

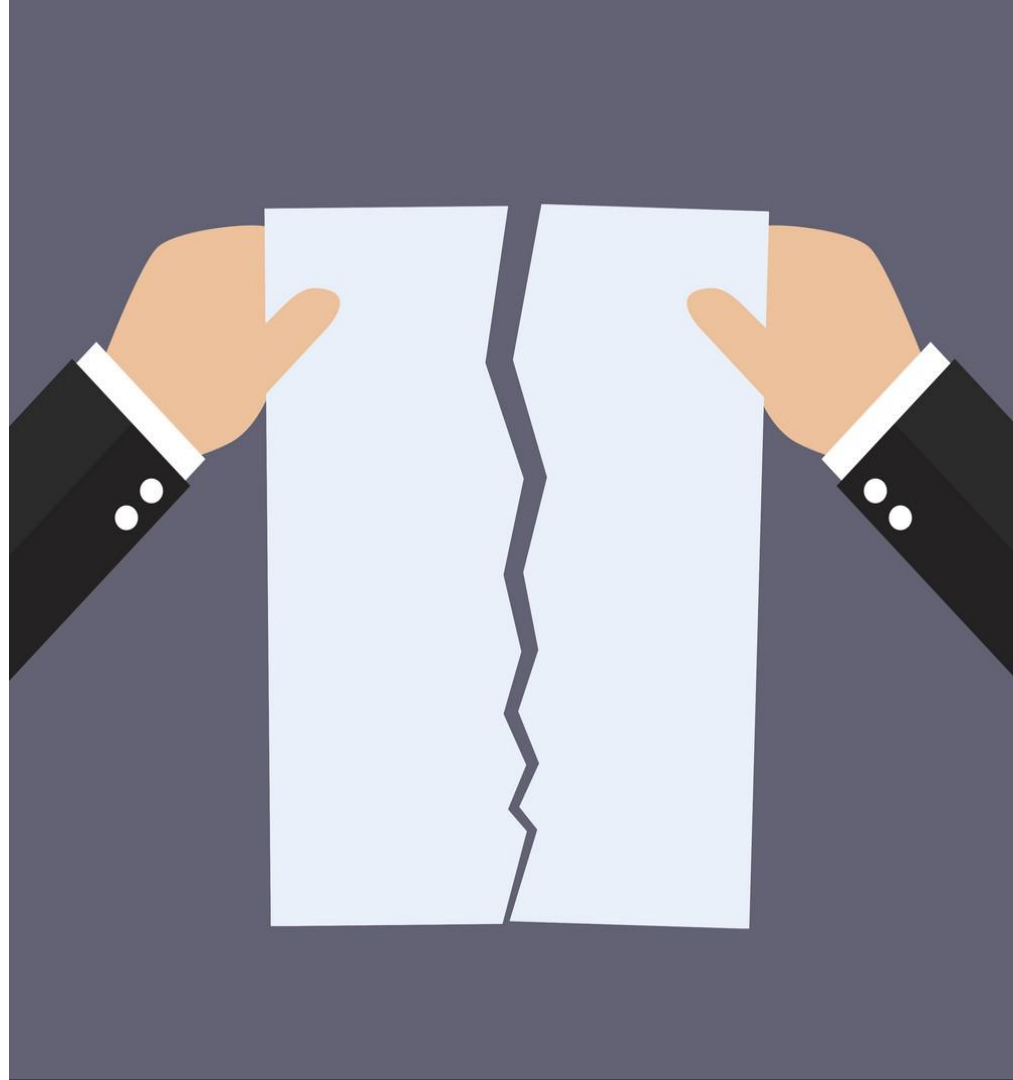
Physically-Based Simulation Sheet Tearing

Group 8

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Goal

Simulate motion and tearing of a 2D sheet



First Approach (Milestone Presentation)

Basic Mass-Spring System

with Symplectic Euler Integration.

- Only 'stable' with very specific parameters.
- Tends to 'fall apart'.



New Approach

Position-based Dynamics

- Convert Mass-Spring System to system of constraints.
- Adjust position of vertices directly to satisfy constraints.
- Solved iteratively within each timestep.

Constraints can be added for external forces:

- Constant velocities
- Collisions

Video