Model Reduction for Elasticity-Based Shape Processing

Klaus Hildebrandt
Delft University of Technology
k.a.hildebrandt@tudelft.nl

In this talk, we will discuss model reduction techniques that can be used to design fast approximation algorithms for shape optimization problems. The goal is to obtain approximate solutions at run times that are independent of the resolution of the discrete shapes to be optimized. As applications we will discuss methods for real-time elasticity-based shape interpolation and the processing of curves in shape spaces in which a shape is a single point.

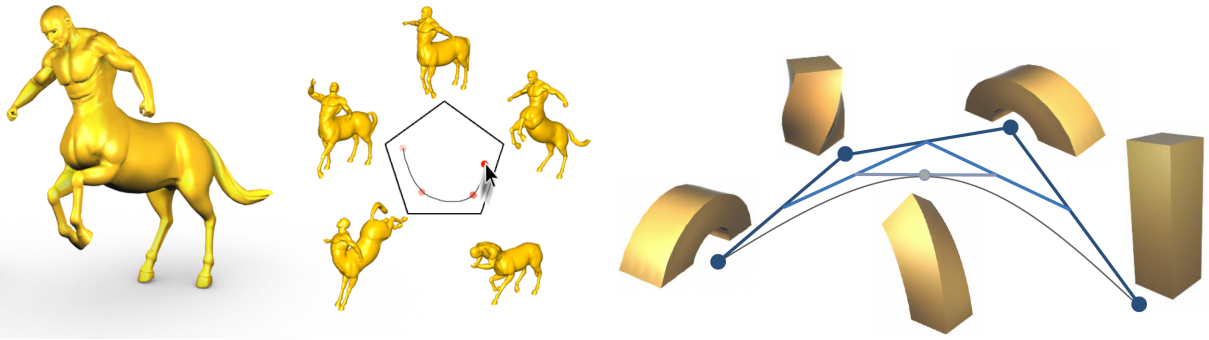

Figure 1: Real-time non-linear shape interpolation (left) and a non-linear Bézier curve in shape space (right).

Joint work with: Christopher Brandt (TU Delft), Elmar Eisemann(TU Delft), Philipp von Radziewsky (TU Delft), Christian Schulz (MPI Informatics), Hans-Peter Seidel (MPI Informatics) and Christoph von Tycowicz (Zuse Institute Berlin).

References

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