

Scientific references that used CPL codes

- [1] Jacopo Banchetti, Paolo Luchini, and Maurizio Quadrio. Turbulent drag reduction over curved walls. *Journal of Fluid Mechanics*, 896, 2020. doi: 10.1017/jfm.2020.338.
- [2] T Bewley, J Pralits, and P Luchini. Minimal-energy control feedback for stabilization of bluff-body wakes based on unstable open-loop eigenvalues and left eigenvectors. In *Proceedings of the Fifth Conference on Bluff Body Wakes and Vortex-Induced Vibrations (BBVIV5)*, pages 129–132, 2007.
- [3] Thomas Bewley, Paolo Luchini, and Jan Pralits. Methods for solution of large optimal control problems that bypass open-loop model reduction. *Meccanica*, 51(12):2997–3014, 2016. doi:10.1007/s11012-016-0547-3.
- [4] P. Blondeaux, J. Pralits, and G. Vittori. Transition to turbulence at the bottom of a solitary wave. *Journal of Fluid Mechanics*, 709:396–407, 2012. doi:10.1017/jfm.2012.341.
- [5] P. Blondeaux, J.O. Pralits, and G. Vittori. Turbulence appearance at the bottom of a solitary wave. 2012. doi:10.9753/icce.v33.waves.17.
- [6] S. Boi, A. Mazzino, and J.O. Pralits. Minimal model for zero-inertia instabilities in shear-dominated non-newtonian flows. *Physical Review E - Statistical, Nonlinear, and Soft Matter Physics*, 88(3), 2013. doi: 10.1103/PhysRevE.88.033007.
- [7] S. Boi, A. Mazzino, and J.O. Pralits. Zero-inertia instabilities in rheopectic fluids. 2015.

- [8] A Bottaro and P Luchini. Görtler vortices: are they amenable to local eigenvalue analysis? *European Journal of Mechanics-B/Fluids*, 18(1):47–65, 1999. doi:10.1016/S0997-7546(99)80005-3.
- [9] Alessandro Bottaro and Paolo Luchini. The linear stability of Görtler vortices revisited. In *Mathematical Modeling and Simulation in Hydrodynamic Stability*, pages 1–14. World Scientific, 1996.
- [10] Martin G Byström, Jan O Pralits, Ardeshir Hanifi, P Luchini, and DS Henningson. Optimal disturbances in three-dimensional boundary-layer flows. In *6th ERCOFTAC SIG 33 workshop, Laminar-Turbulent Transition Mechanisms, Prediction and Control. June 17-20, 2007, Kleinwalsertal, Austria.*, 2007.
- [11] M Carini, JO Pralits, and P Luchini. Feedback control of vortex shedding using a full-order optimal compensator. *Journal of Fluids and Structures*, 53:15–25, 2015. doi:10.1016/j.jfluidstructs.2014.11.011.
- [12] Marco Carini, Jan Oscar Pralits, and Paolo Luchini. Cylinder wake stabilization using a minimal energy compensator. In *ERCOFTAC international symposium on Advances in fluid-structure interaction, Mykonos, Greece, June 17-21, 2013*, pages 335–348, 2016. doi:10.1007/978-3-319-27386-0_21.
- [13] Marco Carini and Maurizio Quadrio. Direct-numerical-simulation-based measurement of the mean impulse response of homogeneous isotropic turbulence. *Physical Review E*, 82(6):066301, 2010. doi:10.1103/PhysRevE.82.066301.
- [14] Patricia Cathalifaud and Paolo Luchini. Algebraic growth in boundary layers: optimal control by blowing and suction at the wall. *European Journal of Mechanics-B/Fluids*, 19(4):469–490, 2000. doi:10.1016/S0997-7546(00)00128-X.
- [15] Patricia Cathalifaud and Paolo Luchini. Optimal control by blowing and suction at the wall of algebraically growing boundary layer disturbances. In *Laminar-Turbulent Transition*, pages 307–312. Springer, Berlin, Heidelberg, 2000.

