



Vortrag



On the simulation of dense suspensions in shear flows

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We present an immersed domain approach coupled with a viscous contact model for studying the rheological behaviour of dense suspensions in a shear flow.

We analyze the importance of contact modelling as well as the choice of the boundary conditions on the macroscopic properties of the suspension. The behaviour of suspension of fiber-spheres particles is also considered. We pointed out with experimental and numerical observations that the Jeffery approximation is no more valid as the sphere particle concentration increases.

Some results on non Newtonian matrix are also presented in the simple case of spherical particle in a shear flow.

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