

CURRICULUM VITAE

Name : CHAOUAT
First Name : Bruno
Position : Senior Research Scientist
Official Address : ONERA, Université Paris-Saclay
92322, Châtillon cedex, FRANCE
Tel : 01 46 73 45 25
Email : bruno.chaouat@onera.fr

Education

Master degree in Physics, University of Lille, 1984
Engineering degree, Ecole Centrale Paris, 1986
Ph.D in Fluid Dynamics, University of Paris 6, 1994
Habilitation Thesis, University of Paris 6, 2007

Career/Employment

Research Scientist, ONERA, since 1988
Visiting Scientist, University of Illinois, 1995
Officer, French Air Force , Military Service, 1987

Papers

- [a1] B. Chaouat. Flow Analysis of a Solid Propellant Rocket Motor with Aft Fins, *Journal of Propulsion and Power*, 13(2) :194-196, 1997.
- [a2] B. Chaouat. Simulations of Channel Flows with Effects of Spanwise Rotation or Wall Injection Using a Reynolds Stress Model, *Journal of Fluid Engineering, ASME*, 123 : 2-10, 2001.
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- [a10] B. Chaouat. Subfilter-scale Transport Model for Hybrid RANS/LES Simulations Applied to a Complex Bounded Flow, *Journal of Turbulence*, 1-30, 2010.
- [a11] B. Chaouat. A new Partially Integrated Transport Modelling (PITM) Method for Continuous Hybrid Non-Zonal RANS/LES Simulations, Third hybrid RANS/LES methods, *Notes on Numerical Fluid Mechanics and Multidisciplinary Design*, Ed. Springer by S. H. Peng, P. Doerffer, W. Haase, 111, 213-224, 2010.
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- [a14] B. Chaouat and R. Schiestel. Analytical Insight into the Partially Integrated Transport Modeling Method for Hybrid RANS-LES Simulations of Turbulent Flows, *Physics of Fluids*, 4 (085106), 1-34, 2012.
- [a15] B. Chaouat and R. Schiestel. Hybrid RANS-LES Simulations of the Turbulent Flow over Periodic Hills at High Reynolds Number, *Computers & Fluids*, 279-300, 2013.
- [a16] B. Chaouat and R. Schiestel. Partially Integrated Transport Modeling Method for Turbulence Simulation with Variable Filters, *Physics of Fluids*, 25, (125102),1-39, 2013.
- [a17] B. Chaouat. Application of the PITM Method using Inlet Synthetic Turbulence Generation for the Simulation of the Turbulent Flow in a Small Axisymmetric Contraction, *Flow, Turbulence and Combustion*, 98(4), 987-1024, 2017.
- [a18] B. Chaouat. The State of the Art of Hybrid RANS/LES Modeling for the Simulation of Turbulent Flows, *Flow, Turbulence and Combustion*, 99(2), 279-327, 2017.
- [a19] B. Chaouat. Commutation Errors in PITM Simulation, *International Journal of Heat and Fluid Flow*, 67, 138-154, 2017.
- [a20] B. Chaouat and C. Peyret, Investigation of the Wall Scalar Fluctuations Effect on Passive Scalar Turbulent Fields at Several Prandtl Numbers by means of Direct Numerical Simulations, *Journal of Heat Transfer, ASME*, 141(12), 1-12, 2019.
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- [a24] B. Chaouat, Contribution of Direct Numerical Simulations to the Budget and Modeling of the Transport Equations for Passive Scalar Turbulent Fields with Wall Scalar Fluctuations, *Journal of Fluid Mechanics*, 963(A21), 1-43, 2023.
- [a25] B. Chaouat and R. Schiestel, Variational Calculus in Hybrid Turbulence Transport Models with Passive Scalar, *Journal of Turbulence*, 24(13), 1-46, 2024.

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- [v2] B. Aupoix, D. Arnal, H. Bézard, B. Chaouat, F. Chedevergne, S. Deck, V. Gleize, P. Grenard and E. Laroche. Transition and turbulence modelling, *The ONERA Journal AerospaceLab*, 2, 2011.
- [v3] B. Chaouat and R. Schiestel. Mathematical Framework of the PITM Method for the Simulation of Turbulent Flows, *ERCRAFT Bulletin*, 120, 32-37, 2019

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- [c1] B. Chaouat and F. Vuillot. A multi-domain 3D Euler solver for flows in solid propellant rocket motor with aft fin, AIAA paper n° 92-3507, 28th AIAA Aerospace Sciences Meeting and Exhibit, Nashville 1992.
- [c2] B. Chaouat and F. Nicoud. Turbulence au voisinage d'une paroi débitante, Journées R&T CNES/ONERA. Fonctionnement des moteurs à propergol solide segmentés pour lanceurs spatiaux, (4) :363-391, Paris 1995.
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- [c4] B. Chaouat. Etude de l'influence des conditions aux limites turbulentes d'un écoulement avec injection pariétale, 3 ième colloque R&T. Ecoulements Internes en propulsion solide, (2) :150-159, Poitiers 1998.
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- [c17] B. Chaouat. Continuous hybrid non-zonal RANS/LES simulations of turbulent rotating flows using the PITM method, 7th Symposium on Turbulent Shear Flow Phenomena, (P46P) :1-6 Ottawa 2011.
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- [c22] B. Chaouat. DNS of Passive Scalar Transport Fields in Turbulent Flow at Low and High Prandtl Numbers, 12th International ERCOFTAC Symposium on Engineering Turbulence Modelling and Measurements, (S1) :1-6, Montpellier 2018.
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- [c24] B. Chaouat and R. Schiestel. Contribution to the Variational Calculus of the Hybrid RANS/LES PITM Method for the Simulation of Turbulent Flows, 14th International ERCOFTAC Symposium on Engineering Turbulence Modelling and Measurements, Barcelona 2023.
- [c25] B. Chaouat. Direct Numerical Simulation of Passive Scalar Turbulent Fields with Wall Scalar Fluctuations at Low, Medium and High Prandtl Numbers, 14th International ERCOFTAC Symposium on Engineering Turbulence Modelling and Measurements, Barcelona 2023.