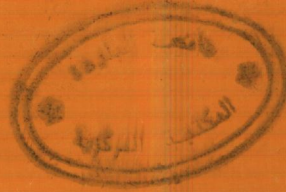


VOLUME 23, ISSUE 1, JANUARY-FEBRUARY 2004

ISSN 0997-7546



EUROPEAN JOURNAL OF MECHANICS

Special Issue

Fluid Body Waves and Non-linear Vibration

Port Douglas, Australia, 17–20 December 2002

Guest Editors: T. Lewke
K. Hourigan
C.H.K. Williamson

B/FLUIDS

EUROPEAN JOURNAL OF MECHANICS

B/FLUIDS

An official medium of publication for EUROMECH "European Mechanics Society"

Vol. 23, issue 1, January-February 2004

CONTENTS (continued)

Abstracted/indexed in: Applied Mechanics Reviews, CNRS/Pascal, Current Contents/Physics, Chemical and Earth Sciences, INSPEC, Mathematical Reviews, Mechanics Contents, Science Citation Index, Zentralblatt MATH

Special issue: Bluff Body Wakes and Vortex-Induced Vibrations (BBVIV-3 International Conference)

Cylinder oscillations beneath a free-surface J. Carberry, J. Sheridan, D. Rockwell	81
Wake states and response branches of forced and freely oscillating cylinders J. Carberry, R. Govardhan, J. Sheridan, D. Rockwell, C.H.K. Williamson	89
Two-dimensional Floquet stability analysis of the flow produced by an oscillating circular cylinder in quiescent fluid J.R. Elston, J. Sheridan, H.M. Blackburn	99
A high-amplitude 2T mode of vortex-induced vibration for a light body in XY motion C.H.K. Williamson, N. Jauvtis	107
Flow-induced in-line oscillation of a circular cylinder A. Okajima, A. Nakamura, T. Kosugi, H. Uchida, R. Tamaki	115
Vortex structures in the wake of a buoyant tethered cylinder at moderate to high reduced velocities K. Ryan, M.C. Thompson, K. Hourigan	127
Interactions of the wakes of two spheres placed side by side L. Schouveiler, A. Brydon, T. Leweke, M.C. Thompson	137
Three-dimensional stationary flow over a backward-facing step J.-F. Beaudoin, O. Cadot, J.-L. Aider, J. Eduardo Wesfreid	147
Secondary instability mechanisms in the wake of a flat plate S. Julien, S. Ortiz, J.-M. Chomaz	157
Asymmetric structure and non-linear transition behaviour of the wakes of toroidal bodies G.J. Sheard, M.C. Thompson, K. Hourigan	167
DNS and experiments of flow past a wired cylinder at low Reynolds number S. Sirisup, G.E. Karniadakis, N. Saelim, D. Rockwell	181
Closed-loop control of fluid-structure interactions on a flexibly supported cylinder M.M. Zhang, L. Cheng, Y. Zhou	189
Vortex-induced travelling waves along a cable M.L. Facchinetti, E. de Langre, F. Biolley	199
Multi-modal vortex-induced vibrations of a vertical riser pipe subject to a uniform current profile R.H.J. Willden, J.M.R. Graham	209
The Stuart-Landau model applied to wake transition revisited M.C. Thompson, P. Le Gal	219
Predicted low frequency structures in the wake of elliptical cylinders S.A. Johnson, M.C. Thompson, K. Hourigan	229

EUROPEAN JOURNAL OF MECHANICS

B/FLUIDS

An official medium of publication for EUROMECH "European Mechanics Society"

Vol. 23, issue 1, January-February 2004

CONTENTS

Abstracted/indexed in: Applied Mechanics Reviews, CNRS/Pascal, Current Contents/Physics, Chemical and Earth Sciences, INSPEC, Mathematical Reviews, Mechanics Contents, Science Citation Index, Zentralblatt MATH

Special issue: Bluff Body Wakes and Vortex-Induced Vibrations (BBVIV-3 International Conference)

Conference on Bluff Body Wakes and Vortex-Induced Vibrations	1
Preface	
T. Leweke, K. Hourigan, C.H.K. Williamson	3
List of all presentations	5
Participants	8
Experimental studies of passive control of vortex-induced vibration	
P. Bearman, M. Branković	9
Critical mass in vortex-induced vibration of a cylinder	
R. Govardhan, C.H.K. Williamson	17
Three-dimensionality of mode transition in vortex-induced vibrations of a circular cylinder	
F.S. Hover, J.T. Davis, M.S. Triantafyllou	29
Predictability and uncertainty in flow-structure interactions	
D. Lucor, G.E. Karniadakis	41
Numerical simulations of VIV on long flexible cylinders immersed in complex flow fields	
J.R. Meneghini, F. Saltara, R.A. Fregonesi, C.T. Yamamoto, E. Casaprima, J.A. Ferrari Jr.	51
From the double vortex street behind a cylinder to the wake of a sphere	
M. Provansal, L. Schouveiler, T. Leweke	65

Continued on inside back cover