Cornell University Library

We gratefully acknowledge support from the Simons Foundation and member institutions

arXiv.org > math > arXiv:1107.2054

Search or Article-id

(Help | Advanced search)

All papers | Go!

Mathematics > Analysis of PDEs

Self-similar asymptotics of solutions to the Navier-Stokes system in two dimensional exterior domain

Dragoş Iftimie, Grzegorz Karch, Christophe Lacave

(Submitted on 11 Jul 2011)

We consider the 2D incompressible Navier-Stokes equations with Dirichlet boundary condition in the exterior of one obstacle. Assuming that the circulation at infinity of the velocity is sufficiently small, we prove that the large time behavior of the corresponding solution to the initial-boundary value problem is described by the Lamb-Oseen vortex. The later is the well-known explicit self-similar solution to the Navier-Stokes system in the whole space $\R^2$.

Submission history

From: Christophe Lacave M [view email]
[v1] Mon, 11 Jul 2011 15:18:33 GMT (15kb)

Which authors of this paper are endorsers?

References & Citations

- NASA ADS

Bookmark(what is this?)