

LAURENT BRICTEUX

Personal

Born: 01-12-76 Uccle, Belgium	Address: 23 rue du Culot 1341 Ottignies, Belgium
Citizenship: Belgium Married, 2 Children	Tel: +32.498.72.26.47 Email: laurent.bricteux@gmail.com

Education

- 2004 — 2008** Université catholique de Louvain, Belgium
Ph.D in mechanical engineering
“Simulation of turbulent aircraft wake vortex flows
and their impact on the signals returned
by a coherent Doppler LIDAR system”
Advisor: Pr. G. Winckelmans
- 2004 — 2006** Université catholique de Louvain, Belgium
MS in mechanical engineering
- 1995 — 2000** Université catholique de Louvain, Belgium
BA in mechanical engineering
BA thesis performed at the von Karman institute
for fluid dynamics (VKI)
Particle image velocimetry measurements of 3D lung flows
Advisors: Pr. F. Dupret (UCL), Pr. M. Riethmuller (VKI)

Work

- 2011 — present** **Assistant Professor**, University of Mons, Belgium
- 2010 — present** **Invited lecturer**, ECAM, Brussels, Belgium
- 2008 — 2011** **Senior research engineer**, Université catholique de Louvain
Main tasks: working on research projects and industrial
R&D contracts in energetics and fluid mechanics.
- 2001 — 2004** **Application engineer**, LMS international
Main tasks: technical consulting in advanced numerical
methods for acoustics, aeroacoustics, vibrations and optimisation
Key account responsibility: Renault, Ford, Autovaz, Tata

Languages

French	Mother tongue
English	Fluent both written and oral
Dutch	Good knowledge

Areas of professional interest

- Expertise in fluid dynamics, heat transfer, thermodynamics, structural vibrations, aeroacoustics
- Expertise in optical measurement techniques: Particle Image Velocimetry (PIV), Laser Doppler Velocimetry (LDV), Light Detection And Ranging (LIDAR)
- Research in computational fluid dynamics (CFD), in computational aeroacoustics (CAA), numerical methods, parallel computing.
- Member of the American Physical Society (APS), Division of Fluid Dynamics (DFD)
- Member of the Belgian Section of the Combustion Institute

Computer skills

- Operating systems: Windows, Linux, MAC OS
- Languages: C/C++, Fortran, MPI, Matlab, Latex, openMP
- Softwares: Autocad, LMS Virtual.Lab, Catia V5, Fluent, openFOAM, Paraview, Visit

Teaching activities

Lecturer of the following courses at Université de Mons:

- Internal combustion engines (2nd cycle) (30h/year)
- Compressors (2nd cycle) (30h/year)
- Steam and Gas Turbines (2nd cycle) (30h/year)
- Technical Thermodynamics (2nd cycle) (30h/year)
- Energetics (2nd cycle) (20h/year)

Teaching assistant of the following courses at UCL:

- Thermodynamics and energetics (2nd cycle) (30h/year) (2004, 2005, 2006)
- Numerical methods in fluid dynamics (2nd cycle) (15h/year) (2005, 2006, 2007, 2008, 2009)
- Physical mathematics: partial derivatives equations (1st cycle) (15h/year) (2004)
- Fluid mechanics and heat transfer (2nd cycle) (30h/year) (2008)

Advisory and jury of master in Nuclear Engineering at SCK-BNEN:

- Moïse Manconi (2012): Investigation of the near-wall modelling strategy and the concept of the turbulent Prandtl number for low Prandtl number flows
- Emmanuel Van Noorbeeck (2011): Computational Fluid Dynamic of Turbulent Heat Transfer at Very Low Prandtl Number : Application for Liquid Metal Reactors

Member of the Ph.D. thesis advisory committee:

- Orkun Temel: Numerical prediction of pollutant transport in atmospheric boundary layers (as advisor at UMONS with Prof J. Van Beeck at von Karman institute).
- Stéphanie Zeoli: Numerical prediction of pollutant transport in atmospheric boundary layers (as advisor at UMONS).
- Marie Cordier: Large Eddy Simulation of flameless combustion with complex chemistry (as advisor at UMONS).
- C. Carton de Wiart: Development of a new methodology for numerical simulation of high Reynolds number flows and application to aeroacoustics (advisor: Prof. G. Winckelmans UCL), thesis defended, june 2014.
- S. Gremmo: Innovative numerical methods for solver and mesh-generator in CFD software when large displacements are taken into account (advisor: Prof. G. Coussement UMONS).
- G. Lorieul : Numerical simulation of multiphase flows for thermal hydraulic applications (advisor: Prof. Y. Bartosiewicz UCL).
- N. Bourgeois : Large Eddy Simulation of an HCCI engine using detailed chemistry (advisor: Prof. H. Jeanmart UCL).

