CrossMark

The new home of
Cambridge Journals

cambridge.org/core

Cambridge Core

CAMBRIDGE
UNIVERSITY PRESS

https://doi.org/10.1017/jfm.2017.445 Published online by Cambridge University Press

Mathematics

Books and Journals from Cambridge University Press

Cambridge is a world leading publisher in pure and applied mathematics, with an extensive programme of high quality books and journals that reaches into every corner of the subject.

Our catalogue reflects not only the breadth of mathematics but also its depth, with titles for undergraduate students, for graduate students, for researchers and for users of mathematics.

We are proud to include world class researchers and influential educators amongst our authors, and also to publish in partnership with leading mathematical societies.

For further details visit:
cambridge.org/core-mathematics

Cambridge Core

CAMBRIDGE UNIVERSITY PRESS

https://doi.org/10.1017/jfm.2017.445 Published online by Cambridge University Press

https://doi.org/10.1017/jfm.2017.445 Published online by Cambridge University Press

https://doi.org/10.1017/jfm.2017.445 Published online by Cambridge University Press

592 Velocity fluctuations generated by the flow through a random array of spheres: a model of bubble-induced agitation
Z. Amoura, C. Besnaci, F. Risso & V. Roig

S 617 Unsteady effects of strong shock-wave/boundary-layer interaction at high Reynolds number
V. Pasquariello, S. Hickel & N. A. Adams

658 New model for acoustic waves propagating through a vortical flow
J. Thomas

675 An active particle in a complex fluid
C. Datt, G. Natale, S. G. Hatzikiriakos & G. J. Elfring

689 The stability of compressible swirling pipe flows with density stratification
N. K. Yadav & A. Samanta

S 716 Stable–streamlined and helical cavities following the impact of Leidenfrost spheres
M. M. Mansoor, I. U. Vakarelski, J. O. Marston, T. T. Truscott & S. T. Thoroddsen

755 On the compressible bidirectional vortex in a cyclonically driven Trkalian flow field
B. A. Maicke, O. M. Cecil & J. Majdalani

787 Study of air-core vortical flow structure induced by a plughole vortex
R. Ahmed & H. Lim

JFM Rapids (online only)

R1 Scaling and modelling of turbulence in variable property channel flows
R. Pecnik & A. Patel

R2 Self-similarity of wall-attached turbulence in boundary layers
W. J. Baars, N. Hutchins & I. Marusic

S R3 Synthetic jet generation by high-frequency cavitation
M. Mohammadzadeh, S. R. Gonzalez-Avila, K. Liu, Q. J. Wang & C.-D. Ohl

R4 Relaxation drag history of shock accelerated microparticles
A. D. Bordoloi, A. A. Martinez & K. Prestridge

R5 A multi-parameter criterion for layer formation in a stratified shear flow using sorted buoyancy coordinates
J. R. Taylor & Q. Zhou

S indicates supplementary data or movies available online.

https://doi.org/10.1017/jfm.2017.445 Published online by Cambridge University Press

823

ISSN 0022-1120

Journal of Fluid Mechanics

25 July 2017

1 Self-similarity of fluid residence time statistics in a turbulent round jet
D. Shin, R. D. Sandberg & E. S. Richardson

26 Conditional sampling of a high Péclet number turbulent plume and the implications for entrainment
H. C. Burridge, D. A. Parker, E. S. Kruger, J. L. Partridge & P. F. Linden

S 57 Geostrophic and chimney regimes in rotating horizontal convection with imposed heat flux
C. A. Vreugdenhil, R. W. Griffiths & B. Gayen

100 Effect of geometry and Reynolds number on the turbulent separated flow behind a bulge in a channel
J.-P. Mollicone, F. Battista, P. Gualtieri & C. M. Casciola

134 Multivariate and conditioned statistics of velocity and wall pressure fluctuations induced by a jet interacting with a flat plate
M. Mancinelli, A. Di Marco & R. Camussi

166 Stability and three-dimensional evolution of a transitional dynamic stall vortex
A.-J. Buchner, D. Honnery & J. Soria

198 Diapycnal mixing in layered stratified plane Couette flow quantified in a tracer-based coordinate
Q. Zhou, J. R. Taylor, C. P. Caulfield & P. F. Linden

230 Optimal sensor placement for variational data assimilation of unsteady flows past a rotationally oscillating cylinder
V. Mons, J.-C. Chassaing & P. Sagaut

S 278 Formation of levees, troughs and elevated channels by avalanches on erodible slopes
A. N. Edwards, S. Viroulet, B. P. Kokelaar & J. M. N. T. Gray

316 Surfing surface gravity waves
N. E. Pizzo

329 Wind farm power fluctuations and spatial sampling of turbulent boundary layers
J. Bossuyt, C. Meneveau & J. Meyers

S 345 Deformation of a compliant wall in a turbulent channel flow
C. Zhang, J. Wang, W. Blake & J. Katz

391 Submesoscale surface fronts and filaments: secondary circulation, buoyancy flux, and frontogenesis
J. C. McWilliams

S 433 Clustering instabilities in sedimenting fluid–solid systems: critical assessment of kinetic-theory-based predictions using direct numerical simulation data
W. D. Fullmer, G. Liu, X. Yin & C. M. Hrenya

S 470 Evaporating pure, binary and ternary droplets: thermal effects and axial symmetry breaking
C. Diddens, H. Tan, P. Lv, M. Versluis, J. G. M. Kuerten, X. Zhang & D. Lohse

498 Universality of the energy-containing structures in wall-bounded turbulence
C. M. de Silva, D. Krug, D. Lohse & I. Marusic

511 Assessment and development of the gas kinetic boundary condition for the Boltzmann equation
L. Wu & H. Struchtrup

538 Shock transformation and hysteresis in underexpanded confined jets
R. Arun Kumar & G. Rajesh

S 562 Feedback loop and upwind-propagating waves in ideally expanded supersonic impinging round jets
C. Bogey & R. Gojon

Contents continued on inside back cover.

https://doi.org/10.1017/jfm.2017.445 Published online by Cambridge University Press

Cambridge Core
For further information about this journal please go to the journal web site at
cambridge.org/flm

FSC www.fsc.org MIX Paper from responsible sources FSC® C007785

CAMBRIDGE UNIVERSITY PRESS