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Expériences

CERFACS **Toulouse**
Chef de projet adjoint CFD *2006–...*

Activité de gestion d'équipe, de montage de projets (nationaux et Européens), d'encadrement de post-doctorants et de doctorants.

CERFACS **Toulouse**
Ingénieur de recherche *2002–2006*

Activité de gestion, montage de projet, d'encadrement, de support et de développement de solveur CFD.

AVL-FRANCE **Paris**
Ingénieur d'étude *1999–2002*

Réalisation d'études numériques avec le logiciel FIRE sur des configurations automobiles. Formation et assistance technique au logiciel FIRE. Développement de fonctions spécifiques aux applications traitées. Détachement chez PSA pour la mise en place d'une méthodologie de simulation d'un moteur à combustion interne.

Education

Von Karman Institute **Rhode-Saint-Genèse**
Diploma course with honours, Numerical option *1996*

Université de Valenciennes **Valenciennes**
DEA de mécanique des fluides, Mention Bien *1995*

ENSIMEV **Valenciennes**
Ingénieur, option Mécanique des fluides *1995*

Publications

M. Catchirayer, **Boussuge, J.-F.**, Sagaut P., Montagnac M., Papadogiannis D., and Garnaud X. Extended integral wall-model for large-eddy simulations of compressible wall-bounded turbulent flows. *Physics of Fluids*, 30(6):065106, 6 2018.

C. Coreixas, G. Wissocq, G. Puigt, **Boussuge, J.-F.**, and P. Sagaut. Recursive regularization step for high-order lattice boltzmann methods. *Physical Review E*, 96(3):033306 (1–22), 2017.

M. Daroukh, S. Moreau, N. Gourdain, **Boussuge, J.-F.**, and C. Sensiau. Effect of distortion on turbofan tonal noise at cutback with hybrid methods. *International Journal of Turbomachinery, Propulsion and Power*, 2(3):16, 2017.

J. Vanharen, G. Puigt, X. Vasseur, **Boussuge, J.-F.**, and P. Sagaut. Revisiting the spectral analysis for high-order spectral discontinuous methods. *Journal of Computational Physics*, 337:379–402, 2017.

S. Bocquet, J.-C. Jouhaud, H. Deniau, **Boussuge, J.-F.**, and M.-J. Esteve. Wall-modelled large-eddy simulation of a hot jet-in-cross-flow with turbulent inflow generation. *Computers and Fluids*, 101(September):136 – 154, 2014.

B. François, M. Laban, M. Costes, G. Dufour, and **Boussuge, J.-F.** In-plane forces prediction and analysis in high-speed conditions on a contra-rotating open rotor. *Journal of Turbomachinery*, 136(8):081002–1–15, 2014.

L. Cambier, M. Gazaix, Sébastien Heib, Sylvie Plot, Marc Poinot, Jean-Pierre Veuillot, **Boussuge, J.-F.**, and M. Montagnac. Cfd platforms and coupling: An overview of the multi-purpose elsa flow solver. *Aerospace Lab*, Issue 2:AL02–10, 2011.

Y. Colin, H. Deniau, and **Boussuge, J.-F.** A robust low speed preconditioning formulation for viscous flow computations. *Computers and Fluids*, 47(1):1 – 15, 2011.

L.Y.M. Gicquel, N. Gourdain, **Boussuge, J.-F.**, H. Deniau, G. Staffelbach, P. Wolf, and Th. Poinsot. High performance parallel computing of flows in complex geometries. *Comptes Rendus Mécanique*, 339(2-3):104 – 124, 2011.

N. Gourdain, L.Y.M. Gicquel, M. Montagnac, O. Vermorel, M. Gazaix, G. Staffelbach, M. Garcia, **Boussuge, J.-F.**, and T. Poinsot. High performance parallel computing of flows in complex geometries - part 1: methods. *Computational Science and Discovery*, 2(November):015003, 2009.

N. Gourdain, L.Y.M. Gicquel, G. Staffelbach, O. Vermorel, F. Duchaine, **Boussuge, J.-F.**, and T. Poinsot. High performance parallel computing of flows in complex geometries - part 2: applications. *Computational Science and Discovery*, 2(November):015004, 2009.

N. Gourdain, M. Montagnac, and **Boussuge, J.-F.** Numerical simulation of an axial compressor with non axisymetric casing treatment. In *Progress in propulsion physics*, pages 593–608, 2009.

