

**Personal statement** – Prof Olivier Cadot is Chair in Aerospace Engineering in the School of Engineering (SoE) of the University of Liverpool (UoL) since 2017. His experimental research focuses on turbulence, wave-turbulence, wake transitions and flow control. OC's recent original contributions are related to understanding the turbulent wake dynamics of three-dimensional bluff bodies. His approach is both fundamental and industrial. He identified universal features (steady asymmetric modes) that directly impact most of the aerodynamic optimization of bodies involved in the surface transportation industries. OC was the first to propose the control of these modes as a new strategy to achieve drag reduction. These major contributions have led to two invited keynote lectures in international conferences. He has also been invited to co-lead the UK Fluids Network Special Interest Groups (SIG) 'Ground Vehicle Aerodynamics' from 2017. Among the 80 journal articles produced during his career, OC has published on this topic during the last 10 years 25 papers with fundamental physics background and 10 research articles with industrial applications. A substantial part of OC's recent research has been funded by Peugeot SA (PSA) and Renault (0.9 M€) and by the French procurement Agency of Defence Ministry (DGA) and Ministry of Research (0.5 M€ and a one-year sabbatical at Imperial College). OC has collaborations with several universities and research centres worldwide, such as the Universities of Paris-Saclay and Poitiers (France), Jaen (Spain), Khalifa (UAE) and Tonji (China), with industries, such as Stellantis (ex-PSA), Renault Group, EDF, CEA, and leads the AeroLab of the UoL. OC is the Academic lead for International Opportunities of the School of Engineering for the University of Liverpool.

### Education

2001 Higher Doctorate Degree (HDR). Fluid Mechanics, University of Le Havre, France.  
1995 Ph.D. Fluid Mechanics, Ecole Normale Supérieure, Paris, France.  
1992 M.Sc. Fundamental Physics, University Denis Diderot, France.  
1989 B.Sc. Fundamental Physics, University Denis Diderot, France.

### Career History

2017-present. Full Professor, chair in Aerospace Engineering at University of Liverpool, UK.  
2004-2016. Professor, Ecole Nationale Sup. de Techniques Avancées, Paris-Saclay, France.  
2002-2003. CNRS Associate Researcher, Ecole Sup. Physique et Chimie Industrielle, Paris, France.  
1996-2001. Associate Professor, University of Le Havre, France.

### Academic recognition

External examiner for 60 PhDs and higher degrees in France, UK, Sweden, Australia and India.  
Invitation to 30 Research seminars, Gothenburg, Cambridge, Imperial College, KTH Mechanics, IIT Kanpur, ONERA and many Universities across France.  
Peer reviewer for 100 journal articles and 10 research projects.  
Scientific committee in IVAC (2018, 2020), Aerovehicles (2020), BBA IX (2020), AERO(2020).  
Chairman for International Conferences ETC (2019), BIFD (2019), BBVIV (2018).  
Plenary keynote lectures in Windy (India 2013), Aerovehicles (France, 2014), Universal features in turbulences (France, 2019). Visiting Professor for 3 months at the Indian Institute of Kanpur (2013)  
Academic review expert for IIT Kanpur (India 2014), ONERA (France, 2015), Polytechnique Montréal (Canada, 2017), IMFT (France, 2019), LMFA (Lyon, France, 2020).

### Publications (5 last years)

- [18] Podvin, B., Pellerin, S., Fraigneau, Y., Bonnavion, G., Cadot, O, Journal of Fluid Mechanics, **927**, art. no. R6, (2021)
- [17] Joly, A., de Buretel de Chasse, N., Martin, A., Cadot, O., Pastur, L., Moussou, P., Journal of Fluids and Structures, **104**, art. no. 103326, (2021).
- [16] Hsu, E.-C., Pastur, L., Cadot, O., Parezanović, V, Experiments in Fluids, **62** (5), art. no. 95, (2021)
- [15] A. Legeai and O. Cadot, Experiments in Fluids, **61**(12) 249, (2020).
- [14] Y. Fan, C. Xia, S. Chu, Z. Yang and O Cadot, Physics of Fluids **32**, 105111 (2020).
- [13] O.Cadot, M. Almarzooqi, A. Legeai, V. Parezanovic and L. Pastur, CRAS, **348**(6-7), pp. 509-517 (2020).
- [12] B. Podvin, S. Pellerin, Y. Fraigneau, A. Evrard, O. Cadot, Physical Review Fluids, **5** (6) (2020), art. no. 064612.
- [11] M. Lorite-Díez, *et al.*, Physical review. E, **102** (2020), p. 011101.
- [10] M. Lorite-Díez, *et al.*, Journal of Wind Engineering and Industrial Aerodynamics, **200** (2020) art. no.104145.
- [9] M. Lorite-Díez, J. I. Jiménez, L. Pastur, C. Martínez-Bazán and O. Cadot J. Fluid Mech. **883**, A53 (2020).
- [8] E. Boujo, O. Cadot, Journal of Fluid and Structures, **89** 257–266 (2019).
- [7] G. Bonnavion & O. Cadot, Journal of Fluid and Structures, **89** 61–71 (2019).
- [6] G. Bonnavion, O. Cadot *et al.* Journal of Wind Engineering & Industrial Aerodynamics **184**, 77–89, (2019).
- [5] G. Bonnavion & O. Cadot, J. Fluid Mech, **854**, pp. 196-232. (2018).
- [4] J.-M. Lucas, O. Cadot, V. Herbert, S. Parpais and J. Déler, J. Fluid Mech, **831**, pp. 675-697. (2017).
- [3] D. Barros, J. Borée, O. Cadot, A. Spohn & B. Noack, Journal of Fluid Mechanics, **829**. R1 (2017).
- [2] G. Bonnavion O. Cadot *et al.* Journal of Wind Engineering and Industrial Aerodynamics, **164** 22–33 (2017).
- [1] A. Evrard, O. Cadot *et al.* Proc IMechE Part D: J Automobile Engineering 1–7 (2017).