

Abstract Submitted
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High Performance Computing for complex fluids simulation

MOURAD ISMAIL, VINCENT CHABANNES, VINCENT DOYEUX, STÉPHANE PRIEM, Grenoble University, CHRISTOPHE PRUD'HOMME, Strasbourg University, FEELPP TEAM¹ — In order to better understand the behavior of complex fluids in general and blood flow in particular, several models have been proposed by considering blood as a Newtonian fluid (governed by the Stokes equations or Navier-Stokes) in which are immersed deformable entities. These particles contain a second fluid of different viscosity and density from outer fluid. This context, I will present some models based on the same principle and will show its validations using some known benchmarks. I will also talk briefly about High Performance Computing in the framework of complex fluids simulations.

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