JOURNALS

JFM ARCHIVE

Journal of Fluid Mechanics

Digital Archive 1956–1996



The JFM Digital Archive contains every article from the first 40 years of the journal, scanned and digitised to the highest standards.

Please speak to your librarian about gaining access.

journals.cambridge.org/jfm





- Faster publication
- Greater visibility for papers
- Freely available to all for the first year

For more information visit

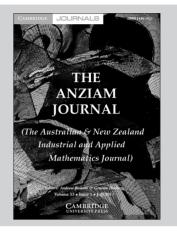
journals.cambridge.org/rapids



JOURNALS

The ANZIAM Journal

Published for The Australian Mathematical Society



The ANZIAM Journal is available online at: http://journals.cambridge.org/anz

Editors-in-Chief

A. Bassom, *The University of Western Australia, Australia* G. C. Hocking, *Murdoch University, Australia*

The ANZIAM Journal considers papers in any field of applied mathematics and related mathematical sciences with the aim of rapid publication in print and electronic formats. Novel applications of mathematics in real situations are especially welcomed. All papers should include some indication of applicability, and an introduction that can be understood by non-specialist readers from the whole applied mathematical community.

To subscribe contact Customer Services

in Cambridge:

Phone +44 (0)1223 326070 Fax +44 (0)1223 325150 Email journals@cambridge.org

in New York:

Phone +1 (845) 353 7500 Fax +1 (845) 353 4141 Email subscriptions_newyork@cambridge.org

Price information

is available at: http://journals.cambridge.org/anz

Free email alerts

Keep up-to-date with new material – sign up at http://journals.cambridge.org/anz-alerts

For free online content visit: http://journals.cambridge.org/anz



https://doi.org/10.1017/jfm.2013.548 Published online by Cambridge University Press

European Journal of Applied Mathematics

Co-Editors-in-Chief

S. D. Howison, University of Oxford, UK
A. A. Lacey, DPMMS, Heriot-Watt University, UK
M. J. Ward, University of British Columbia, Canada

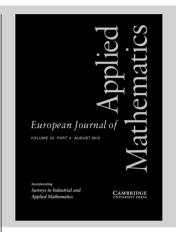
Since 2008 *EJAM* surveys have been expanded to cover Applied and Industrial Mathematics. Coverage of the journal has been strengthened in probabilistic applications, while still focusing on those areas of applied mathematics inspired by real-world applications, and at the same time fostering the development of theoretical methods with a broad range of applicability. Survey papers contain reviews of emerging areas of mathematics, either in core areas or with relevance to users in industry and other disciplines. Research papers may be in any area of applied mathematics, with special emphasis on new mathematical ideas, relevant to modelling and analysis in modern science and technology, and the development of interesting mathematical methods of wide applicability.

Price information

is available at: http://journals.cambridge.org/ejm

Free email alerts

Keep up-to-date with new material – sign up at http://journals.cambridge.org/ejm-alerts



European Journal of Applied Mathematics

is available online at: http://journals.cambridge.org/ejm

To subscribe contact Customer Services

in Cambridge:

Phone +44 (0)1223 326070 Fax +44 (0)1223 325150 Email journals@cambridge.org

in New York:

Phone +1 (845) 353 7500 Fax +1 (845) 353 4141 Email subscriptions newyork@cambridge.org

For free online content visit: http://journals.cambridge.org/ejm



JFM Rapids (online only)

- R1 Non-invasive measurement of the pressure distribution in a deformable micro-channel
 O. Ozsun, V. Yakhot & K. L. Ekinci
- S R2 Mixing in gravity currents
 A. T. Fragoso, M. D. Patterson
 & J. S. Wettlaufer

S indicates supplementary data or movies available online.

- R3 Deformation of leaky-dielectric fluid globules under strong electric fields: boundary layers and jets at large Reynolds numbers
 - O. Schnitzer, I. Frankel & E. Yariv
- R4 The two classes of primary modal instability in laminar separation bubbles
 - D. Rodríguez, E. M. Gennaro & M. P. Juniper

Journal of Fluid Mechanics

Toward coherently representing turbulent wall-flow dynamics

J. C. Klewicki

5 A unified criterion for the centrifugal instabilities of vortices and swirling jets

P. Billant & F. Gallaire

36 On the breakdown of Rayleigh's criterion for curved shear flows: a destabilization mechanism for a class of inviscidly stable flows P. Hall

83 Global analysis of Navier–Stokes and Boussinesq stochastic flows using dynamical orthogonality T. P. Sapsis, M. P. Ueckermann & P. F. J. Lermusiaux

114 Nonlinear interfacial dynamics in stratified multilayer channel flows

E. S. Papaefthymiou, D. T. Papageorgiou & G. A. Pavliotis

- 144 On high-frequency noise scattering by aerofoils in flow L. J. Ayton & N. Peake
- S 183 Recoil of a liquid filament: escape from pinch-off through creation of a vortex ring

 J. Hoepffner & G. Paré
 - 198 Vortex generation by deep-water breaking waves N. E. Pizzo & W. K. Melville
 - 219 A macrotransport equation for the particle distribution in the flow of a concentrated, non-colloidal suspension through a circular tube

A. Ramachandran

253 Turbulent acidic jets and plumes injected into an alkaline environment

H. Ülpre, I. Eames & A. Greig

Model-based scaling of the streamwise energy density in high-Reynolds-number turbulent channels
 R. Moarref, A. S. Sharma, J. A. Tropp &
 B. J. McKeon

Contents continued on inside back cover.

- 317 Topographic controls on gravity currents in porous media
 - S. S. Pegler, H. E. Huppert & J. A. Neufeld
- S 338 Rayleigh–Taylor instability in a finite cylinder: linear stability analysis and long-time fingering solutions H. Sweeney, R. R. Kerswell & T. Mullin
- 363 Multifluid Eulerian model of an electrospray in a host gas

F. J. Higuera

387 Dynamics of thermal ignition of spray flames in mixing layers

D. Martínez-Ruiz, J. Urzay, A. L. Sánchez, A. Liñán & F. A. Williams

424 Consequences of viscous anisotropy in a deforming, two-phase aggregate. Part 1. Governing equations and linearized analysis

Y. Takei & R. F. Katz

456 Consequences of viscous anisotropy in a deforming, two-phase aggregate. Part 2. Numerical solutions of the full equations

R. F. Katz & Y. Takei

- 486 Bore-generated macrovortices on erodible beds
 M. Brocchini
- 509 Large-eddy simulation of three-dimensional dunes in a steady, unidirectional flow. Part 2. Flow structures M. Omidyeganeh & U. Piomelli
- 535 Non-geostrophic instabilities of an equilibrium baroclinic state

A. B. Pieri, F. S. Godeferd, C. Cambon & A. Salhi

S 567 Experimental evidence of new three-dimensional modes in the wake of a rotating cylinder

A. Radi, M. C. Thompson, A. Rao, K. Hourigan & J. Sheridan



