Cambridge Core

The new home of Cambridge Journals cambridge.org/core

Cambridge **Core**



Physics Books and Journals from Cambridge University Press

Cambridge University Press is a leading publisher of textbooks, handbooks and monographs that span all areas of physics, from condensed matter physics, to theoretical and mathematical physics.

We also publish a key cluster of journals including the Journal of Plasma Physics, Journal of Fluid Mechanics, and High Power Laser Science and Engineering.

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

Cambridge



- 602 Near-surface turbulence and buoyancy induced by heavy rainfallE. L. Harrison & F. Veron
- 631 Two-dimensional stability of finite-amplitude gravity waves on water of finite depth with constant vorticityM. Francius & C. Kharif
- 660 Tilting at wave beams: a new perspective on the St. Andrew's Cross
 T. Kataoka, S. J. Ghaemsaidi,
 N. Holzenberger, T. Peacock & T. R. Akylas
- 681 Transient and limit cycle combustion dynamics analysis of turbulent premixed swirling flames
 P. Palies, M. Ilak & R. Cheng
- 708 Numerical simulation of turbulent channel flow over a viscous hyper-elastic wall
 M. E. Rosti & L. Brandt

JFM Rapids (online only)

- R1 Sharp acceleration of a macroscopic contact line induced by a particle
 L. Mu, D. Kondo, M. Inoue, T. Kaneko,
 H. N. Yoshikawa, F. Zoueshtiagh & I. Ueno
- R2 High-frequency wavepackets in turbulent jets
 K. Sasaki, A. V. G. Cavalieri, P. Jordan,
 O. T. Schmidt, T. Colonius & G. A. Brès

S indicates supplementary data or movies available online.

- 736 On the evolution of the plume function and entrainment in the near-source region of lazy plumes
 G. Marjanovic, G. N. Taub &
 S. Balachandar
- 760 Estimation of turbulent channel flow at $Re_{\tau} = 100$ based on the wall measurement using a simple sequential approach **T. Suzuki & Y. Hasegawa**
- 797 Statistics of turbulence in the energy-containing range of Taylor–Couette compared to canonical wall-bounded flows
 D. Krug, X. I. A. Yang, C. M. de Silva,
 R. Ostilla-Mónico, R. Verzicco, I. Marusic
 & D. Lohse
- 821 CORRIGENDUM

823 CORRIGENDUM

- R3 Heat transfer in rotating Rayleigh–Bénard convection with rough plates
 P. Joshi, H. Rajaei, R. P. J. Kunnen & H. J. H. Clercx
- R4 Turbulent planar wakes under pressure gradient conditionsS. Shamsoddin & F. Porté-Agel

ISSN 0022-1120

830

Journal of Fluid Mechanics

- A statistical mechanical phase transition to turbulence in a model shear flow
 N. Goldenfeld
- 5 Effect of surface contamination on interfacial mass transfer rate J. G. Wissink, H. Herlina, Y. Akar & M. Uhlmann
- 35 The impact of static and dynamic roughness elements on flow separationP. Servini, F. T. Smith & A. P. Rothmayer
- 63 Analysis of the forward and backward in time pair-separation probability density functions for inertial particles in isotropic turbulence
 A. D. Bragg
- 93 Dispersion of solids in fracturing flows of yield stress fluids
 S. Hormozi & I. A. Frigaard
- 138 Diffusion-driven nucleation from surface nuclei in hydrodynamic cavitation
 T. F. Groß & P. F. Pelz
- 165 The effect of inertia on the time period of rotation of an anisotropic particle in simple shear flow
 N. K. Marath & G. Subramanian
- 211 Compressible Rayleigh–Taylor turbulent mixing layer between Newtonian miscible fluids
 S. Gauthier
- 257 An experimental investigation of the laminar horseshoe vortex around an emerging obstacle G. Launay, E. Mignot, N. Riviere & R. Perkins
- 300 Relationship between the heat transfer law and the scalar dissipation function in a turbulent channel flow
 H. Abe & R. A. Antonia

Contents continued on inside back cover.

- 326 Surface shape stability analysis of a magnetic fluid in the field of an electromagnet
 T. I. Becker, V. A. Naletova, V. A. Turkov & K. Zimmermann
- 350 Effective reaction rate on a heterogeneous surfaceA. S. Sangani
- *S* 369 Effect of a surface tension imbalance on a partly submerged cylinderS. D. Janssens, V. Chaurasia & E. Fried
 - 387 Green's functions for Rossby waves R. C. Kloosterziel & L. R. M. Maas
 - 408 Spectral analysis and coherence of aerodynamic lift on rectangular cylinders in turbulent flow
 S. Li & M. Li
 - 439 Unsteady aerodynamics and vortex-sheet formation of a two-dimensional airfoilX. Xia & K. Mohseni
 - 479 Gravity-driven flow in a horizontal annulus M. C. Horsley & A. W. Woods
- 494 Resonance dynamics in compressible cavity flows using time-resolved velocity and surface pressure fields
 J. L. Wagner, S. J. Beresh, K. M. Casper,
 - E. P. DeMauro & S. Arunajatesan
- 528 Transient penetration of a viscoelastic fluid in a narrow capillary channel
 U. R. Sumanasekara, M. N. Azese &
 S. Bhattacharya
- 553 Compressibility regularizes the μ(I)-rheology for dense granular flows
 J. Heyman, R. Delannay, H. Tabuteau & A. Valance
- 569 A numerical study of a variable-density low-speed turbulent mixing layer
 A. Almagro, M. García-Villalba &
 O. Flores

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



MIX Paper from responsible sources FSC® C007785

