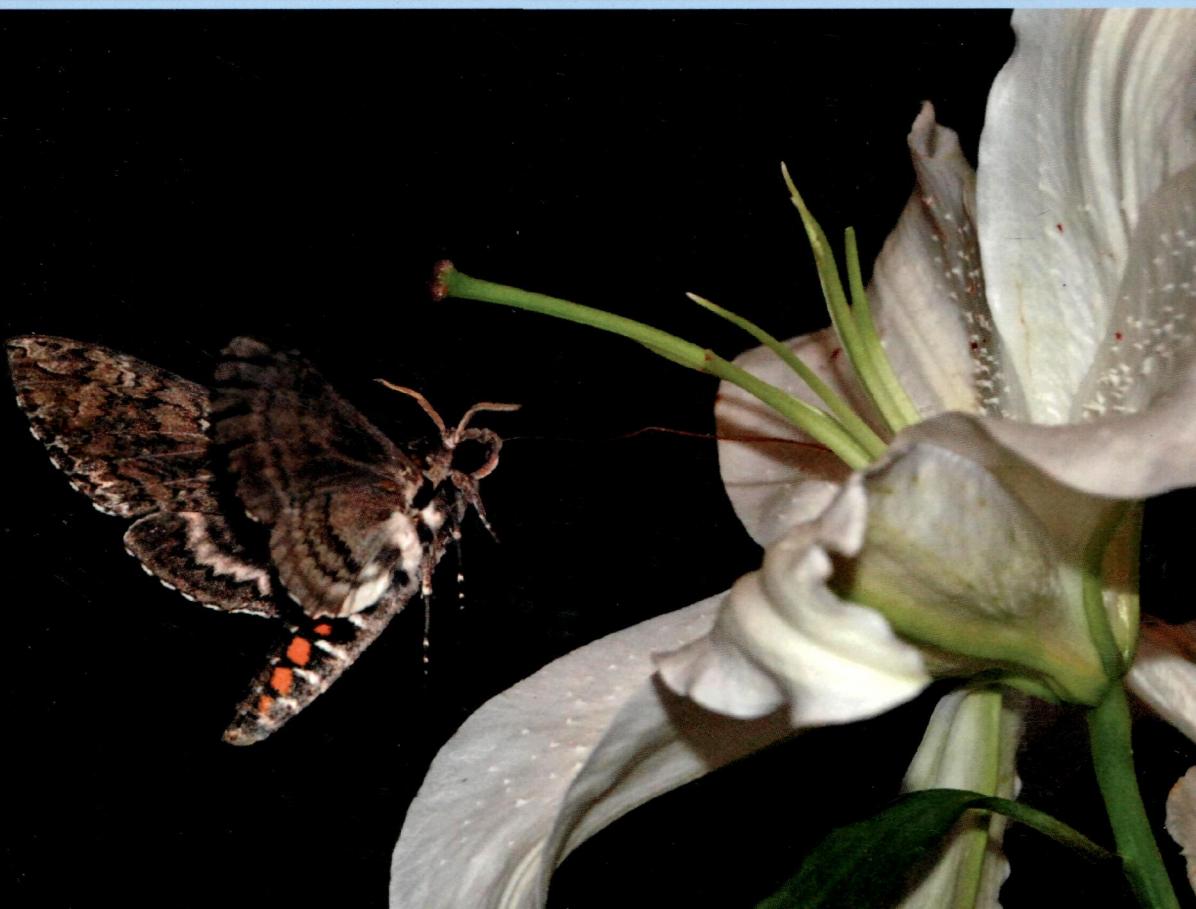


CAMBRIDGE
UNIVERSITY PRESS

25 April 2013

Journal of Fluid Mechanics

VOLUME 721



- 1 Can barotropic tide–eddy interactions excite internal waves?
M.-P. Lelong & E. Kunze
- 28 Stationary ideal flow on a free surface of a given shape
L. Tophøj & T. Bohr
- 46 Study of polygonal water bells: inertia-dominated thin-film flows over microtextured surfaces
E. Dressaire, L. Courbin, A. Delancy, M. Roper & H. A. Stone
- 58 The emergence of localized vortex–wave interaction states in plane Couette flow
K. Deguchi, P. Hall & A. Walton
- 86 Rapid gravitational adjustment of horizontal shear flows
B. L. White & K. R. Helfrich
- 118 A multi-fidelity modelling approach for evaluation and optimization of wing stroke aerodynamics in flapping flight
L. Zheng, T. L. Hedrick & R. Mittal
- 155 Effect of turbulent fluctuations on the drag and lift forces on a towed sphere and its boundary layer
H. Homann, J. Bec & R. Grauer
- 180 Off-plane motion of a prolate capsule in shear flow
C. Dupont, A.-V. Salsac & D. Barthès-Biesel
- 199 Thermal boundary layer structure in turbulent Rayleigh–Bénard convection in a rectangular cell
Q. Zhou & K.-Q. Xia
- 225 Volume displacement effects during bubble entrainment in a travelling vortex ring
A. J. Cihonski, J. R. Finn & S. V. Apte
- 268 Variable density and viscosity, miscible displacements in horizontal Hele-Shaw cells. Part 1. Linear stability analysis
L. Talon, N. Goyal & E. Meiburg
- 295 Variable density and viscosity, miscible displacements in horizontal Hele-Shaw cells. Part 2. Nonlinear simulations
M. O. John, R. M. Oliveira, F. H. C. Heussler & E. Meiburg
- 324 Nonlinear analysis of shock–vortex interaction: Mach stem formation
P. Clavin
- 340 New conservation laws of helically symmetric, plane and rotationally symmetric viscous and inviscid flows
O. Kelbin, A. F. Cheviakov & M. Oberlack
