Deep Contact

Accelerating Rigid Simulation with Convolutional Networks

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Outline

Outline

Previous Work

- My first point.
- My second point.

Outline

Thesis Overview

- Modeling Contact.

Thesis Overview

- Modeling Contact.
- Second item.

Thesis Overview

- Modeling Contact.
- Second item.
- Third item.

Thesis Overview

- Modeling Contact.
- Second item.
- Third item.
- Fourth item.

Thesis Overview

- Modeling Contact.
- Second item.
- Third item.
- Fourth item.
- Fifth item.

Thesis Overview

- Modeling Contact.
- Second item.
- Third item.
- Fourth item.
- Fifth item. Extra text in the fifth item.

Outline

Grid-Particle Method

In order to generate accessible data for CNN model, we transform every state into a set of grid images.

- It can make the simulation states be expressed by a set of matrixes, which can be accessible for deep neural networks.

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1. Based on Smoothed Particle Hydrodynamics(SPH), map current state(m, v_x, v_y, ω, n_x) to a image(the number of channel is 5.), which is called feature image.

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3. For all contacts positions, interpolated values will be gener- ated based on label image. Then, the values will be used as starting iterate values for contact force solver. In our hypoth- esis, the given starting values will speed up the solver to reach convergence.

Outline

Smoothed Particle Hydrodynamics

Fundamentals

Outline

Bilinear Interpolation

Outline

Outline

Blocks

Block Title

You can also highlight sections of your presentation in a block, with it's own title

Theorem

There are separate environments for theorems, examples, definitions and proofs.

Example

Here is an example of an example block.

Summary

- The first main message of your talk in one or two lines.
- The second main message of your talk in one or two lines.
- Perhaps a third message, but not more than that.

- Outlook
  - Something you haven't solved.
  - Something else you haven't solved.

For Further Reading I

A. Author.
Handbook of Everything.
Some Press, 1990.

S. Someone.
On this and that.
Journal of This and That, 2(1):50–100, 2000.