INDEX

Alam, M.-R., Liu, Y. & Yue, D. K. P. Oblique sub- and super-harmonic Bragg resonance of surface waves by bottom ripples, 437–447

Antuono, M. & Brocchini, M. Solving the nonlinear shallow-water equations in physical space, 207–232

Asmolov, E. S. & Feuillebois, F. Far-field disturbance flow induced by a small non-neutrally buoyant sphere in a linear shear flow, 449–470

Bluemink, J. J., Lohse, D., Prosperetti, A. & van Wijngaarden, L. Drag and lift forces on particles in a rotating flow, 1–31

Boffetta, G., Mazzino, A., Musacchio, S. & Vozella, L. Rayleigh–Taylor instability in a viscoelastic binary fluid, 127–136

Brocchini, M. *See* Antuono & Brocchini

Brocchini, M. *See* Stocchino & Brocchini

Brownell, C. J. *See* Su, Helmer & Brownell

Chen, L.-W., Xu, C.-Y. & Lu, X.-Y. Numerical investigation of the compressible flow past an aerofoil, 97–126

Chung, D. & Pullin, D. I. Direct numerical simulation and large-eddy simulation of stationary buoyancy-driven turbulence, 279–308

Coleman, G. N. *See* Johnstone, Coleman & Spalart

Cossu, C. *See* Hwang & Cossu

Dahl, J. M., Hover, F. S., Triantafyllou, M. S. & Oakley, O. H. Dual resonance in vortex-induced vibrations at subcritical and supercritical Reynolds numbers, 395–424

Eaton, J. K. *See* Tanaka & Eaton

Feuillebois, F. *See* Asmolov & Feuillebois

Gayen, B., Sarkar, S. & Taylor, J. R. Large eddy simulation of a stratified boundary layer under an oscillatory current, 233–266

Helmer, D. B. *See* Su, Helmer & Brownell

Hourigan, K. *See* Stewart, Thompson, Leweke & Hourigan

Hover, F. S. *See* Dahl, Hover, Triantafyllou & Oakley

Huang, Z. *See* Mei, Krotov, Huang & Huhe

Huhe, A. *See* Mei, Krotov, Huang & Huhe

Hwang, Y. & Cossu, C. Amplification of coherent streaks in the turbulent Couette flow: an input–output analysis at low Reynolds number, 333–348

Johnstone, R., Coleman, G. N. & Spalart, P. R. The resilience of the logarithmic law to pressure gradients: evidence from direct numerical simulation, 163–175

Krotov, M. *See* Mei, Krotov, Huang & Huhe

Lanzoni, S. *See* Seminara, Lanzoni, Tambroni & Toffolon

Legendre, D. *See* Riboux, Risso & Legendre

Leontini, J. S. *See* Lo Jacono, Leontini, Thompson & Sheridan

Leweke, T. *See* Stewart, Thompson, Leweke & Hourigan

Liu, Y. *See* Alam, Liu & Yue

Lo Jacono, D., Leontini, J. S., Thompson, M. C. & Sheridan, J. Modification of three-dimensional transition in the wake of a rotationally oscillating cylinder, 349–362

Lohse, D. *See* Bluemink, Lohse, Prosperetti & van Wijngaarden

https://doi.org/10.1017/S0022112009994216 Published online by Cambridge University Press

Lohse, D. *See* Stevens, Verzicco & Lohse

Lu, X.-Y. *See* Chen, Xu & Lu

Mazzino, A. *See* Boffetta, Mazzino, Musacchio & Vozella

Mei, C. C., Krotov, M., Huang, Z. & Huhe, A. Short and long waves over a muddy seabed, 33–58

Musacchio, S. *See* Boffetta, Mazzino, Musacchio & Vozella

Oakley, O. H. *See* Dahl, Hover, Triantafyllou & Oakley

Obrist, D. & Schmid, P. J. Algebraically decaying modes and wave packet pseudo-modes in swept Hiemenz flow, 309–332

Pozrikidis, C. Slip velocity over a perforated or patchy surface, 471–477

Prosperetti, A. *See* Bluemink, Lohse, Prosperetti & van Wijngaarden

Pullin, D. I. *See* Chung & Pullin

Riboux, G., Risso, F. & Legendre, D. Experimental characterization of the agitation generated by bubbles rising at high Reynolds number, 509–539

Rieutord, M. & Valdettaro, L. Viscous dissipation by tidally forced inertial modes in a rotating spherical shell, 363–394