- [16] Alessandro Chiarini and Maurizio Quadrio. The light/dark cycle of microalgae in a thin-layer photobioreactor. *Journal of Applied Phycology*, pages 1–13, 2020. doi:10.1007/s10811-020-02310-1.
- [17] Andrea Cimarelli, Bettina Frohnepfel, Yosuke Hasegawa, Elisabetta De Angelis, and Maurizio Quadrio. Prediction of turbulence control for arbitrary periodic spanwise wall movement. *Physics of Fluids*, 25(7):075102, 2013. doi:10.1063/1.4813807.
- [18] Vincenzo Citro, Flavio Giannetti, Luca Brandt, and Paolo Luchini. Linear three-dimensional global and asymptotic stability analysis of incompressible open cavity flow. *Journal of Fluid Mechanics*, 768:113–140, 2015. doi:10.1017/jfm.2015.72.
- [19] Vincenzo Citro and Paolo Luchini. Unsteady boundary-layer transition prediction. In *Memorie del XXI Congresso AIMETA 2013, Torino, 17-20 Sep*, pages 1–9, 2013.
- [20] Vincenzo Citro and Paolo Luchini. Multiple-scale approximation of instabilities in unsteady boundary layers. *European Journal of Mechanics-B/Fluids*, 50:1–8, 2015. doi:10.1016/j.euromechflu.2014.10.004.
- [21] Vincenzo Citro, Paolo Luchini, Filippo Giannetti, and Franco Auteri. Efficient stabilization and acceleration of numerical simulation of fluid flows by residual recombination. *Journal of Computational Physics*, 344:234–246, 2017. doi:10.1016/j.jcp.2017.04.081.
- [22] GN Coleman, S Pirozzoli, MAURIZIO Quadrio, and PR Spalart. Direct numerical simulation and theory of a wall-bounded flow with zero skin friction. *Flow, turbulence and combustion*, 99(3-4):553–564, 2017. doi:10.1007/s10494-017-9834-x.
- [23] P De Matteis, RS Donelli, and P Luchini. Application of the ray-tracing theory to the stability analysis of three-dimensional incompressible boundary layers. In *XIII AIDAA Conference*, 1995.
- [24] R Donelli, F Giannetti, and P Luchini. Global stability analysis of open cavity flows in the acoustic limit. In *XX Congresso Associazione Italiana di Meccanica Teorica e Applicata, Bologna 12-15 Sep. 2011*, page 47. Publi&Stampa, Bologna, 2011.

- [25] B. Frohnappfel, Y. Hasegawa, and M. Quadrio. Money versus time: Evaluation of flow control in terms of energy consumption and convenience. *Journal of Fluid Mechanics*, 700:406–418, 2012. doi:10.1017/jfm.2012.139.
- [26] Luca Galantucci, CF Barengi, M Sciacca, Maurizio Quadrio, and P Luchini. Turbulent superfluid profiles in a counterflow channel. *Journal of Low Temperature Physics*, 162(3-4):354–360, 2011. doi:10.1007/s10909-010-0266-4.
- [27] Luca Galantucci and Maurizio Quadrio. Very fine near-wall structures in turbulent scalar mixing. *International journal of heat and fluid flow*, 31(4):499–506, 2010. doi:10.1016/j.ijheatfluidflow.2010.04.002.
- [28] Luca Galantucci, Maurizio Quadrio, and Paolo Luchini. Superfluid vortices in a wall-bounded flow. In *XIX Congresso AIMETA di Meccanica Teorica e Applicata, Ancona 14-17 Sep. 2009*, pages 1–10. Aras Edizioni, 2009.
- [29] Davide Gatti, Alessandro Chiarini, Andrea Cimorelli, and Maurizio Quadrio. Structure function tensor equations in inhomogeneous turbulence. *Journal of Fluid Mechanics*, 898, September 2020. doi:10.1017/jfm.2020.399.
- [30] Davide Gatti, Andrea Cimorelli, Yosuke Hasegawa, Bettina Frohnappfel, and Maurizio Quadrio. Global energy fluxes in turbulent channels with flow control. *Journal of Fluid Mechanics*, 857:345–373, 2018. doi:10.1017/jfm.2020.399.
- [31] Davide Gatti and Maurizio Quadrio. Performance losses of drag-reducing spanwise forcing at moderate values of the Reynolds number. *Physics of Fluids*, 25(12):125109, 2013. doi:10.1017/jfm.2016.485.
- [32] Davide Gatti and Maurizio Quadrio. Reynolds-number dependence of turbulent skin-friction drag reduction induced by spanwise forcing. *Journal of Fluid Mechanics*, 802:553–582, 2016. doi:10.1017/jfm.2016.485.
- [33] F Giannetti and P Luchini. Receptivity of the circular cylinder’s first instability. In *Proc. 5th Eur. Fluid Mech. Conf., Toulouse*, 2003.

