

2015학년도 1학기

수학전공 Colloquium

제 목

An immersed boundary method for a contractile elastic ring in a three-dimensional Newtonian fluid

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초

In this paper, we present an immersed boundary method for a contractile elastic ring in a three-dimensional Newtonian fluid. The elastic ring is shrinking as time evolves.

록

The governing equations are the modified Navier-Stokes equations with an elastic force from the contractile ring. We dynamically reduce the number of the Lagrangian boundary points when the distance between the adjacent point is too close. We perform numerical experiments with various initial configurations of the contractile elastic ring. The numerical results show that the proposed method can model and simulate the time dependent contractile elastic ring in a three-dimensional Newtonian fluid.

일 시

4월 2일 목요일 오후 5시

장 소

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