

A Numerical Approach For The Shape Reconstruction Of The Incompressible Flows

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This paper is concerned with the problem of the shape reconstruction of two-dimensional incompressible flows governed by Stokes equations and Navier-Stokes equations. We derive the representation for domain derivative of the corresponding operator. Finally we apply a regularized iterative method to the problems, and the numerical examples show that our theory is useful for practical purpose and the proposed algorithm is feasible.