- [34] Flavio Giannetti, Simone Camarri, and Paolo Luchini. Structural sensitivity of the secondary instability in the wake of a circular cylinder. *Journal of Fluid Mechanics*, 651:319–337, 2010. doi:10.1017/S0022112009993946.
- [35] Flavio Giannetti, Vincenzo Citro, Luca Brandt, and Paolo Luchini. Three-dimensional instability in open cavity flows. In *XXI Congresso dell’Associazione Italiana di Meccanica Teorica ed Applicata (AIMETA)*, pages 1–10, 2013.
- [36] Flavio Giannetti and Paolo Luchini. Leading-edge receptivity by adjoint methods. *Journal of Fluid Mechanics*, 547:21, 2006. doi:10.1017/S002211200500649X.
- [37] Flavio Giannetti and Paolo Luchini. Structural sensitivity of the first instability of the cylinder wake. *Journal of Fluid Mechanics*, 581(1):167–197, 2007. doi:10.1017/S0022112007005654.
- [38] Flavio Giannetti, Paolo Luchini, and Luca Marino. Linear stability analysis of three-dimensional lid-driven cavity flow. In *Atti del XIX Congresso AIMETA di Meccanica Teorica e Applicata*, pages 14–17. Aras Edizioni Ancona, Italy, 2009.
- [39] Flavio Giannetti, Paolo Luchini, and Luca Marino. Characterization of the three-dimensional instability in a lid-driven cavity by an adjoint based analysis. In *Seventh IUTAM Symposium on Laminar-Turbulent Transition*, pages 165–170. Springer, Dordrecht, 2010. doi:10.1007/978-90-481-3723-7-25.
- [40] Flavio Giannetti, Paolo Luchini, and Luca Marino. Stability and sensitivity analysis of non-newtonian flow through an axisymmetric expansion. *J Physics: Conference Series*, 318(3):032015, 2011. doi:10.1088/1742-6596/318/3/032015.
- [41] Benoît-Joseph Gréa, Paolo Luchini, and Alessandro Bottaro. Ray theory of flow instability and the formation of caustics in boundary layers. Technical report, IMFT Internal Report, 2005.
- [42] Y. Hasegawa, M. Quadrio, and B. Frohnapfel. Numerical simulation of turbulent duct flows at constant power input. *Journal of Fluid Mechanics*, 750:191–209, 2014. doi:10.1017/jfm.2014.269.

- [43] K. Isakova, J.O. Pralits, R. Repetto, and M.R. Romano. Mechanical models of the dynamics of vitreous substitutes. *BioMed Research International*, 2014, 2014. doi:10.1155/2014/672926.
- [44] K. Isakova, J.O. Pralits, R. Repetto, and M.R. Romano. A model for the linear stability of the interface between aqueous humor and vitreous substitutes after vitreoretinal surgery. *Physics of Fluids*, 26(12), 2014. doi:10.1063/1.4902163.
- [45] P Luchini. Computation of three-dimensional Stokes flow over complicated surfaces (3D riblets) using a boundary-independent grid and local corrections. In *10th European Drag Reduction Meeting, Berlin.*, 1997.
- [46] P Luchini. Acoustic streaming and lower-than-laminar drag in controlled channel flow. In *Progress in Industrial Mathematics at ECMI 2006*, pages 169–177. Springer, Berlin, Heidelberg, 2008. doi:10.1007/978-3-540-71992-2_12.
- [47] P Luchini. Phase-locked linear response and the optimal feedback control of near-wall turbulence. *Mathematical Physics Models and Engineering Sciences, Liguori Editore, Naples*, 2008.
- [48] P Luchini. The relevance of longitudinal and transverse protrusion heights for drag reduction by a superhydrophobic surface. In *European Drag Reduction and Flow Control Meeting 2015*, 2015.
- [49] P Luchini, T Bewley, and Maurizio Quadrio. Wiener filters in active-feedback drag reduction of turbulent channel flow. In *6th EUROMECH Fluid Mechanics Conference (EFMC6)*, 2006.
- [50] P Luchini, F Giannetti, and J Pralits. Structural sensitivity of the finite-amplitude vortex shedding behind a circular cylinder. In *IUTAM Symposium on Unsteady Separated Flows and their Control*, pages 151–160. Springer, Dordrecht, 2009. doi:10.1007/978-1-4020-9898-7_12.
- [51] P Luchini, F Giannetti, and JO Pralits. Optimal control of a thin-airfoil wake using a Riccati-less approach. In *Programme and Proceedings of 8th Euromech Fluid Mechanics Conference*, pages 13–16, 2010.