C. Coreixas, G. Wissocq, G. Puigt, **Boussuge, J.-F.**, and P. Sagaut. General regularization step for standard and high-order lattice boltzmann methods. In *14th International Conference for Mesoscopic Methods in Engineering and Science*, France, 2017. Ecole Centrale de Nantes.

M. Daroukh, N. Gourdain, S. Moreau, **Boussuge, J.-F.**, and C. Sensiau. Impact of inlet distortion on fan tonal noise. In *Proceedings of 12th European Conference on Turbomachinery Fluid dynamics & Thermodynamics*, pages Paper ID: ETC2017–201, Stockholm, Suede, 2017. KTH.

C. Perez-Arroyo, G. Puigt, **Boussuge, J.-F.**, and C. Airiau. Large eddy simulation of shock-cell noise from a dual stream jet. In *22nd AIAA/CEAS Aeroacoustics Conference*, pages AIAA 2016–2798, Lyon, France, 2016. AIAA.

M. Daroukh, S. Moreau, N. Gourdain, **Boussuge, J.-F.**, and C. Sensiau. Influence of distortion on fan tonal noise. In *22nd AIAA/CEAS Aeroacoustics Conference*, Lyon, France, 5 2016.

R. Biolchini, C. Bailly, **Boussuge, J.-F.**, and R. Fernando. Numerical study on the relation between hydrodynamic fluctuations and noise in hot jets at high reynolds number. In *22nd AIAA/CEAS Aeroacoustics Conference*, pages AIAA 2016–3048, Lyon, France, 2016. AIAA.

R. Biolchini, C. Bailly, M. Koenig, and **Boussuge, J.-F.** Effets de temperature sur le developpement et l'acoustique d'un jet subsonique à nombre de reynolds élevé par simulation des grandes échelles. In *22eme Congrès Français de Mécanique*, Lyon, France, 2015.

A.X. Sengissen, J.-C. Giret, C. Coreixas, and **Boussuge, J.-F.** Simulations of lagoon landing-gear noise using lattice-boltzmann solver. In *21st AIAA/CEAS Aeroacoustics Conference*, Dallas, TX USA, 2015.

D. Kolomenskiy, R. Paoli, and **Boussuge, J.-F.** Hybrid rans–les simulation of wingtip vortex dynamics. In *Proceedings of the ASME 2014 : 4th joint us-european fluids engineering division summer meeting and 12th international conference on nanochannels, microchannels, and minichannels*, Chicago, Illinois, USA, 2014.

H. Deniau, G. Dufour, **Boussuge, J.-F.**, C. Polacsek, and S. Moreau. Affordable compressible les of airfoil-turbulence interaction in a free jet. In *17th AIAA/CEAS aeroacoustics conference*, Portland (USA), 2011.

J. Vanharen, G. Puigt, **Boussuge, J.-F.**, and A. Balan. Optimised runge-kutta time integration for the spectral difference method. In *23rd AIAA Computational Fluid Dynamics Conference*, Denver (USA), 2017.

A. Fosso-Pouangue, H. Deniau, N. Lamarque, **Boussuge, J.-F.**, and S. Moreau. Simulation of a low-mach, high reynolds number jet: first step towards the simulation of jet noise control using micro-jets. In *16th aiaa/ceas aeroacoustics conference*, Stockholm, Sweden, 2010.

A. Fosso-Pouangue, H. Deniau, N. Lamarque, **Boussuge, J.-F.**, and S. Moreau. Sixth-order compact finite volume scheme for aeroacoustics with complex geometries. In *5th European Conference on Computational Fluid Dynamics (ECCOMAS CFD 2010)*, Lisbon, Portugal, 2010.

F. Blanc, F.X. Roux, J.-C. Jouhaud, and **Boussuge, J.-F.** Numerical methods for control surfaces aerodynamics with flexibility effects. In *IFASD 2009*, Seattle, Washington, USA, 2009.

N. Gourdain, M. Stoll, M. Montagnac, and **Boussuge, J.-F.** Numerical investigation of the tip leakage flow in a multistage high pressure compressor. In *Computational Fluid Dynamics 2008*, pages 217–229, Seoul, Korea, 2009.

Y. Colin, B. Aupoix, **Boussuge, J.-F.**, and P. Chanez. Numerical simulation of the distorsion generated by crosswind inlet flows. In *18th isabe 2007*, Beijing, China, 2007.

Y. Colin, B. Aupoix, **Boussuge, J.-F.**, and P. Chanez. Numerical simulation and analysis of crosswind inlet flows at low mach numbers. In *8th isaif*, Lyon France, 2007.