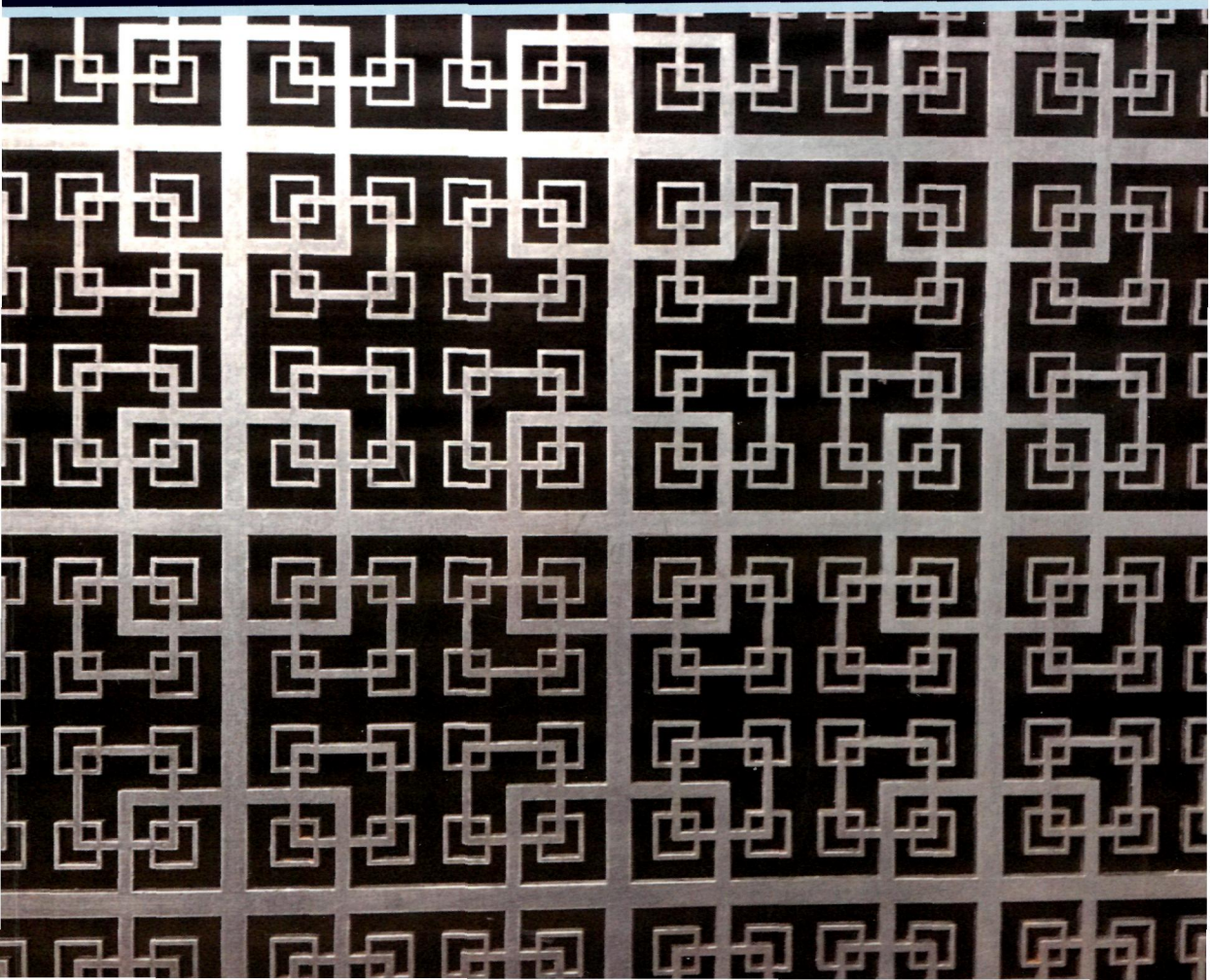


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## JOURNAL OF FLUID MECHANICS, VOLUME 741

Sidewall effects in Rayleigh–Bénard convection  
Richard J. A. M. Stevens and Detlef Lohse and Roberto Verzicco

[Journal of Fluid Mechanics, Volume 741, February 2014, pp 1-27](#)