- [52] P Luchini and M Quadrio. A 4-th order accurate, parallel numerical method for the direct numerical simulation of turbulence in rectangular and cylindrical geometries. In *XV Congresso Nazionale dell'Associazione Italiana di Meccanica Teorica e Applicata (AIMETA)*, pages 1–15, 2001.
- [53] P Luchini and Maurizio Quadrio. Direct numerical simulation of turbulent flow in an annular pipe. In *Minisimposio su “Transizione e Turbolenza” del V Congresso Nazionale della SIMAI*, pages 626–629, 2000.
- [54] P Luchini and Maurizio Quadrio. Convection velocity in turbulent wall flows. In *XVI Congresso Nazionale AIDAA*, pages 1–10, 2001.
- [55] P Luchini and R Tognaccini. Comparison of viscous and inviscid numerical simulations of the start-up vortex issuing from a semi-infinite flat plate. In *ESAIM: Proceedings*, volume 7, pages 247–257. EDP Sciences, 1999.
- [56] Paolo Luchini. End-correction integration formulae with optimized terminal sampling points. *Computer physics communications*, 83(2-3):236–244, 1994. doi:10.1016/0010-4655(94)90051-5.
- [57] Paolo Luchini. Fourier analysis of numerical integration formulae. *Computer physics communications*, 83(2-3):227–235, 1994. doi:10.1016/0010-4655(94)90050-7.
- [58] Paolo Luchini. Reynolds-number-independent instability of the boundary layer over a flat surface. *Journal of Fluid Mechanics*, 327:101–115, 1996. doi:10.1017/S0022112096008476.
- [59] Paolo Luchini. Reynolds-number-independent instability of the boundary layer over a flat surface: optimal perturbations. *Journal of Fluid Mechanics*, 404:289–309, 2000. doi:10.1017/S0022112099007259.
- [60] Paolo Luchini. Receptivity to molecular agitation in boundary-layer transition. *Bull. Am. Phys. Soc.*, 61:HD–005, 2008.
- [61] Paolo Luchini. The role of microscopic fluctuations in transition prediction. *arXiv:0804.2067*, 2008. <http://arXiv.org/abs/0804.2067>.
- [62] Paolo Luchini. A thermodynamic lower bound on transition-triggering disturbances. In *Seventh IUTAM Symposium on Laminar-Turbulent Transition*, pages 11–18. Springer, Dordrecht, 2010. doi:10.1007/978-90-481-3723-7-2.

- [63] Paolo Luchini. Linearized boundary conditions at a rough surface. *Bulletin of the American Physical Society*, 57, 2012.
- [64] Paolo Luchini. Linearized no-slip boundary conditions at a rough surface. *Journal of fluid mechanics*, 737:349–367, 2013. doi:10.1017/jfm.2013.574.
- [65] Paolo Luchini. Receptivity to thermal noise in real airfoil configurations. *Bull. Am. Phys. Soc.*, pages A21–003, 2014.
- [66] Paolo Luchini. Contradictions in the large-wavelength approximation of turbulent flow past a wavy bottom. In *Progress in Turbulence VI*, pages 155–159. Springer, Cham, 2016. doi:10.1007/978-3-319-29130-7_28.
- [67] Paolo Luchini. Immersed-boundary simulations of turbulent flow past a sinusoidally undulated river bottom. *European Journal of Mechanics-B/Fluids*, 55:340–347, 2016. doi:10.1016/j.euromechflu.2015.08.007.
- [68] Paolo Luchini. Surprising behaviour in the large-wavelength approximation of turbulent flow past a wavy bottom. In *International Symposium on Stratified Flows*, volume 1, 2016.
- [69] Paolo Luchini. Addendum to “Immersed-boundary simulations of turbulent flow past a sinusoidally undulated river bottom”[Eur. J. Mech. B Fluids 55 (2016) 340–347]. *European Journal of Mechanics-B/Fluids*, 62:57–58, 2017. doi:10.1016/j.euromechflu.2016.11.013.
- [70] Paolo Luchini. Receptivity to thermal noise of the boundary layer over a swept wing. *AIAA Journal*, 55(1):121–130, 2017. doi:10.2514/1.J054891.
- [71] Paolo Luchini. Surprising behaviour and singularity in the Saint-Venant approximation for a fluid. *Istituto Lombardo-Accademia di Scienze e Lettere-Incontri di Studio*, 2018.
- [72] Paolo Luchini and Thomas Bewley. Methods for the solution of very large flow-control problems that bypass open-loop model reduction. *Bull. Am. Phys. Soc.*, 63:AJ–003, 2010.

