



Access
leading
journals in
your subject

Cambridge Core

Explore today at cambridge.org/core

Cambridge Core



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

T'



CAMBRIDGE
UNIVERSITY PRESS

cotg u

tg u

sin u

cos u



- 624 A numerical study on reaction-induced radial fingering instability
V. Sharma, S. Pramanik, C.-Y. Chen & M. Mishra
- 639 Stratified shear instability in a field of pre-existing turbulence
A. K. Kaminski & W. D. Smyth
- 659 Fully developed and transient concentration profiles of particulate suspensions sheared in a cylindrical Couette cell
M. Sarabian, M. Firouznia, B. Metzger & S. Hormozi
- 672 Thermohaline layering on the microscale
T. Radko
- S 696 The electrostatically forced Faraday instability: theory and experiments
K. Ward, S. Matsumoto & R. Narayanan
- S 732 Elastohydrodynamics of a pre-stretched finite elastic sheet lubricated by a thin viscous film with application to microfluidic soft actuators
E. Boyko, R. Eshel, K. Gommed, A. D. Gat & M. Bercovici
- 753 Rough or wiggly? Membrane topology and morphology for fouling control
B. Ling & I. Battiatto
- 781 Direct numerical simulation of turbulence over systematically varied irregular rough surfaces
Y. Kuwata & Y. Kawaguchi
- 816 Absolute and convective instabilities in electrohydrodynamic flow subjected to a Poiseuille flow: a linear analysis
F. Li, B.-F. Wang, Z.-H. Wan, J. Wu & M. Zhang
- S 845 The instantaneous structure of secondary flows in turbulent boundary layers
C. Vanderwel, A. Stroh, J. Kriegseis, B. Frohnäpfel & B. Ganapathisubramani
- 871 Thrust, drag and wake structure in flapping compliant membrane wings
G. Alon Tzezana & K. S. Breuer
- 889 Is spontaneous generation of coherent baroclinic flows possible?
N. A. Bakas & P. J. Ioannou
- 924 Water entry of an expanding body with and without splash
Y. A. Semenov & G. X. Wu
- 951 Vortex pairing in jets as a global Floquet instability: modal and transient dynamics
L. Shaabani-Ardali, D. Sipp & L. Lesshaft
- 990 Sensitivity and feedback of wind-farm-induced gravity waves
D. Allaerts & J. Meyers
- 1029 Exact coherent states of attached eddies in channel flow
Q. Yang, A. P. Willis & Y. Hwang
- 1060 Corner effects for oblique shock wave/turbulent boundary layer interactions in rectangular channels
X. Xiang & H. Babinsky
- 1084 Universality in statistics of Stokes flow over a no-slip wall with random roughness
V. Parfenyev, S. Belan & V. Lebedev
- 1105 Bubble cloud dynamics in an ultrasound field
K. Maeda & T. Colonius
- S 1135 On the internal flow of a ventilated supercavity
Y. Wu, Y. Liu, S. Shao & J. Hong
- 1166 Analysis of the two-dimensional dynamics of a Mach 1.6 shock wave/transitional boundary layer interaction using a RANS based resolvent approach
N. Bonne, V. Brion, E. Garnier, R. Bur, P. Molton, D. Sipp & L. Jacquin
- 1203 CORRIGENDUM

JFM Rapids (online only)

- R1 Prandtl–Batchelor theorem for flows with quasiperiodic time dependence
H. Arbabi & I. Mezić
- R2 The onset of transient turbulence in minimal plane Couette flow
J. R. T. Lustro, G. Kawahara, L. van Veen, M. Shimizu & H. Kokubo
- S R3 Water entry of spheres with various contact angles
N. B. Speirs, M. M. Mansoor, J. Belden & T. T. Truscott
- R4 Nonlinear aspects of focusing internal waves
N. D. Shmakova & J.-B. Flór
- R5 On the decay of dispersive motions in the outer region of rough-wall boundary layers
J. Meyers, B. Ganapathisubramani & R. B. Cal

S indicates supplementary data or movies available online.

- 1 Dropping slender-body theory into the mud
S. E. Spagnolie
- 5 A rarefied gas flow around a rotating sphere: diverging profiles of gradients of macroscopic quantities
S. Taguchi, K. Saito & S. Takata
- 34 Hydrodynamics of periodic wave energy converter arrays
G. Tokić & D. K. P. Yue
- 75 Drag reduction in turbulent flows along a cylinder by streamwise-travelling waves of circumferential wall velocity
M.-X. Zhao, W.-X. Huang & C.-X. Xu
- 99 Laboratory experiments on the temporal decay of homogeneous anisotropic turbulence
L. B. Esteban, J. S. Shrimpton & B. Ganapathisubramani
- 128 The role of gravity in the prediction of the circular hydraulic jump radius for high-viscosity liquids
Y. Wang & R. E. Khayat
- S 162 A simple system for moist convection: the Rainy–Bénard model
G. K. Vallis, D. J. Parker & S. M. Tobias
- 200 System identification of a low-density jet via its noise-induced dynamics
M. Lee, Y. Zhu, L. K. B. Li & V. Gupta
- 216 Separated rows structure of vortex streets behind triangular objects
I. Kim
- 227 Large eddy simulation of transient upstream/downstream vortex interactions
K. J. Forster, S. Diasinos, G. Doig & T. J. Barber
- S 261 Droplet levitation over a moving wall with a steady air film
E. Sawaguchi, A. Matsuda, K. Hama, M. Saito & Y. Tagawa
- 283 Macroscopic model for unsteady flow in porous media
D. Lasseux, F. J. Valdés-Parada & F. Bellet
- 312 Thermophoresis of a spherical particle: modelling through moment-based, macroscopic transport equations
J. C. Padrino, J. E. Sprittles & D. A. Lockerby
- S 348 Dynamics of heavy and buoyant underwater pendulums
V. Mathai, L. A. W. M. Loeffen, T. T. K. Chan & S. Wildeman
- 364 On the breakup of spiralling liquid jets
Y. Li, G. M. Sisoev & Y. D. Shikmurzaev
- S 385 Shape and rheology of droplets with viscous surface moduli
V. Narsimhan
- S 421 Nozzle external geometry as a boundary condition for the azimuthal mode selection in an impinging underexpanded jet
J. L. Weightman, O. Amili, D. Honnery, D. Edginton-Mitchell & J. Soria
- 449 A Lagrangian probability-density-function model for collisional turbulent fluid–particle flows
A. Innocenti, R. O. Fox, M. V. Salvetti & S. Chibbaro
- 490 Incipient bedforms in a bidirectional wind regime
C. Gadal, C. Narteau, S. Courrech du Pont, O. Rozier & P. Claudin
- 517 Analytical solutions for mass transport in hydrodynamic focusing by considering different diffusivities for sample and sheath flows
A. Sadeghi
- 552 A new model of shoaling and breaking waves: one-dimensional solitary wave on a mild sloping beach
M. Kazakova & G. L. Richard
- 592 Collision and breakup of fractal particle agglomerates in a shear flow
F. E. Dizaji, J. S. Marshall & J. R. Grant

Contents continued on inside back cover.