Computer Aided Design (CAD) to industrial design. From a topological view point, a shape is a certain space (typically, a simplicial complex or a surface) and its deformation (animation) is a family of imbeddings into the ambient space (typically, $\mathbb{R}^3$). In this talk, I will review some of my recent work to demonstrate how this topological view can actually be made into algorithms of shape deformation.

References