- 367 Ultra-fast escape of a deformable jet-propelled body
G. D. Weymouth & M. S. Triantafyllou
- 386 Edges in models of shear flow
N. Lebovitz & G. Mariotti
- S 403 Transient force generation during impulsive rotation of wall-mounted panels
A. Pierides, A. Elzawawy & Y. Andreopoulos
- 438 Visualization of the Ludford column
O. Andreev, Y. Kolesnikov & A. Thess
- 454 Large-eddy simulation of three-dimensional dunes in a steady, unidirectional flow. Part 1. Turbulence statistics
M. Omidyeganeh & U. Piomelli
- 484 Flame wrinkle destruction processes in harmonically forced, turbulent premixed flames
D.-H. Shin & T. Lieuwen
- S 514 Revealing the state space of turbulent pipe flow by symmetry reduction
A. P. Willis, P. Cvitanović & M. Avila
- 541 An explicit algebraic model for the subgrid-scale passive scalar flux
A. Rasam, G. Brethouwer & A. V. Johansson
- 578 Multi-species turbulent mixing under supercritical-pressure conditions: modelling, direct numerical simulation and analysis revealing species spinodal decomposition
E. Masi, J. Bellan, K. G. Harstad & N. A. Okong'o
- 627 Acceleration in turbulent channel flow: universalities in statistics, subgrid stochastic models and an application
R. Zamansky, I. Vinkovic & M. Gorokhovski

Contents continued on inside back cover.

JFM Rapids (online only)

- R1 Effect of small asymmetries on axisymmetric stenotic flow
M. D. Griffith, T. Leweke, M. C. Thompson & K. Hourigan
- R2 The clustering morphology of freely rising deformable bubbles
Y. Tagawa, I. Roghair, V. N. Prakash, M. van Sint Annaland, H. Kuipers, C. Sun & D. Lohse
- R3 Spontaneous layering in stratified turbulent Taylor–Couette flow
R. L. F. Oglethorpe, C. P. Caulfield & A. W. Woods
- R4 Halting scale and energy equilibration in two-dimensional quasigeostrophic turbulence
R. K. Scott & D. G. Dritschel

S indicates supplementary data or movies available online.