Invited lecturer at ECAM (Ecole Centrale des Arts et Métiers), Brussels, 2010—present

- Teaching fluid mechanics and heat transfer (45 hours/year) .

Software courses

Course sessions on the operational wake vortex predictor software (WAKE4D, for which I am co-owner), based on the Method of Discrete Vortices (MDV).

- WAKE 4D course session for US Federal Aviation Administration (FAA), December 2009 (3 days).
- WAKE 4D course session for the European Organisation for the Safety of Air Navigation (Eurocontrol), January 2010 (4 days).

Scientific reviewing

Peer-review for different research activities

- ASME-turbo expo conference 2015
- Eurotherm 2012 conference
- Icone "International Conference on Nuclear Engineering" 2012, 2014 conference
- Journal of fuel
- Computers and fluids
- Physics of fluids
- Nuclear engineering and design
- Evaluation of research projects

Research projects

Significant involvement (scientific research, reporting and administrative tasks) in the following large scale research projects:

- *FAR-WAKE*: fundamental research on aircraft wake phenomena. *FAR-WAKE* is a project of the 6th Framework Programme of the European Commission.
- *FIDELIO*: fiber laser development for next generation LIDAR onboard detection system. *FIDELIO* is a project of the 6th Framework Programme of the European Commission.
- *LASEF*: Belgian government funded project. Development and simulation of a ground based airport LIDAR to perform remote sensing of aircraft wake vortices and wind.
- *NANOCOMPO*: Belgian government funded project. Numerical evaluation of the heat transfert enhancement using nanofluids.
- *CREDOS*: Crosswind - Reduced Separations for Departure Operations. *CREDOS* is a project of the 6th Framework Programme of the European Commission and coordinated by EUROCONTROL.
- *SINUS*: SINUS is a set of project funded by the "Région Wallonne" of Belgium and the European FEDER funds. This applied research project aims to realize activities related to the development of "state of the art" numerical methods.
- *GREENWAKE*: Project funded by the European commission (FP7). The Green-Wake project is a collaborative project funded by the European Commission which will develop and test an on-board short-range (50-100m) Imaging Doppler LIDAR system that is capable of detecting and measuring wake vortexes and wind shear phenomena in front of an aircraft.
- *THINS*: Project funded by the European commission (FP7). Development of new models for GEN IV nuclear reactors thermalhydraulics. Main task consist in direct numerical simulation (DNS) of turbulent channel flows at very low Prandtl numbers for sodium, lead, lead-bismuth reactors. The DNS databases obtained will help to improve and calibrate RANS models.
- *HOLLYWOOD*: Belgian government funded project. Numerical simulation of fluid flow and combustion in domestic stoves.

Industry contracts

- Electrabel: Numerical simulation of small wind turbines in an industrial environment 45k€.
- WIDAO: Wake-Independent Departure and Arrival Operations at Paris, Ch. De Gaulle. Subcontracting project with Eurocontrol.
- Research contract funded by Airbus (High-Lift Devices Skill Group Aerodynamics Domain): Large eddy simulation of the transport and decay of aircraft wake vortices in ground effect with turbulent crosswind.
- Research contract with Fluxys: development of a software to normalize gaz concentration measurements.
- Engineering contract for the monitoring and maintenance of the expert system ventilating the Cointe and Beliard tunnels.

External stay

- Invited researcher at ETS Montréal, Canada (july 2014), FNRS travel grant.

