



ProLB

LIST OF SCIENTIFIC ARTICLES



La force de l'innovation

1. E. Lévêque, F. Toschi, L. Shao, J.P. Bertoglio (2007) Shear-improved Smagorinsky model for large-eddy simulation of wall-bounded turbulent flows, *Journal of Fluid Mechanics* 570, 491 - 502, 2007
2. A. Cahuzac, J. Boudet, P. Borgnat, E. Lévêque (2010) Smoothing algorithms for mean-flow extraction in large-eddy simulation of complex turbulent flows, *Physics of fluids* 22 (12), 125104, 2010
3. F. Dubois. Stable lattice Boltzmann scheme for a moving Burgers shock wave, 7ième conférence ICMMES, Edmonton, Alberta, Canada, 12 au 16 juillet 2010. Conférence invitée.
4. Xu, H., Sagaut, P. (2011) Optimal low-dispersion low-dissipation LBM schemes for computational aeroacoustics. *J. Comput. Phys.* 230, 5353-5382
5. Vergnault, E., Sagaut, P. (2011) Application of Lattice Boltzmann Method to Sensitivity Analysis via Complex Differentiation. *J. Comput. Phys.* 230, 5417-5429
6. Vergnault, E., Malaspinas, O., Sagaut, P. (2011) A time-reversal Lattice Boltzmann Method. *J. Comput. Phys.* 230 (22), 8155-8167
7. Malaspinas, O., Sagaut, P. (2011) Advanced Large-Eddy Simulation for lattice Boltzmann methods: the Approximate Deconvolution Model. *Phys. Fluids* 23, 105103 (8 pages)
8. A. Augier, F. Dubois, B. Graille Isotropy conditions for lattice Boltzmann schemes. Applications to D2Q9. Congrès SMAI 2011, Guidel, 23 au 27 mai 2011.
9. P. Lallemand et F. Dubois. Some results on energy-conserving lattice Boltzmann models 8ième conférence ICMMES , Lyon, 4 au 8 juillet 2011. Conférence invitée.
10. A. Augier, F. Dubois, L. Gouarin, B. Graille. Linear lattice Boltzmann schemes for Acoustic: parameter choices and isotropy properties. 8ième conférence ICMMES, Lyon, 4 au 8 juillet 2011
11. F. Dubois, P. Lallemand. D2T4 lattice Boltzmann scheme for scalar problems 20th conférence Discrete Simulation of Fluid Dynamics, Fargo, North Dakota, USA, 8-12 août 2011 Page 4/4
12. Vergnault, E., Malaspinas, O., Sagaut, P. (2011) A time-reversal Lattice Boltzmann Method, Eighth International Conference for Mesoscopic Methods in Engineering and Science, 4-8 July, Lyon, France
13. Hui Xu, Malaspinas, O., Sagaut, P. (2011) Sensitivity Analysis and Optimal Strategies of MRT-LBM for CAA - Determination of free relaxation parameters in MRT-LBM, Eighth International Conference for Mesoscopic Methods in Engineering and Science, 4-8 July, Lyon, France.
14. Xu, Hui & Sagaut, Pierre. (2012). Analysis of the absorbing layers for the weakly-compressible lattice Boltzmann schemes. *Journal of Computational Physics.* 245. 10.1016/j.jcp.2013.02.051.
15. Vergnault, E., Malaspinas, O., Sagaut, P. (2012) A lattice Boltzmann method for non linear disturbances around an arbitrary base flow. *J. Comput. Phys.* 231 (24), 8070-8082
16. Malaspinas, O., Sagaut, P. (2012) Consistent subgrid scale modelling for lattice Boltzmann methods. *J. Fluid Mech.* 700, 514-542