- [73] Paolo Luchini and Alessandro Bottaro. A time-reversed approach to the study of Görtler instabilities. In *Advances in Turbulence VI*, pages 369–370. Springer, Dordrecht, 1996.
- [74] Paolo Luchini and Alessandro Bottaro. Görtler vortices: a backward-in-time approach to the receptivity problem. *Journal of Fluid Mechanics*, 363:1–23, 1998. doi:10.1017/S0022112098008970.
- [75] Paolo Luchini and Alessandro Bottaro. Linear stability and receptivity analyses of the Stokes layer produced by an impulsively started plate. *Physics of Fluids*, 13(6):1668–1678, 2001. doi:10.1063/1.1369605.
- [76] Paolo Luchini and Alessandro Bottaro. Adjoint equations in stability analysis. *Annual Review of Fluid Mechanics*, 46:493–517, 2014. doi:10.1146/annurev-fluid-010313-141253.
- [77] Paolo Luchini and Alessandro Bottaro. Direct numerical simulation of flow past superhydrophobic surfaces. *Bull. Am. Phys. Soc.*, pages E11–004, 2014.
- [78] Paolo Luchini, Alessandro Bottaro, and Simone Zuccher. Optimal perturbations and control of nonlinear boundary layer. *Bull. Am. Phys. Soc.*, 54:JN–007, 2001.
- [79] Paolo Luchini and François Charru. The phase lead of shear stress in shallow-water flow over a perturbed bottom. *Bull. Am. Phys. Soc.*, 62:GS–005, 2009.
- [80] Paolo Luchini and François Charru. A fresh look at an old problem: perturbed flow over uneven terrain. *Bull. Am. Phys. Soc.*, pages G18–001, 2019.
- [81] Paolo Luchini and François Charru. Acoustic streaming past a vibrating wall. *Physics of Fluids*, 17(12):122106, 2005. doi:10.1063/1.2149314.
- [82] Paolo Luchini and François Charru. The phase lead of shear stress in shallow-water flow over a perturbed bottom. *Journal of fluid mechanics*, 665:516, 2010. doi:10.1017/S0022112010004313.

- [83] Paolo Luchini and François Charru. Quasilaminar regime in the linear response of a turbulent flow to wall waviness. *Physical Review Fluids*, 2(1):012601, 2017. doi:10.1103/PhysRevFluids.2.012601.
- [84] Paolo Luchini and François Charru. On the large difference between Benjamin’s and Hanratty’s formulations of perturbed flow over uneven terrain. *Journal of Fluid Mechanics*, 871:534–561, 2019. doi:10.1017/jfm.2019.312.
- [85] Paolo Luchini and Flavio Giannetti. Error sensitivity to refinement: a criterion for optimal grid adaptation. In *GIMC-GMA 2014 - XX Convegno Nazionale di Meccanica Computazionale VII - Riunione del Gruppo Materiali AIMETA*, pages 3–4. Università degli studi di Cassino e del Lazio Meridionale, 2014.
- [86] Paolo Luchini, Flavio Giannetti, and Vincenzo Citro. Short-wave analysis of 3D and 2D instabilities in a driven cavity. *Bull. Am. Phys. Soc.*, pages L10–007, 2013.
- [87] Paolo Luchini, Flavio Giannetti, and Vincenzo Citro. Short-wave analysis of instabilities in open and closed cavities. In *Euromech Colloquium 547 - Trends in open shear flow instability*, page 31. LadHyX, École polytechnique, 2013.
- [88] Paolo Luchini, Flavio Giannetti, and Vincenzo Citro. Error sensitivity to refinement: a criterion for optimal grid adaptation. *Theoretical and Computational Fluid Dynamics*, 31(5-6):595–605, 2017. doi:10.1007/s00162-016-0413-x.
- [89] Paolo Luchini, Flavio Giannetti, and Jan Pralits. Structural sensitivity of the finite-amplitude vortex shedding behind a circular cylinder. *Bull. Am. Phys. Soc.*, 60:BG–006, 2007.
- [90] Paolo Luchini, Flavio Giannetti, and Jan Pralits. Structural sensitivity of linear and nonlinear global modes. In *5th AIAA Theoretical Fluid Mechanics Conference*, page 4227, 2008. doi:10.2514/6.2008-4227.
- [91] Paolo Luchini and Amilcare Pozzi. Stabilità del flusso potenziale bidimensionale in prossimità del bordo di una superficie libera. In *AIMETA2005: Atti del XVI Congresso AIMETA di Meccanica Teorica e Applicata, Firenze 11-15 Sep. 2005*, pages 1–11. Firenze University Press, 2006.