Bibliography

Journal papers

1. K. Chodzynski, K. Zouaoui Boudjeltia, J. Lalmand, A. Aminian, L. Vanhamme, D. Ribeiro de Sousa, S. Gremmo, L. Bricteux, C. Renotte, G. Courbebaisse, G. Coussement, An in vitro test bench reproducing coronary blood flow signals. *BioMedical Engineering OnLine* (2015).
2. C. Carton de Wiart, K. Hillewaert, L. Bricteux, G. Winckelmans, Implicit LES of free and wall bounded turbulent flows based on the discontinuous Galerkin/symmetric interior penalty method. *International Journal for Numerical Methods in Fluids* (2015).
3. M. Duponcheel, L. Bricteux, M. Manconi, G. Winckelmans, Y. Bartosiewicz Assessment of RANS and improved near-wall modeling for forced convection at low Prandtl numbers based on LES up to $Re_\tau = 2000$. *International journal of heat and mass transfer* (2014).
4. I. De Visscher, L. Bricteux, G. Winckelmans Aircraft vortices in stably stratified and weakly turbulent atmospheres: simulation and modeling. *AIAA Journal*, Vol 51, No 3, (2013)
5. L. Bricteux, M. Duponcheel, G. Winckelmans, I. Tiselj and Y. Bartosiewicz Direct and large eddy simulation of turbulent heat transfer at very low Prandtl number: Application to lead-bismuth flows, *Nuclear Engineering and Design*, (May 2012).
6. H. Jeanmart, L. Bricteux, K. Van Tichelen and M. Dierckx, Characterization in water experiments of a "detached flow" free surface spallation target. Published in *Journal of Nuclear Materials* (May 2011)
7. K. Dengler, F. Holzapfel, T. Gerz, A. Wiegele, I. De Visscher, G. Winckelmans, L. Bricteux, H. Fischer and J. Konopka, Crosswind thresholds supporting wake-vortex-free corridors for departing aircraft. *Journal of meteorological applications* (Wiley), Royal meteorology society, (March 2011)
8. L. Bricteux, M. Duponcheel, G. Winckelmans, A new multiscale model for both free vortex flows and wall bounded flows. Published in *Physics of Fluids*, (Oct. 2009).
9. R. Cocle, L. Bricteux (corresponding author), G. Winckelmans, Scale-dependence and asymptotic very high Reynolds number behavior of multiscale subgrid models. Published in *Physics of Fluids* (Aug. 2009).
10. A Dolfi-Bouteyre, G Canat, M Valla, B Augère, C Besson, D Goular, L. Lombard, JP. Cariou, A. Durecu, D. Fleury, L. Bricteux, S. Brousmiche, S. Lugan, B. Macq. "Pulsed 1.5 μm LIDAR for axial aircraft wake vortex detection based on high brightness large core fiber amplifier." *IEEE journal of selected topics in quantum electronics*.

Contributed book

1. C. Carton de Wiart, K. Hillewaert, L. Bricteux, G. Winckelmans, "LES using a discontinuous Galerkin method: isotropic turbulence, channel flow and periodic hill flow" in press in *Direct and Large-Eddy Simulation IX book*, ERCOFTAC Series, Springer, 2013.
2. S. Brousmiche, L. Bricteux, G. Winckelmans, B. Macq, P. Sobieski, "Modeling of wake-vortex detection by a ground-based fiber LIDAR system" In: *Advances in Geoscience and Remote Sensing*, IN-TECH book.
3. L. Bricteux, M. Duponcheel, G. Winckelmans, "A new multiscale model with proper behaviour in both vortex flows and wall bounded flows" in *Direct and Large-Eddy Simulation VII book*, ERCOFTAC Series, ed(s), V. Armenio, B. Geurts and J. Frolich, ed(s), Springer, 2010, 12, p. 253-258..
4. R. Cocle, L. Bricteux, G. Winckelmans, "Spectral behavior of various subgrid-scale models in LES at very high Reynolds number" In: *Quality and Reliability of Large-Eddy Simulations*, ERCOFTAC Series, J. Meyers, B.J. Geurts and P. Sagaut ed(s), Springer, 2008, 12, p. 183-190.

5. G. Winckelmans, L. Bricteux, L. Georges,
"The Sampling-based dynamic procedure for LES without filtering:
validation using finite differences."
In: Direct and Large-Eddy Simulation VI, ERCOFTAC Series, E. Lamballais, R. Friedrich, B.J. Geurts
and O. Métais ed(s), Springer, 2006, 10, p. 183-190.
6. M. Tournour, J.P. Rossion, L. Bricteux, C. McCulloch, I. McGan.
"Accelerating FEM and BEM acoustic solutions"
In: Modelling and Experimental Measurements in Acoustics III.
Computational and Experimental Methods Vol 9 WIT press (2003). Edited by: D. Almorza, C.A.
Brebbia, R. Hernandez.

