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SIMULATION OF PARTICLE & LIQIUD IMPACT ON WATER FILM UNDER EQUIDENSE CONDITIONS USING SMOOTHED PARTICLE HYDRODYNAMICS (SPH)

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ABSTRACT

In today's era of research, a constant need of simulating real time physical problems has been sensed. This gives researchers an

Edge of predicting experimental results on software packages without actually conducting expensive, time consuming experiments. But, for efficiency and accuracy in results, care must be taken in building up the base models for these softwares, developing concepts and algorithms which consider maximum physical real time parameters for the computations. Researchers have classified physical fields into various sections and have developed techniques for their fine simulation. One such technique, used for simulating continuous flow is Smoothed Particle Hydrodynamics (SPH). The paper deals with the simulation of a few real time continuous flow situations using SPH as a computational tool. SPH is a flexible method for hydrodynamics, extensively being used for simulation of continuous fluidic flow. A nice aspect of SPH is that it is Lagrangian. Another nice aspect of the method is that it has no numerical bulk viscosity. In all, the method is very useful for many problems of hydrodynamics, as long as inaccuracies and potential problems are kept in mind.

KEYWORDS: Smoothed Particle Hydrodynamics (SPH), YADE, Density Function

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