

List of Publications Philipp Schlatter

October 16, 2013

1 Articles in Refereed Journals

- [1] T. Khapko, Y. Duguet, T. Kreilos, P. Schlatter, B. Eckhardt, and D. S. Henningson. Complexity of localised coherent structures in a boundary-layer flow. *Eur. Phys. J.*, 2013. Accepted.
- [2] G. Sardina, F. Picano, P. Schlatter, L. Brandt, C. M. Casciola, and D. S. Henningson. Statistics of particle accumulation in spatially developing turbulent boundary layers. *Flow Turbulence Combust.*, 2013. Accepted.
- [3] S. Rahgozar, Y. Maciel, and P. Schlatter. Spatial resolution analysis of planar PIV measurements to characterize vortices in turbulent flows. *J. Turbulence*, 2013. Accepted.
- [4] R. Vinuesa, P. H. Rozier, P. Schlatter, and H. M. Nagib. Renaissance in turbulent boundary layers, and impact on modeling wall-bounded turbulence. *AIAA J.*, 2013. Accepted.
- [5] R. Örlü and P. Schlatter. Comparison of experiments and simulation for zero-pressure gradient turbulent boundary layers at moderate Reynolds numbers. *Exp. Fluids*, 54(6):1–21, 2013.
- [6] J. Malm, P. Schlatter, P. F. Fischer, and D. S. Henningson. Stabilization of the spectral element method in convection dominated flows by recovery of skew-symmetry. *J. Sci. Comput.*, 57:254–277, 2013.
- [7] A. Talamelli, A. Segalini, R. Örlü, P. Schlatter, and P. H. Alfredsson. Correcting hot-wire spatial resolution effects in third and fourth order velocity moments. *Exp. Fluids*, 54(4):1–11, 2013.
- [8] T. Khapko, T. Kreilos, P. Schlatter, Y. Duguet, B. Eckhardt, and D. S. Henningson. Localised edge states in the asymptotic suction boundary layer. *J. Fluid Mech.*, 717, 1 2013.
- [9] G. K. El Khoury, P. Schlatter, A. Noorani, P. F. Fischer, G. Brethouwer, and A. V. Johansson. Direct numerical simulation of turbulent pipe flows at moderately high Reynolds numbers. *Flow Turbulence Combust.*, 91:475–495, 2013.
- [10] A. Noorani, G. K. El Khoury, and P. Schlatter. Evolution of turbulence characteristics from straight to curved pipes. *Int. J. Heat Fluid Flow*, 41:16–26, 2013.
- [11] Y. Duguet and P. Schlatter. Oblique laminar-turbulent interfaces in plane shear flows. *Phys. Rev. Lett.*, 110(034502), 2013.
- [12] V. Vuorinen, M. Larmi, P. Schlatter, L. Fuchs, and B. J. Boersma. A low-dissipative, scale-selective discretization scheme for the Navier–Stokes equations. *Comput. Fluids*, 70:195–205, 2012.
- [13] Y. Tsuji, S. Imayama, P. Schlatter, P. H. Alfredsson, A. V. Johansson, I. Marusic, N. Hutchins, and J. Monty. Pressure fluctuations in high-Reynolds number turbulent boundary layer; results from experiments and DNS. *J. Turbulence*, 13(50):1–19, 2012.
- [14] G. Sardina, P. Schlatter, F. Picano, C. M. Casciola, L. Brandt, and D. S. Henningson. Self-similar transport of inertial particles in a turbulent boundary layer. *J. Fluid Mech.*, 706:584–596, 2012.

