

# Control and stabilization of fluid flows

J. -P. Raymond

Laboratoire Mathématiques pour l'Industrie et la Physique, UMR 5640

Université Paul Sabatier

31062 Toulouse Cedex 4 - France

raymond@mip.ups-tlse.fr

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## **Abstract**

Considering an unstable stationary solution of the 2D Navier-Stokes equations, we look for a feedback boundary control able to stabilize the solutions to the Navier-Stokes equations about the unstable stationary solution. We first study the algebraic Riccati equation for the linearized Navier-Stokes equations. We next show the existence of linear and nonlinear feedback laws stabilizing the Navier-Stokes equations when the initial condition is not far from the stationary solution.