- [92] Paolo Luchini and Maurizio Quadrio. Direct simulation of turbulent flow in a pipe with annular cross-section. In *4th EUROMECH Fluid Mechanics Conference*, pages 33–33, 2000.
- [93] Paolo Luchini and Maurizio Quadrio. Adjoint DNS of turbulent channel flow. In *ASME 2002 Joint US-European Fluids Engineering Division Conference*, pages 1381–1385. American Society of Mechanical Engineers Digital Collection, 2002. doi:10.1115/FEDSM2002-31048.
- [94] Paolo Luchini and Maurizio Quadrio. A low-cost parallel implementation of direct numerical simulation of wall turbulence. *Journal of Computational Physics*, 211(2):551–571, 2006. doi:10.1016/j.jcp.2005.06.003.
- [95] Paolo Luchini and Maurizio Quadrio. A model for fluctuations of the spatial mean in a turbulent channel flow. In *European Drag Reduction and Flow Control Meeting, EDRFCM 2019*, 2019.
- [96] Paolo Luchini, Maurizio Quadrio, and Simone Zuccher. The phase-locked mean impulse response of a turbulent channel flow. *Physics of Fluids*, 18(12):121702, 2006. doi:10.1063/1.2409729.
- [97] Paolo Luchini and Serena Russo. A comparison between eddy-viscosity models and direct numerical simulation: the response of turbulent flow to a volume force. *Bulletin of the American Physical Society*, 56(18):41–41, 2011.
- [98] Paolo Luchini and Serena Russo. A comparison between eddy-viscosity models and direct numerical simulation: the response of turbulent flow to volume forcing. In *XX Congresso AIMETA di Meccanica Teorica e Applicata, Bologna 12-15 Sep. 2011*, pages 1–9, 2011.
- [99] Paolo Luchini and Serena Russo. A fast algorithm for the estimation of statistical error in DNS (or experimental) time averages. *Bull. Am. Phys. Soc.*, pages R5–007, 2015.
- [100] Paolo Luchini and Renato Tognaccini. Direction-adaptive nonreflecting boundary conditions. *Journal of Computational Physics*, 128(1):121–133, 1996. doi:10.1006/jcph.1996.0199.

- [101] Paolo Luchini and Renato Tognaccini. The start-up vortex issuing from a semi-infinite flat plate. *Journal of Fluid Mechanics*, 455:175–193, 2002. doi:10.1017/S0022112001007340.
- [102] Paolo Luchini and Renato Tognaccini. Viscous and inviscid simulations of the start-up vortex. *Journal of Fluid Mechanics*, 813:53–69, 2017. doi:10.1017/jfm.2016.867.
- [103] L Marino and P Luchini. Adjoint analysis of the flow over a forward-facing step. *Theoretical and Computational Fluid Dynamics*, 23(1):37–54, 2009. doi:10.1007/s00162-008-0090-5.
- [104] F Martinelli, M Quadrio, and P Luchini. Reynolds-number dependence of the feedback control of turbulent channel flow. In *XIX Congresso Nazionale AIDAA, Forli 17-21 Sep 2007*, pages 1–11, 2007.
- [105] F Martinelli, M Quadrio, and P Luchini. Turbulent drag reduction by feedback: a Wiener-filtering approach. In *Advances in Turbulence XII: Proceedings of the 12th EUROMECH European Turbulence Conference, September 7-10, 2009, Marburg, Germany*, pages 241–246. Springer, 2009. doi:10.1007/978-3-642-03085-7-59.
- [106] F Martinelli, M Quadrio, and P Luchini. Wiener-hopf design of feedback compensators for drag reduction in turbulent channels. In *XX Congresso Nazionale AIDAA - Milano, 2009*, 2009.
- [107] Fulvio Martinelli, Maurizio Quadrio, and Paolo Luchini. Active control and drag reduction in turbulent wall flows. *Convegno Calcolo ad Alte Prestazioni. Milano*, 2007.
- [108] D. Pirrò and M. Quadrio. Direct numerical simulation of turbulent Taylor–Couette flow. *Eur. J. Mech. B/Fluids*, doi:10.1016/j.euromechflu.2007.10.005, 2007. doi:10.1016/j.euromechflu.2007.10.005.
- [109] Jan Pralits and Paolo Luchini. Leaky waves in boundary layer flow. In *APS Division of Fluid Dynamics Meeting Abstracts*, volume 1, pages BAPS–2005, 2005.

