

数学与系统科学研究院  
计算数学所网络学术报告

报告人: 晏文璟 教授

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报告题目:

**The Application of Continuous  
Adjoint Method for Shape  
Optimization in Navier-Stokes  
Flow**

邀请人: 刘歆 研究员

报告时间: 2022 年 11 月 23 日 (周三)

上午 9:00-9:40

报告工具: 腾讯会议 (ID: 481-992-993)

## **Abstract:**

**In this work, the shape optimization problem of a solid immersed in the incompressible fluid governed by Navier-Stokes equations is considered. Based on the continuous adjoint method, the shape gradient of the cost functional is derived by involving a Lagrange functional with the function space parametrization technique. Then, a gradient-type algorithm is applied to the shape optimization problem. Numerical examples indicate the proposed algorithm is feasible and effective in low Reynolds number flow.**

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