17. A. Augier, F. Dubois, B. Graille, Isotropy conditions for lattice Boltzmann schemes. Applications to D2Q9. ESAIM Proceedings volume 35 (March 2012) p. 191-196, DOI: <http://dx.doi.org/10.1051/proc/201235013>, avril 2012.
18. Xu, H., Malaspinas, O., Sagaut, P. (2012) Sensitivity analysis and determination of free relaxation parameters for the weakly-compressible MRT-LBM schemes. J. Comput. Phys. 231, 7335-7367
19. A. Augier, F. Dubois, B. Graille. Rotational invariance of Lattice Boltzmann schemes. Applications in Acoustics. 9 ième International Conference for Mesoscopic Methods in Engineering and Science Taipei, Taiwan, 26 juillet 2012. Conférence invitée.
20. F. Dubois. Equivalent equations of lattice Boltzmann schemes. Cours le 11 juillet 2012 à la 2012 Summer School on the Lattice Boltzmann Method au Beijing Computational Science Research Center, He-Qing Road, Hai-Dian District, Beijing et à la Tsinghua University.
21. D. Ricot, E. Foquet, H. Touil, E. Leveque, H. Machrouki, F. Chevillotte, M. Meldi (2012), Aeroacoustic computations with a new CFD solver based on the Lattice Boltzmann Method, In Proceedings of SIA 2012, Le Mans, France (2012)
22. H. Machrouki, D. Ricot and O. Coste, Lattice Boltzmann aero-acoustics modelling of flow around obstacles, In Proceedings of Congres Francais d'Acoustique 2012, Nantes, France (2012)
23. Jaouen, L. and Chevillotte, F. and Bécot, F.-X., Multi-scale design of vibro-acoustic packages, In Proceedings of SIA 2012, Le Mans, France (2012)
24. Vergnault, E., Malaspinas, O., Sagaut, P. Noise source identification with the Lattice Boltzmann Method, The Journal of the Acoustical Society of America 133, 1293 (2013)
25. Meldi, M., Vergnault, E., Sagaut, P. (2013) An Arbitrary Lagrangian-Eulerian approach for the simulation of immersed moving solids with Lattice Boltzmann Method J. Comput. Phys. 235, 182-198
26. H. Touil, J. Boudet, D. Ricot et E. Lévêque, Large-eddy simulation of turbulent flows on composite multi-resolution grids by the lattice Boltzmann method 14th European Turbulence Conference, 1-4 september 2013, Lyon, France.
27. Touil, Hatem & Ricot, Denis & Lévêque, Emmanuel. (2013). Direct and Large-Eddy Simulation of Turbulent Flows on Composite Multi-Resolution Grids by the Lattice Boltzmann Method. Journal of Computational Physics. -. 10.1016/j.jcp.2013.07.037.
28. A. Augier, F. Dubois, L. Gouarin, B. Graille, Linear lattice Boltzmann schemes for Acoustic: parameter choices and isotropy properties Computers and Mathematics with Applications, volume 65, pages 845-863, 2013
29. F. Dubois, P. Lallemand. On triangular lattice Boltzmann schemes for scalar problems Communications in Computational Physics, D2T4 lattice Boltzmann scheme for scalar problems volume 13, numéro 3, pages 649-670, doi: 10.4208/cicp.381011.270112s, mars 2013
30. F. Dubois. Stable lattice Boltzmann schemes with a dual entropy approach for monodimensional nonlinear waves, Computers and Mathematics with Applications, volume 65, pages 142-159, 2013.

31. P. Lallemand et F. Dubois Some results on energy-conserving lattice Boltzmann models Page 3/4 Computers and Mathematics with Applications, volume 65, pages 831-844, 2013.
32. A. Augier, F. Dubois, B. Graille Rotational invariance of Lattice Boltzmann schemes. Applications in Acoustics Computers and Mathematics with Applications, Contribution available online 9 July 2013 in Computers and Mathematics with Applications, doi: <http://dx.doi.org/10.1016/j.camwa.2013.06009>.
33. Sengissen, A.; Giret, J.-C.; Coreixas, C. & Boussuge, J.-F. Simulations of LAGOON landing-gear noise using Lattice Boltzmann Solver, 21st AIAA/CEAS Aeroacoustics Conference, 2015, 2993 (<https://arc.aiaa.org/doi/10.2514/6.2015-2993>)
34. Coreixas, C. Round Cavity Noise Simulations using Lattice-Boltzmann Solver, 11st PEGASUS-AIAA Student Conference, 2015 (https://www.pegasus-europe.org/Pegasus_AIAA/papers/2015_Coreixas.pdf)
35. Q. Gallas, M. Lamoureux, J.-C. Monnier, A. Gilliot, C. Verbeke, J. Delva. Flow control and analysis on simplified ship helideck, AIAA Paper 2016-3262, AIAA Aviation 2016, WASHINGTON, U.S.A, 13-17 juin 2016
36. Coreixas, C.; Wissocq, G.; Puigt, G.; Boussuge, J.-F.; Sagaut, P. Recursive regularization step for high-order lattice Boltzmann methods, Phys. Rev. E, American Physical Society, 2017, 96, 033306 (<https://journals.aps.org/pre/abstract/10.1103/PhysRevE.96.033306>)
37. H Touil, B Bazin, J-C Giret, S Malik, E Leveque, J Boudet, D Ricot, A Sengissen (2017) Large-Eddy simulation of rod-airfoil flow configuration in the subcritical turbulent regime by using the lattice Boltzmann method, Proceedings of the 52nd 3AF International Conference on Applied Aerodynamics, March 2017
38. V. Mons, L. Margheri, J-C Chassaing, P. Sagaut (2017). Data assimilation-based reconstruction of urban pollutant release characteristics. Journal of Wind Engineering and Industrial Aerodynamics. 169. 232-250. 10.1016/j.jweia.2017.07.007.
39. J. Jacob, P. Sagaut. Wind comfort assessment by means of large eddy simulation with lattice Boltzmann method in full scale city area. Building and Environment, 2018, 139, pp.110 - 124.
40. L. Merlier, J. Jacob, P. Sagaut. Lattice-Boltzmann Large-Eddy Simulation of pollutant dispersion in street canyons including tree planting effects. Atmospheric Environment, 2018, 195, pp.89-103.
41. L. Merlier, J. Jacob, P. Sagaut. Lattice-Boltzmann large-eddy simulation of pollutant dispersion in complex urban environment with dense gas effect: Model evaluation and flow analysis. Building and Environment, 2019, 148, pp.634-652.
42. Yongliang Feng, Pierre Boivin, Jérôme Jacob, Pierre Sagaut. Hybrid recursive regularized lattice Boltzmann simulation of humid air with application to meteorological flows. Physical Review E , American Physical Society (APS), 2019. fhal-02265484