Conference Proceedings with peer review

1. C. De Maesschalk, C. Lacor, G. Paniagua, S. Lavagnoli, A. Remiot, L. Bricteux Performance robustness of turbine squealer tip designs due to manufacturing and engine operation. ISABE 22nd international symposium on air breathing engines, Phoenix, Az, US, Oct 2015.
2. S. Zeoli, C. Carton De Wiart, K. Hillewaert, B. Colassin, L. Bricteux, DNS and ILES of wall bounded flows using a discontinuous galerkin method and inlet synthetic turbulence, ERCOFTAC workshop Direct and Large-Eddy Simulation 10, Limassol, Cyprus May 2015.
3. L. Bricteux, M. Duponcheel, M. Manconi and Y. Bartosiewicz, Numerical prediction of turbulent heat transfer at low Prandtl number.
Eurotherm 2012 6th European Thermal Sciences Conference, Poitiers, France, September 4-7, 2012.
Paper published in *J. Phys.: Conf.*, Daniel Petit and Christophe Le Niliot eds.
4. C. Carton de Wiart, K. Hillewaert, P. Geuzaine, R. Luccioni, L. Bricteux, G. Coussement, G. Winckelmans Assessment of LES modeling within a high order Discontinuous Galerkin solver, ETMM9: 9th International ERCOFTAC Symposium on Engineering Turbulence Modelling and Measurements, June 2012, Thessaloniki, Greece.
5. L. Bricteux, M. Duponcheel, G. Winckelmans and Y. Bartosiewicz, DNS and LES of turbulent channel flows at very low Prandtl number: application to convection in lead-bismuth. The 14th International Topical Meeting on Nuclear Reactor Thermal Hydraulics (NURETH-14) Toronto, Ontario, Canada, September 25-29, 2011.
6. L. Bricteux, M. Duponcheel, G. Winckelmans, C. Schram, Jet flow aeroacoustics at $Re=93000$: comparison between experimental results and numerical predictions, 17th AIAA/CEAS Aeroacoustics Conference (32nd AIAA Aeroacoustics Conference) Portland June 2011.
7. P. Chatelain, L. Bricteux, S. Backaert, G. Winckelmans, S. Kern, P. Koumoutsakos Vortex particle-mesh methods with immersed lifting lines applied to the Large Eddy Simulation of wind turbine wakes. Wake Conference, Gotland univ., June 8-9 2011, Visby, Sweden
8. L. Bricteux, M. Duponcheel, Y. Bartosiewicz "Direct and Large Eddy Simulation of Turbulent Heat Transfer at Very Low Prandtl Number: Application to Lead-bismuth Flows", In: proceedings of the international conference on nuclear energy for new Europe, Portoroz Slovenia, sept 2010.
9. I. De Visscher, G. Winckelmans, T. Lonfils, L. Bricteux, M. Duponcheel and N. Bourgeois The WAKE4D simulation platform for predicting aircraft wake vortex transport and decay: description and examples of application AIAA 2010 Conference, Toronto, Ontario, Canada, August 2010.
10. I. De Visscher, L. Bricteux, G. Winckelmans, LES of aircraft wake vortices evolving in a stably stratified and weakly turbulent atmosphere, in Fifth European Conference on Computational Fluid Dynamics ECCOMAS CFD 2010, Lisbon, Portugal, 2010.
11. Y. Marichal, L. Bricteux, M. Duponcheel, C. Carton de Wiart, G. Winckelmans, and P. Geuzaine, DES of the flow past a pair of cylinder in tandem configuration, Proceedings of the workshop on benchmark problems for airframe noise computations (BANC-I workshop, AIAA-NASA), Stockholm, Sweden June 2010.

