

A Stokeslets approach for the numerical solution of Brinkman systems

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Abstract:

In this work we present some properties of unsteady hydrodynamic potentials in order to justify a meshfree numerical method for Brinkman systems with Dirichlet and Neumann boundary conditions. The problems here addressed concerns interior 2D problems and can be easily extended for exterior and 3D problems. We will illustrate the feasibility of the methods with some numerical simulations.