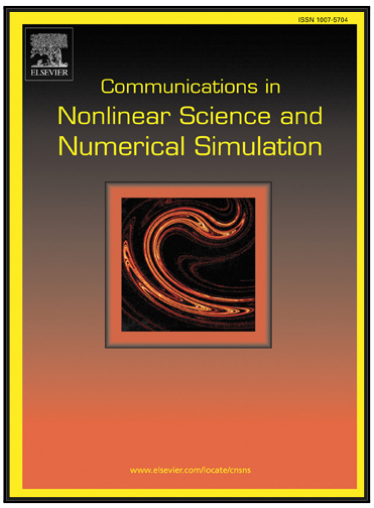
Accepted Manuscript



Numerical simulations of the transition from laminar to chaotic behaviour of the planar vortex flow past a circular cylinder

D. Durante, E. Rossi, A. Colagrossi, G. Graziani

PII: S1007-5704(16)30507-X
DOI: 10.1016/j.cnsns.2016.12.013
Reference: CNSNS 4053

To appear in: *Communications in Nonlinear Science and Numerical Simulation*

Received date: 11 April 2016
Revised date: 27 October 2016
Accepted date: 4 December 2016

Please cite this article as: D. Durante, E. Rossi, A. Colagrossi, G. Graziani, Numerical simulations of the transition from laminar to chaotic behaviour of the planar vortex flow past a circular cylinder, *Communications in Nonlinear Science and Numerical Simulation* (2016), doi: 10.1016/j.cnsns.2016.12.013

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

ACCEPTED MANUSCRIPT

Highlights

- Planar flow past a circular cylinder for Reynolds number up to 500,000 is addressed
- A Lagrangian particle method approach has been used to directly follow the vorticity
- To resolve all the vortical scales, high resolutions have been adopted
- Boundary layer, near and far wake dynamics have been described
- Peculiar phenomena, not discussed before in the literature, are depicted

ACCEPTED MANUSCRIPT

Download English Version:

https://daneshyari.com/en/article/5011580

Download Persian Version:

https://daneshyari.com/article/5011580

Daneshyari.com