Universidad Nacional de San Agustín

Artificial Intelligence

Multiple Sequence Alignment using Particle Swarm Optimization

MSc. Vicente Machaca Arceda

2021

Content

Overview

Overview

Paper 1

A Particle-based Method for Preserving Fluid Sheets [1].

- **Year**: 2011
- **Authors**: Ando, Ryoichi and Tsuruno, Reiji
- **Event**: Proceedings of the 2011 ACM SIGGRAPH/Eurographics symposium on computer animation

Paper 1
Problem and Proposal

Problem:

- Particle based methods are no good for simulate thin fluids features.

Proposal:

- It is a particle-based framework that preserves thin fluid features like those in Eulerian fluid.
- Integrates Smoothed-Particle Hydrodynamics (SPH) and Particle-In-Cell/Fluid-Implicit-Particle (PIC/FLIP).
- The thin sheets are preserved by inserting new particles at sparse thin points in the sheets. These particles are then quickly removed as they dive into the deep water.

References I

[1] R. Ando and R. Tsuruno, “A particle-based method for preserving fluid sheets,” in *Proceedings of the 2011 ACM SIGGRAPH/Eurographics symposium on computer animation*, 2011, pp. 7–16.