1067-35-1590   **Jan Sokolowski*** (`Jan.Sokolowski@iecn.u-nancy.fr`), Institut Elie Cartan, UMR 7502, Nancy-Universite-CNRS-INRIA, Universite Henri Poincare Nancy 1 BP 239, 54506 Vandoeuvre-Les-Nancy, France, and **P.I. Plotnikov**. *Nonhomogeneius boundary value problems for non-stationary compressible Navier-Stokes equations and work minimization.*

In the paper [1] we prove the new result on the existence of weak renormalized solution to in/out flow problem for nonstationary compressible Navier-Stokes equations posed in a bounded domain with an obstacle inside. The result of [1] is employed to obtain the existence of an optimal shape of the obstacle which minimizes the work for a given flight scenario. [1] P.I. Plotnikov, J. Sokolowski,INHOMOGENEIUS BOUNDARY VALUE PROBLEM FOR NONSTATIONARY COMPRESSIBLE NAVIER-STOKES EQUATIONS, Journal of Mathematical Sciences, Vol. 170, No. 1, 2010, Springer Verlag,pp 34-130. (Received September 21, 2010)