12. L. Bricteux, M. Duponcheel, I. De Visscher, G. Winckelmans, "Multiscale Models for Large Eddy Simulation of Aircraft Wake Vortices Under Various Atmospheric Conditions", In: 2009 ASME International Mechanical Engineering Congress and Exposition, Florida, US, November 2009.
13. S. Brousmiche, L. Bricteux, P. Sobieski, G. Winckelmans, B. Macq, C. Craeye, "Parameters Estimation of Wake Vortices in Ground Effect", In: 15th Coherent Laser Radar Conference, Toulouse, France, June, 2009.
14. I. De Visscher, L. Bricteux, G. Winckelmans, S. Caliaro, T. Vilbajo, "Large eddy simulations of aircraft wake vortices in a stably stratified atmosphere" In: Sixth International Symposium on Turbulence and Shear Flow Phenomena (TSFP-6), Seoul, Korea, June, 2009.
15. L. Bricteux, R. Cogle, M. Duponcheel, L. Georges, G. Winckelmans, "Assessment of multiscale models for LES : spectral behaviour in very high Reynolds number turbulence and cases with aircraft wakes vortices", In: Fifth International Symposium on Turbulence and Shear Flow Phenomena (TSFP-5), TUM, Garching, Germany, 27-29 August, 2007.
16. S. Brousmiche, L. Bricteux, P. Sobieski, B. Macq, G. Winckelmans, "Numerical simulation of a heterodyne Doppler LIDAR for wind measurements in a turbulent atmospheric boundary layer", In: IEEE International Geosciences And Remote Sensing Symposium (IGARSS 2007), Sensing and Understanding our Planet, Barcelona, Spain, 23-27 July, 2007.
17. S. Lugan, L. Bricteux, B. Macq, P. Sobieski, G. Winckelmans, "Simulation of LIDAR-based aircraft wake vortex detection using a bi-Gaussian spectral model", In: IEEE International Geosciences And Remote Sensing Symposium (IGARSS 2007), Sensing and Understanding our Planet, Barcelona, Spain, 23-27 July, 2007.

Conference Proceedings without peer review

1. S. Zeoli, L. Bricteux, Numerical prediction of pollutant dispersion and transport in an atmospheric boundary layer, 67th Annual Meeting of the APS Division of Fluid Dynamics (Nov.2014, San Francisco, CA), Proceedings of the American physical society.
2. S. Gremmo, C. Carton, B. Gorissen, K. Hillewaert, G. Winckelmans, G. Coussement, L. Bricteux, Implicit LES of turbulent flows with a high order discontinuous Galerkin method, 65th Annual Meeting of the APS Division of Fluid Dynamics (Nov.2012, San Diego, CA), Proceedings of the American physical society.
3. G. Winckelmans, I. De Visscher, L. Bricteux, Aircraft wake two-vortex system at turbulent equilibrium, 65th Annual Meeting of the APS Division of Fluid Dynamics (Nov.2012, San Diego, CA), Proceedings of the American physical society.
4. M. Duponcheel, M. Manconi, L. Bricteux, G. Winckelmans, Y. Bartosiewicz "Assessment of different RANS approaches and near wall modeling strategies for the prediction of turbulent heat transfer in liquid metals: comparison with DNS and LES" A.S.M.E ICONE 2012: 20th international conference on nuclear engineering.
5. I. De Visscher, G. Winckelmans, T. Lonfils, L. Bricteux, "Recent improvement of operational wake vortex models: modeling of in-ground, atmospheric stratification and turbulence effects" WakeNet3-Europe Specific Workshop: "Operational Wake Vortex Models", Nov 7-8 2011, UCL, Louvain-la-Neuve, Belgium.
6. P. Chatelain, L. Bricteux, G. Winckelmans, P. Koumoutsakos. Vortex methods with immersed lifting lines applied to LES of wind turbine wakes" 63rd Annual Meeting of the APS Division of Fluid Dynamics (Nov.2010, Long Beach, CA), Proceedings of the American physical society.
7. M. Duponcheel, L. Bricteux, G. Winckelmans. "Improving the near-wall behavior of multiscale models for LES." 61st Annual Meeting of the Division of Fluid Dynamics (Nov.2008, San Antonio, Texas), Proceedings of the American physical society.

