Modeling microscopic swimmers at a low Reynolds number

Abstract

I will talk about modeling microswimmers in low Reynolds numbers. at first, I'll try to define the main problem after that I'll introduce three methods (Oseen tensor, lattice Boltzmann, multiparticle collision dynamics) for the modeling of hydrodynamics interaction.

Then I'll talk about the Golestanian - Najafi swimmer model theory and apply the three methods to the model. Finally, I'll conclude with the efficiency of each method for the model. This talk is originated from an article for microswimmers by David et al.

Reference to article: https://arxiv.org/abs/cond-mat/0701511

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مکان: کلاس مجازی دکتر اجتهادی

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