- [110] Jan O Pralits and Paolo Luchini. Leaky waves in spatial stability analysis. In *XVII Congresso AIMETA di Meccanica Teorica e Applicata*, pages 244–248. Firenze University Press, 2005.
- [111] Jan Oscar Pralits, Flavio Giannetti, and Paolo Luchini. A global stability analysis of a thin-airfoil wake. In *Atti del XIX Congresso AIMETA di Meccanica Teorica e Applicata Ancona (An), Italia 14-17 Settembre 2009*, pages 734–744. FANO ARAS EDIZIONI, 2009.
- [112] Jan Oscar Pralits and Paolo Luchini. Riccati-less optimal control of bluff-body wakes. In *Seventh IUTAM Symposium on Laminar-Turbulent Transition*, pages 325–330. Springer, Dordrecht, 2010. doi:10.1007/978-90-481-3723-7-52.
- [113] J.O. Pralits, E. Alinovi, and A. Bottaro. Stability of the flow in a plane microchannel with one or two superhydrophobic walls. *Physical Review Fluids*, 2(1), 2017. doi:10.1103/PhysRevFluids.2.013901.
- [114] JO Pralits, TR Bewley, and P Luchini. Feedback stabilization of the wake behind a steady cylinder. In *7th ERCOFTAC SIG 33-FLUBIO WORKSHOP on Open Issues in Transition and Flow Control*, 2008.
- [115] J.O. Pralits, L. Brandt, and F. Giannetti. Instability and sensitivity of the flow around a rotating circular cylinder. *Journal of Fluid Mechanics*, 650:513–536, 2010. doi:10.1017/S0022112009993764.
- [116] J.O. Pralits, F. Giannetti, and L. Brandt. Three-dimensional instability of the flow around a rotating circular cylinder. *Journal of Fluid Mechanics*, 730:5–18, 2013. doi:10.1017/jfm.2013.334.
- [117] M. Quadrio, B. Frohnapfel, and Y. Hasegawa. Does the choice of the forcing term affect flow statistics in DNS of turbulent channel flow? *Eur. J. Mech. B / Fluids*, 55:286–293, 2016. doi:10.1016/j.euromechflu.2015.09.005.
- [118] M. Quadrio and P. Ricco. Initial response of a turbulent channel flow to spanwise oscillation of the walls. *Journal of Turbulence*, 4(7), 2003. doi:10.1088/1468-5248/4/1/007.

- [119] M. Quadrio and P. Ricco. Critical assessment of turbulent drag reduction through spanwise wall oscillation. *Journal of Fluid Mechanics*, 521:251–271, 2004. doi:10.1017/S0022112004001855.
- [120] M. Quadrio and P. Ricco. The laminar generalized Stokes layer and turbulent drag reduction. *Journal of Fluid Mechanics*, 667:135–157, 2011. doi:10.1017/S0022112010004398.
- [121] M. Quadrio, P. Ricco, and C. Viotti. Streamwise-traveling waves of spanwise wall velocity for turbulent drag reduction. *Journal of Fluid Mechanics*, 627:161–178, 2009. doi:10.1017/S0022112009006077.
- [122] Maurizio Quadrio, J Floryan, and P Luchini. Control of turbulent channel flow using distributed suction. In *5th EUROMECH Fluid Mechanics Conference*, 2003.
- [123] Maurizio Quadrio, JM Floryan, and P Luchini. Effect of streamwise-periodic wall transpiration on turbulent friction drag. *Journal of Fluid Mechanics*, 576(004):425–444, 2007. doi:10.1017/S0022112007004727.
- [124] Maurizio Quadrio, JM Floryan, and Paolo Luchini. Modification of turbulent flow using distributed suction. In *50th Annual meeting of the Canadian Aeronautics and Space Institute*, pages 1–10, 2003.
- [125] Maurizio Quadrio, JM Floryan, and Paolo Luchini. Modification of turbulent flow using distributed transpiration. *Canadian Aeronautics and Space Journal*, 51(2):61–69, 2005. doi:10.5589/q05-008.
- [126] Maurizio Quadrio and Paolo Luchini. Direct numerical simulation of the turbulent flow in a pipe with annular cross section. *European Journal of Mechanics-B/Fluids*, 21(4):413–427, 2002. doi:10.1016/S0997-7546(02)01192-5.
- [127] Maurizio Quadrio and Paolo Luchini. The linear response of a turbulent channel flow. In *9th Euromech European Turbulence Conference (EETC9)*, pages 715–718. CIMNE, 2002.
- [128] Maurizio Quadrio and Paolo Luchini. Integral space–time scales in turbulent wall flows. *Physics of fluids*, 15(8):2219–2227, 2003. doi:10.1063/1.1586273.