8. G. Winckelmans and L. Bricteux. "Modified law of the wall leading to turbulent channel flow universal velocity profiles valid down to $Re_\tau = 395$." 61st Annual Meeting of the Division of Fluid Dynamics (Nov.2008, San Antonio, Texas), Proceedings of the American physical society.
9. L. Georges, L. Bricteux, M. Duponcheel, P. Geuzaine, G. Winckelmans, LES of wake vortices in ground effect without and with wind, and also comparing different multiscale subgrid models. In: Proc. International Workshop on Fundamental Issues Related to Aircraft Wakes (FAR-Wake Workshop) 27-29 May 2008, Marseille, France.
10. T. Louagie, L. Georges, P. Geuzaine, L. Bricteux, M. Duponcheel, T. Lonfils, G. Winckelmans. "Numerical simulation of wake vortex flows: RANS-LES of a fuselage wake and LES of wake vortices in ground effect with and without wind" 43rd conference on applied aerodynamics, 10-12 March 2008, Poitiers, France
11. Duponcheel Matthieu, Lonfils Timothee, Bricteux Laurent, Georges Laurent, Cocle Roger, Daeninck Goeric, Cottin Cedric, Desenfans Olivier, De Visscher Ivan, Winckelmans Gregoire, Investigation of wake vortices in ground effect : DNS, LES, towing tank experiments, real-time operational modelling, In: Proc. Annual Seminar of the Belgian ERCOFTAC Pilot Centre, UCL, Louvain-la-Neuve, Dec. 8, 2006,.
12. L. Bricteux, L. Dufresne, G. Winckelmans, "LES investigation of aircraft wake two-vortex system in low level atmospheric turbulence : reaching the equilibrium turbulent system?", In: Proc. Annual Seminar of the Belgian ERCOFTAC Pilot Centre, CENAERO, Gosselies, 2005.
13. G. Winckelmans, R. Cocle, L. Dufresne, R. Capart, L. Bricteux, G. Daeninck, T. Lonfils, M. Duponcheel, O. Desenfans, L. Georges, "Direct numerical simulation and large eddy simulation of wake vortices: going from laboratory conditions to flight conditions." Paper presented at the European conference on computational fluid dynamics(ECCOMAS 2006).
14. M. Duponcheel, T. Lonfils, L. Bricteux, G. Winckelmans. "Simulation of three-dimensional wake vortices in ground effect using a fourth order incompressible code." Paper presented at the 7th National Congress on theoretical and applied Mechanics : NCTAM 2006 Mons Belgium.
15. G. Winckelmans, L. Dufresne, L. Bricteux. "LES investigation of aircraft wake two-vortex system in low level atmospheric turbulence." 58th Annual Meeting of the Division of Fluid Dynamics (Nov.2005) American physical society.
16. G. Winckelmans, L. Georges, L. Bricteux, H. Jeanmart. "Sampling-based dynamic procedure for LES in physical space." 57th Annual Meeting of the Division of Fluid Dynamics (Nov.2004) American physical society.
17. V. Treve, G. Winckelmans, T. Duquesne, L. Bricteux, "Description of the VFS, and VFS results on the benchmark for wake vortices IGE (with Annex : improved probabilistic methodology results, as revisited after the workshop)", In: Proc. Joint WakeNet-USA and WakeNet2-Europe Workshop on the Prediction of Wake Vortices in Ground Effects in an Operational Context, New Orleans, LA, April 27-29, 2004, 2004.
18. M. Tournour, J.-P. Rossion, L. Bricteux, C. McCulloch. "Getting useful FEM and BEM vibro-acoustic solutions faster, using new solution methodologies." ISMA International Conference on Noise and Vibration Engineering 2002.

Research project deliverables and technical reports

1. M. Duponcheel, L. Bricteux, Y. Bartosiewicz, "Direct and Large-Eddy Simulations of Turbulent Heat Transfer in a Channel Flow at Low Prandtl Numbers" Deliverable D3101. FP7 project THINS Thermal-Hydraulics for Innovative Nuclear Systems, june 2012.
2. I. De Visscher, L. Bricteux, S. J. Karabelas, G. Winckelmans, "EDDF-2 database analysis and performance assessment of the DVM and PVM models on the EDDF-2 and EDDF-1 databases", European project AST5-CT-2006-030837, CREDOS, November 2008.
3. L. Georges, P. Geuzaine, L. Bricteux, M. Duponcheel, T. Lonfils, G. Winckelmans, LES of a two vortex system in ground effect with and without wind, European project AST4-CT-2005-012238, FAR-WAKE, Report TR3.1.1-3, March, 2007.
4. O. Desenfans, T. Lonfils, G. Daeninck, R. Cocle, L. Bricteux, L. Dufresne and G. Winckelmans, Numerical simulations of counter-rotating four-vortex systems, European project AST4-CT-2005-012238, FAR-WAKE, Report TR1.2.2-2, January, 2007.

Ph.D. thesis

L. Bricteux. "Simulation of turbulent aircraft wake vortex flows and their impact on the signals returned by a coherent Doppler LIDAR system" Ph.D. thesis Louvain school of engineering, Université catholique de Louvain, March 2008.

Hobbies

- Hiking, skiing, snowboarding, all terrain biking, running, swimming.
 - Coding.
 - Building and flying remote controlled airplanes, two stroke engines cars and helicopters.
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