Risso, F. *See* Riboux, Risso & Legendre

Sarkar, S. *See* Gayen, Sarkar & Taylor

Schmid, P. J. *See* Obrist & Schmid

Seminara, G., Lanzoni, S., Tambroni, N. & Toffolon, M. How long are tidal channels?, 479–494

Sheridan, J. *See* Lo Jacono, Leontini, Thompson & Sheridan

Spalart, P. R. *See* Johnstone, Coleman & Spalart

Stevens, R. J. A. M., Verzicco, R. & Lohse, D. Radial boundary layer structure and Nusselt number in Rayleigh–Bénard convection, 495–507

Stewart, B. E., Thompson, M. C., Leweke, T. & Hourigan, K. Numerical and experimental studies of the rolling sphere wake, 137–162

Stocchino, A. & Brocchini, M. Horizontal mixing of quasi-uniform straight compound channel flows, 425–435

Su, L. K., Helmer, D. B. & Brownell, C. J. Quantitative planar imaging of turbulent buoyant jet mixing, 59–95

Tambroni, N. *See* Seminara, Lanzoni, Tambroni & Toffolon

Tanaka, T. & Eaton, J. K. Sub-Kolmogorov resolution partical image velocimetry measurements of particle-laden forced turbulence, 177–206

Taylor, J. R. *See* Gayen, Sarkar & Taylor

Thompson, M. C. *See* Lo Jacono, Leontini, Thompson & Sheridan

Thompson, M. C. *See* Stewart, Thompson, Leweke & Hourigan

Toffolon, M. *See* Seminara, Lanzoni, Tambroni & Toffolon

Triantafyllou, M. S. *See* Dahl, Hover, Triantafyllou & Oakley

Ungarish, M. The propagation of high-Reynolds-number non-Boussinesq gravity currents in axisymmetric geometry, 267–277

Valdettaro, L. *See* Rieutord & Valdettaro

Verzicco, R. *See* Stevens, Verzicco & Lohse

Vozella, L. *See* Boffetta, Mazzino, Musacchio & Vozella

van Wijngaarden, L. *See* Bluemink, Lohse, Prosperetti & van Wijngaarden

Xu, C.-Y. *See* Chen, Xu & Lu

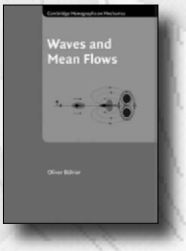
Yue, D. K. P. *See* Alam, Liu & Yue

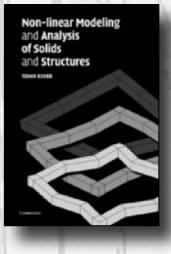
https://doi.org/10.1017/S0022112009994216 Published online by Cambridge University Press

CAMBRIDGE

Fantastic Titles in Fluid Mechanics from Cambridge!

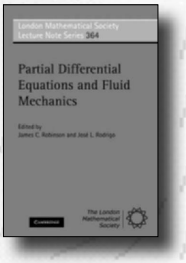
Waves and Mean Flows
Oliver Bühler
Cambridge Monographs on Mechanics
$99.00: Hb: 978-0-521-86636-1: 370 pp.

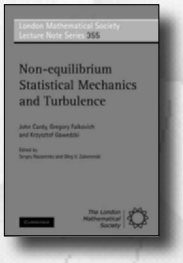




Non-linear Modeling and Analysis of Solids and Structures
Steen Krenk
$80.00: Hb: 978-0-521-83054-6: 360 pp.

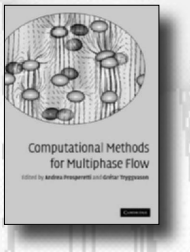
Partial Differential Equations and Fluid Mechanics
Edited by
James C. Robinson
José L. Rodrigo
London Mathematical Society Lecture Note Series
$60.00: Pb: 978-0-521-12512-3: 270 pp.





Non-equilibrium Statistical Mechanics and Turbulence
John Cardy, Gregory Falkovich, Krzysztof Gawedzki
Edited by
Sergey Nazarenko
Oleg V. Zaboronski
London Mathematical Society Lecture Note Series
$45.99: Pb: 978-0-521-71514-0: 172 pp.

Computational Methods for Multiphase Flow
Edited by
Andrea Prosperetti
Grétar Tryggvason
"This book was written by world-leading experts with much first-hand experience, which makes the book even more valuable. Its goal is undoubtedly well fulfilled. I highly recommend this volume to those readers who wish to acquaint themselves with computational methods for multiphase flow."
–Journal of Fluid Mechanics
$58.00: Pb: 978-0-521-13861-1: 488 pp.



