

A survey on fast simulation of elastic objects

Jin HUANG, Jiong CHEN, Weiwei XU, Hujun BAO

Frontiers of Computer Science, DOI: [10.1007/s11704-018-8081-1](https://doi.org/10.1007/s11704-018-8081-1)

Problems & Ideas

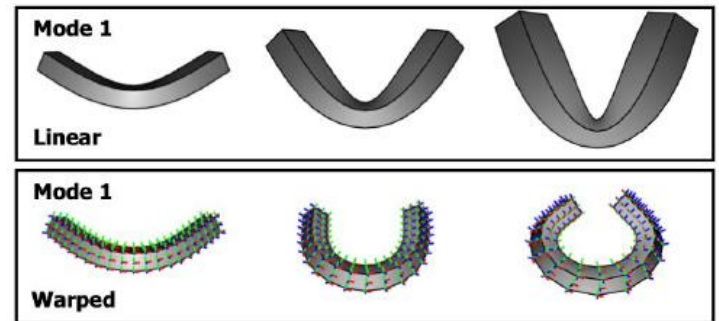
- Review basic knowledge for simulation
 - Euler-Lagrange equation
 - Elastic model
- Review classical techniques for fast simulation
 - Corotational methods
 - Reduction
 - Rotation-strain method
 - Position-based and projective dynamics
- Discuss applications of fast simulation techniques
 - Optimal control
 - Collision

Main Contributions

- Corotational method



- Reduction and RS warping



Our Method with L-BFGS
($m=5$)

Projective Dynamics

Projective dynamics