- [15] G. Brethouwer, Y. Duguet, and P. Schlatter. Turbulent-laminar coexistence in wall flows with Coriolis, buoyancy or Lorentz forces. *J. Fluid Mech.*, 704:137–172, 2012.
- [16] P. Schlatter and R. Örlü. Turbulent boundary layers at moderate Reynolds numbers. Inflow length and tripping effects. *J. Fluid Mech.*, 710:5–34, 2012.
- [17] G. Sardina, P. Schlatter, L. Brandt, F. Picano, and C. M. Casciola. Wall accumulation and spatial localization in particle-laden wall flows. *J. Fluid Mech.*, 699:50–78, 2012.
- [18] J. Malm, P. Schlatter, and D. S. Henningson. Coherent structures and dominant frequencies in a turbulent three-dimensional diffuser. *J. Fluid Mech.*, 699:320–351, 2012.
- [19] M. Ilak, P. Schlatter, S. Bagheri, and D. S. Henningson. Bifurcation and stability analysis of a jet in crossflow: onset of global instability at low velocity ratio. *J. Fluid Mech.*, 696:94–121, 2012.
- [20] P. Lenaers, Q. Li, G. Brethouwer, P. Schlatter, and R. Örlü. Rare backflow and extreme wall-normal velocity fluctuations in near-wall turbulence. *Phys. Fluids*, 24(035110), 2012.
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- [31] P. Schlatter, S. Bagheri, and D. S. Henningson. Self-sustained global oscillations in a jet in crossflow. *Theor. Comput. Fluid Dyn.*, 25:129–146, 2011.

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2 Articles in Refereed Proceedings

- [1] A. Peplinski, P. Schlatter, and D. S. Henningson. Investigations of stability and transition of a jet in crossflow using DNS. In *Direct and Large-Eddy Simulation 9*, 2013. To appear.
- [2] P. Schlatter and G. Eitel-Amor. Turbulent boundary layers in long computational domains. In *Direct and Large-Eddy Simulation 9*, 2013. To appear.
- [3] P. Lenaers, P. Schlatter, G. Brethouwer, and A. V. Johansson. A new high order method for the accurate simulation of incompressible wall-bounded flows. In *Direct and Large-Eddy Simulation 9*, 2013. To appear.
- [4] G. El Khoury, P. Schlatter, A. Noorani, G. Brethouwer, and A. V. Johansson. Assessment of direct numerical simulation data of turbulent pipe flows. In *Direct and Large-Eddy Simulation 9*, 2013. To appear.
- [5] P. Schlatter, R. Örlü, G. Eitel-Amor, Q. Li, D. S. Henningson, and F. Hussain. On the near-wall vortical structures at moderate Reynolds numbers. In B. Skallerud and H. I. Andersson, editors, *Computational Mechanics – MekIT’13*, pages 35–57, 2013.
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- [9] A. Peplinski, P. Schlatter, and D. S. Henningson. Investigations of stability and transition of a jet in crossflow using DNS. In *ICOMASED, Prato*, 2013. To appear.
- [10] G. El Khoury, P. Schlatter, G. Brethouwer, and A. V. Johansson. Turbulent pipe flow: Statistics, *Re*-dependence, structures and similarities with channel and boundary layer flows. In J. Jiménez, editor, *Proceedings of Multiflow Summer Programme*, 2013. To appear.
- [11] T. Kreilos, T. Khapko, T. M. Schneider, G. Veble, Y. Duguet, P. Schlatter, D. S. Henningson, and B. Eckhardt. Turbulence transition in the asymptotic suction boundary layer. In *Turbulence and Shear Flow Phenomena (TSFP-8)*, number TRAE, 2013.
- [12] M. Brynjell-Rahkola, P. Schlatter, A. Hanifi, and D. S. Henningson. Modal analysis of roughness-induced crossflow vortices in a Falkner-Skan-Cooke boundary layer. In *Turbulence and Shear Flow Phenomena (TSFP-8)*, number TBL4B, 2013.
- [13] R. Vinuesa, A. Noorani, A. Lozano-Durán, G. El Khoury, P. Schlatter, P. F. Fischer, and H. M. Nagib. Direct numerical simulations of variable-aspect-ratio turbulent duct flows at low to moderate Reynolds numbers. In *Turbulence and Shear Flow Phenomena (TSFP-8)*, number COH2C, 2013.
- [14] L. Wei, G. E. Elsinga, G. Brethouwer, P. Schlatter, and A. V. Johansson. Scaling of small-scale motions in wall-bounded turbulent flows. In *Turbulence and Shear Flow Phenomena (TSFP-8)*, number TBL2E, 2013.
- [15] J. A. Åström, A. Carter, J. Hetherington, K. Ioakimidis, E. Lindahl, G. Mozdzyński, R. W. Nash, P. Schlatter, A. Signell, and J. Westerholm. Preparing scientific application software for exascale computing. In P. Manninen and P. Öster, editors, *PARA 2012, INCS 7782*, pages 27–42. Springer-Verlag, Berlin, 2013.
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