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Adjoint-based control of loud events in a turbulent jet  
Jeonglae Kim and Daniel J. Bodony and Jonathan B. Freund

[Journal of Fluid Mechanics, Volume 741, February 2014, pp 28-59](#)

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Instantaneous pressure measurements on a spherical grain under threshold flow conditions  
Ahmet O. Celik and P. Diplas and C. L. Dancey

[Journal of Fluid Mechanics, Volume 741, February 2014, pp 60-97](#)

doi: 10.1017/jfm.2013.632, Published online by Cambridge University Press 07 Feb 2014

---

Droplet–turbulence interaction in a confined polydispersed spray: effect of droplet size and flow length scales on spatial droplet–gas velocity correlations

S. Sahu and Y. Hardalupas and A. M. K. P. Taylor

[Journal of Fluid Mechanics, Volume 741, February 2014, pp 98-138](#)

doi: 10.1017/jfm.2013.676, Published online by Cambridge University Press 07 Feb 2014

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The role of surfactants on the mechanism of the long-wave instability in liquid film flows  
George Karapetsas and Vasilis Bontozoglou

[Journal of Fluid Mechanics, Volume 741, February 2014, pp 139-155](#)

doi: 10.1017/jfm.2013.670, Published online by Cambridge University Press 12 Feb 2014

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On the impact of swirl on the growth of coherent structures  
K. Oberleithner and C. O. Paschereit and I. Wygnanski

[Journal of Fluid Mechanics, Volume 741, February 2014, pp 156-199](#)

doi: 10.1017/jfm.2013.669, Published online by Cambridge University Press 07 Feb 2014

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Breakdown of the Bretherton law due to wall slippage  
Yen-Ching Li and Ying-Chih Liao and Ten-Chin Wen and Hsien-Hung Wei

[Journal of Fluid Mechanics, Volume 741, February 2014, pp 200-227](#)

doi: 10.1017/jfm.2013.562, Published online by Cambridge University Press 07 Feb 2014

---

Effects of surface corrugation on the stability of a zero-pressure-gradient boundary layer  
Mochamad Dady Ma'mun and Masahito Asai and Ayumu Inasawa

[Journal of Fluid Mechanics, Volume 741, February 2014, pp 228-251](#)

doi: 10.1017/jfm.2013.653, Published online by Cambridge University Press 12 Feb 2014

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Modelling size segregation of granular materials: the roles of segregation, advection and diffusion  
Yi Fan and Conor P. Schlick and Paul B. Umbanhowar and Julio M. Ottino and Richard M. Lueptow

[Journal of Fluid Mechanics, Volume 741, February 2014, pp 252-279](#)

doi: 10.1017/jfm.2013.680, Published online by Cambridge University Press 21 Feb 2014

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Streak instabilities in boundary layers beneath free-stream turbulence  
M. J. P. Hack and T. A. Zaki

[Journal of Fluid Mechanics, Volume 741, February 2014, pp 280-315](#)

doi: 10.1017/jfm.2013.677, Published online by Cambridge University Press 13 Feb 2014

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Wave turbulence in a rotating channel  
Julian F. Scott

[Journal of Fluid Mechanics, Volume 741, February 2014, pp 316-349](#)

doi: 10.1017/jfm.2013.652, Published online by Cambridge University Press 13 Feb 2014

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## JOURNAL OF FLUID MECHANICS, VOLUME 741

Flow of a falling liquid curtain into a pool  
Harumichi Kyotoh and Kazuki Fujita and Koichi Nakano and Takeaki Tsuda

[Journal of Fluid Mechanics, Volume 741, February 2014, pp 350-376](#)

doi: 10.1017/jfm.2013.672, Published online by Cambridge University Press 17 Feb 2014

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Surface slopes, velocity profiles and fluid pressure in coarse-grained debris flows saturated with water and mud  
R. Kaitna and W. E. Dietrich and L. Hsu

[Journal of Fluid Mechanics, Volume 741, February 2014, pp 377-403](#)

doi: 10.1017/jfm.2013.675, Published online by Cambridge University Press 17 Feb 2014

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Linearized oscillations of a vortex column: the singular eigenfunctions  
Anubhab Roy and Ganesh Subramanian