- [129] Maurizio Quadrio and Paolo Luchini. The numerical solution of the incompressible Navier–Stokes equations on a low cost, dedicated parallel computer. *Preprint*, 2004.
- [130] Maurizio Quadrio, Paolo Luchini, and JM Floryan. A parallel algorithm for the direct numerical simulation of turbulent channel flow. In *Proc. of the XI Conf. of the CFD Society of Canada*, pages 28–30, 2003.
- [131] Maurizio Quadrio, Claudio Viotti, and Paolo Luchini. Skin-friction drag reduction via steady streamwise oscillations of spanwise velocity. In *Advances in Turbulence XI*, pages 659–661. Springer, Berlin, Heidelberg, 2007. doi:10.1007/978-3-540-72604-3_210.
- [132] P. Ricco, C. Ottonelli, Y. Hasegawa, and M. Quadrio. Changes in turbulent dissipation in a channel flow with oscillating walls. *Journal of Fluid Mechanics*, 700:77–104, 2012. doi:10.1017/jfm.2012.97.
- [133] P. Ricco and M. Quadrio. Wall-oscillation conditions for drag reduction in turbulent channel flow. *International Journal of Heat and Fluid Flow*, 29:601–612, 2008. doi:10.1016/j.ijheatfluidflow.2007.12.005.
- [134] Marco E Rosti, Luca Cortelezzi, and Maurizio Quadrio. Direct numerical simulation of turbulent channel flow over porous walls. *J Fluid Mech*, 2015. doi:doi:10.1017/jfm.2015.566.
- [135] S Russo and P Luchini. The linear response of turbulent flow to a volume force: comparison between eddy-viscosity model and DNS. *Journal of Fluid Mechanics*, 790:104–127, 2016. doi:10.1017/jfm.2016.4.
- [136] Serena Russo and Paolo Luchini. The linear response of turbulent flow to an undulated wall. In *XXI Congresso dell’Associazione Italiana di Meccanica Teorica ed Applicata (AIMETA)*, 2013.
- [137] Serena Russo and Paolo Luchini. A fast algorithm for the estimation of statistical error in DNS (or experimental) time averages. *Journal of Computational Physics*, 347:328–340, 2017. doi:10.1016/j.jcp.2017.07.005.
- [138] Claudio Viotti, Maurizio Quadrio, and Paolo Luchini. Streamwise oscillation of spanwise velocity at the wall of a channel for turbulent drag

- reduction. *Physics of fluids*, 21(11):115109, 2009. doi:10.1063/1.3266945.
- [139] Simone Zuccher, Alessandro Bottaro, and Paolo Luchini. Algebraic growth in a Blasius boundary layer: Nonlinear optimal disturbances. *European Journal of Mechanics-B/Fluids*, 25(1):1–17, 2006. doi:10.1016/j.euromechflu.2005.07.001.
 - [140] Simone Zuccher and Paolo Luchini. Time-dependent optimal perturbations for the algebraic instability in the nonlinear regime. In *Fluids Engineering Division Summer Meeting*, volume 36150, pages 1387–1393, 2002. doi:10.1115/FEDSM2002-31049.
 - [141] Simone Zuccher and Paolo Luchini. Boundary-layer receptivity to external disturbances using multiple scales. *Meccanica*, 49(2):441–467, 2014. doi:10.1007/s11012-013-9804-x.
 - [142] Simone Zuccher, Paolo Luchini, and Alessandro Bottaro. Algebraic growth in a Blasius boundary layer: optimal and robust control by mean suction in the nonlinear regime. *Journal of Fluid Mechanics*, 513:135, 2004. doi:10.1017/S0022112004000011.