



Universidad Nacional de San Agustín

# Artificial Intelligence

## Multiple Sequence Alignment using Particle Swarm Optimization

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## 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



## 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.



- [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.