[Journal of Fluid Mechanics, Volume 741, February 2014, pp 404-460](#)

doi: 10.1017/jfm.2013.666, Published online by Cambridge University Press 20 Feb 2014

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Solutal-convection regimes in a two-dimensional porous medium  
Anja C. Slim

[Journal of Fluid Mechanics, Volume 741, February 2014, pp 461-491](#)

doi: 10.1017/jfm.2013.673, Published online by Cambridge University Press 17 Feb 2014

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The wake of a two-dimensional ship in the low-speed limit: results for multi-cornered hulls  
Philippe H. Trinh and S. Jonathan Chapman

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doi: 10.1017/jfm.2013.589, Published online by Cambridge University Press 17 Feb 2014

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Transport mechanisms of the turbulent energy cascade in upward/downward bubbly flows  
J. Lelouvetel and T. Tanaka and Y. Sato and K. Hishida

[Journal of Fluid Mechanics, Volume 741, February 2014, pp 514-542](#)

doi: 10.1017/jfm.2014.24, Published online by Cambridge University Press 13 Feb 2014

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Absolute instabilities in eccentric Taylor–Couette–Poiseuille flow  
Colin Leclercq and Benoît Pier and Julian F. Scott

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doi: 10.1017/jfm.2013.646, Published online by Cambridge University Press 17 Feb 2014

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Decay of turbulence generated by a square-fractal-element grid  
R. J. Hearst and P. Lavoie

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doi: 10.1017/jfm.2013.684, Published online by Cambridge University Press 17 Feb 2014

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Stability analysis for the onset of thermoacoustic oscillations in a gas-filled looped tube  
H. Hyodo and N. Sugimoto

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doi: 10.1017/jfm.2013.621, Published online by Cambridge University Press 13 Feb 2014

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Instability of an inhomogeneous bacterial suspension subjected to a chemo-attractant gradient  
T. V. Kasyap and Donald L. Koch

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doi: 10.1017/jfm.2013.628, Published online by Cambridge University Press 17 Feb 2014

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Non-Boussinesq gravity currents propagating on different bottom slopes  
Albert Dai

[Journal of Fluid Mechanics, Volume 741, February 2014, pp 658-680](#)

doi: 10.1017/jfm.2014.5, Published online by Cambridge University Press 13 Feb 2014

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## JOURNAL OF FLUID MECHANICS, VOLUME 741

Non-classical gas dynamics of vapour mixtures

Alberto Guardone and Piero Colonna and Emiliano Casati and Enrico Rinaldi

[Journal of Fluid Mechanics, Volume 741, February 2014, pp 681-701](#)

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The quasi-static growth of  $\mathbf{CO}_2$  bubbles

Oscar R. Enriquez and Chao Sun and Detlef Lohse and Andrea Prosperetti and Devaraj van der Meer

[Journal of Fluid Mechanics, Volume 741, February 2014, R1](#)

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Lagrangian cascade in three-dimensional homogeneous and isotropic turbulence

Yongxiang Huang and François G. Schmitt

[Journal of Fluid Mechanics, Volume 741, February 2014, R2](#)

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Note on the triad interactions of homogeneous turbulence

H. K. Moffatt

[Journal of Fluid Mechanics, Volume 741, February 2014, R3](#)

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A reciprocal theorem for Marangoni propulsion

Hassan Masoud and Howard A. Stone

[Journal of Fluid Mechanics, Volume 741, February 2014, R4](#)

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Rotne–Prager–Yamakawa approximation for different-sized particles in application to macromolecular bead models

P. J. Zuk and E. Wajnryb and K. A. Mizerski and P. Szymczak

[Journal of Fluid Mechanics, Volume 741, February 2014, R5](#)

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Interaction of two axisymmetric bodies falling side by side at moderate Reynolds numbers

Patricia Ern and Nicolas Brosse

[Journal of Fluid Mechanics, Volume 741, February 2014, R6](#)

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FLM volume 741 Cover and Front matter

[Journal of Fluid Mechanics, Volume 741, February 2014, pp f1-f4](#)

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FLM volume 741 Cover and Back matter

[Journal of Fluid Mechanics, Volume 741, February 2014, pp b1-b3](#)

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