CrossMark

The new home of
Cambridge Journals

cambridge.org/core

Cambridge Core

CAMBRIDGE
UNIVERSITY PRESS

https://doi.org/10.1017/jfm.2018.163 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.2018.163 Published online by Cambridge University Press

555 Thermal rupture of a free liquid sheet
G. Kitavtsev, M. A. Fontelos & J. Eggers

579 Critical regime of gravity currents flowing in non-rectangular channels with density stratification
L. Chiapponi, M. Ungarish, S. Longo, V. Di Federico & F. Addona

613 Inertial focusing of finite-size particles in microchannels
E. S. Asmolov, A. L. Dubov, T. V. Nizkaya, J. Harting & O. I. Vinogradova

JFM Rapids (online only)

R1 Onset conditions for vortex breakdown in supersonic flows
T. Hiejima

S indicates supplementary data or movies available online.

631 Turbulence and secondary motions in square duct flow
S. Pirozzoli, D. Modesti, P. Orlandi & F. Grasso

656 Dynamics of capsules enclosing viscoelastic fluid in simple shear flow
Z. Y. Luo & B. F. Bai

S 688 Horizontal locomotion of a vertically flapping oblate spheroid
J. Deng & C. P. Caulfield

https://doi.org/10.1017/jfm.2018.163 Published online by Cambridge University Press

840 ISSN 0022-1120
Journal of Fluid Mechanics 10 April 2018

1 Anatomy of a diffracting detonation in a circular arc of explosive
J. B. Bdzil

5 Competition between the centrifugal and strato-rotational instabilities in the stratified Taylor–Couette flow
J. Park, P. Billant, J.-J. Baik & J. M. Seo

25 A Kriging-based elliptic extended anisotropic model for the turbulent boundary layer wall pressure spectrum
M. Slama, C. Leblond & P. Sagaut

56 Coupling of high Knudsen number and non-ideal gas effects in microporous media
Z. Wang, M. Wang & S. Chen

74 Three-dimensional doubly diffusive convectons: instability and transition to complex dynamics
C. Beaume, A. Bergeon & E. Knobloch

S 106 Self-similar kinematics among efficient slender swimmers
A. J. Wiens & A. E. Hosoi

131 Thick drops climbing uphill on an oscillating substrate
J. T. Bradshaw & J. Billingham

S 154 Hydrodynamics of flexible fins propelled in tandem, diagonal, triangular and diamond configurations
S. G. Park & H. J. Sung

S 190 Dynamics of drop impact on solid surfaces: evolution of impact force and self-similar spreading
L. Gordillo, T.-P. Sun & X. Cheng

215 The effective diffusivity of ordered and freely evolving bubbly suspensions
A. Loisy, A. Naso & P. D. M. Spelt

238 Optimal control of a separated boundary-layer flow over a bump
P.-Y. Passaggia & U. Ehrenstein

266 Stratified Ekman layers evolving under a finite-time stabilizing buoyancy flux
S. M. I. Gohari & S. Sarkar

291 Dynamic linear response of a shock/turbulent-boundary-layer interaction using constrained perturbations
M. C. Adler & D. V. Gaitonde

342 Optimal transient growth in thin-interface internal solitary waves
P.-Y. Passaggia, K. R. Helfrich & B. L. White

S 379 Controlling rotation and migration of rings in a simple shear flow through geometric modifications
N. S. Borker, A. D. Stroock & D. L. Koch

408 Boundary layer fluctuations in turbulent Rayleigh–Bénard convection
Y. Wang, W. Xu, X. He, H. Yik, X. Wang, J. Schumacher & P. Tong

432 Heat transfer and shear-induced migration in dense non-Brownian suspension flows: modelling and simulation
T. Dbouk

455 Shape and fission instabilities of ferrofluids in non-uniform magnetic fields
T. Vieu & C. Walter

498 Parametric instability and wave turbulence driven by tidal excitation of internal waves
T. Le Reun, B. Favier & M. Le Bars

530 On natural modes in moonpools and gaps in finite depth
B. Molin, X. Zhang, H. Huang & F. Remy

Contents continued on inside back cover.

https://doi.org/10.1017/jfm.2018.163 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