Multimedia Fluid Mechanics
Edited by G. M. Homsy

2nd Edition!

Praise for the First edition:
"Homsy and his colleagues have now provided us with a new and powerful teaching aid... This CD is an ambitious project, and, in my view, it has been accomplished with remarkable success... I have no doubt that this CD-ROM should be regarded as a 'set text' for viscous fluid mechanics courses at the undergraduate or starting graduate levels."
–Journal of Fluid Mechanics
$24.99: DVD ROM: 978-0-521-72169-1

Prices subject to change.

www.cambridge.org/us/mathematics
800.872.7423

CAMBRIDGE UNIVERSITY PRESS

https://doi.org/10.1017/S0022112009994216 Published online by Cambridge University Press

https://doi.org/10.1017/S0022112009994216 Published online by Cambridge University Press

643

ISSN 0022-1120

Journal of Fluid Mechanics

25 Jan. 2010

1 Drag and lift forces on particles in a rotating flow
J. J. Bluemink, D. Lohse, A. Prosperetti & L. van Wijngaarden

33 Short and long waves over a muddy seabed
C. C. Mei, M. Krotov, Z. Huang & A. Huhe

59 Quantitative planar imaging of turbulent buoyant jet mixing
L. K. Su, D. B. Helmer & C. J. Brownell

97 Numerical investigation of the compressible flow past an aerofoil
L.-W. Chen, C.-Y. Xu & X.-Y. Lu

127 Rayleigh–Taylor instability in a viscoelastic binary fluid
G. Boffetta, A. Mazzino, S. Musacchio & L. Vozella

137 Numerical and experimental studies of the rolling sphere wake
B. E. Stewart, M. C. Thompson, T. Leweke & K. Hourigan

163 The resilience of the logarithmic law to pressure gradients: evidence from direct numerical simulation
R. Johnstone, G. N. Coleman & P. R. Spalart

177 Sub-Kolmogorov resolution partical image velocimetry measurements of particle-laden forced turbulence
T. Tanaka & J. K. Eaton

207 Solving the nonlinear shallow-water equations in physical space
M. Antuono & M. Brocchini

233 Large eddy simulation of a stratified boundary layer under an oscillatory current
B. Gayen, S. Sarkar & J. R. Taylor

267 The propagation of high-Reynolds-number non-Boussinesq gravity currents in axisymmetric geometry
M. Ungarish

279 Direct numerical simulation and large-eddy simulation of stationary buoyancy-driven turbulence
D. Chung & D. I. Pullin

309 Algebraically decaying modes and wave packet pseudo-modes in swept Hiemenz flow
D. Obrist & P. J. Schmid

333 Amplification of coherent streaks in the turbulent Couette flow: an input–output analysis at low Reynolds number
Y. Hwang & C. Cossu

349 Modification of three-dimensional transition in the wake of a rotationally oscillating cylinder
D. L. Jacono, J. S. Leontini, M. C. Thompson & J. Sheridan

363 Viscous dissipation by tidally forced inertial modes in a rotating spherical shell
M. Rieutord & L. Valdettaro

395 Dual resonance in vortex-induced vibrations at subcritical and supercritical Reynolds numbers
J. M. Dahl, F. S. Hover, M. S. Triantafyllou & O. H. Oakley

425 Horizontal mixing of quasi-uniform straight compound channel flows
A. Stocchino & M. Brocchini

437 Oblique sub- and super-harmonic Bragg resonance of surface waves by bottom ripples
M.-R. Alam, Y. Liu & D. K. P. Yue

449 Far-field disturbance flow induced by a small non-neutrally buoyant sphere in a linear shear flow
E. S. Asmolov & F. Feuillebois

471 Slip velocity over a perforated or patchy surface
C. Pozrikidis

479 How long are tidal channels?
G. Seminara, S. Lanzoni, N. Tambroni & M. Toffolon

495 Radial boundary layer structure and Nusselt number in Rayleigh–Bénard convection
R. J. A. M. Stevens, R. Verzicco & D. Lohse

509 Experimental characterization of the agitation generated by bubbles rising at high Reynolds number
G. Riboux, F. Risso & D. Legendre

540 INDEX TO VOLUME 643

https://doi.org/10.1017/S0022112009994216 Published online by Cambridge University Press

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

FSC
Mixed Sources
Product group from well-managed forests and other controlled sources
Cert no. SA-COC-1527
www.fsc.org
© 1996 Forest Stewardship Council

CAMBRIDGE UNIVERSITY PRESS