

# SÃ©bastien Deck

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/7669615/publications.pdf>

Version: 2024-02-01

108  
papers

5,998  
citations

136950

32  
h-index

76900

74  
g-index

112  
all docs

112  
docs citations

112  
times ranked

1918  
citing authors

#	ARTICLE	IF	CITATIONS
1	ZDES accounting for transition of the OA209 airfoil in poststall conditions. , 2022, , .		1
2	A comprehensive framework for high fidelity computations of two-species compressible turbulent flows. Journal of Computational Physics, 2022, 462, 111222.	3.8	2
3	Outer layer turbulence dynamics in a high-Reynolds-number boundary layer up to recovering from mild separation. Journal of Fluid Mechanics, 2022, 942, .	3.4	4
4	Assessment of ZDES for WMLES of turbulent boundary layers with pressure gradient and mild flow separation. , 2021, , .		0
5	Assessment of ZDES for WMLES of turbulent boundary layers with pressure gradient and mild flow separation. , 2021, , .		0
6	Numerical workflow for scale-resolving computations of space launcher afterbody flows with and without jets. Computers and Fluids, 2021, 226, 104994.	2.5	4
7	On the coupling of wall-model immersed boundary conditions and curvilinear body-fitted grids for the simulation of complex geometries. Computers and Fluids, 2021, 226, 104996.	2.5	5
8	Validation of correlations-based transition modeling strategies applied to the Spalart-Allmaras turbulence model for the computation of separation-induced transition. Aerospace Science and Technology, 2021, 119, 107045.	4.8	6
9	Towards an enhanced protection of attached boundary layers in hybrid RANS/LES methods. Journal of Computational Physics, 2020, 400, 108970.	3.8	48
10	On the estimation of unsteady aerodynamic forces and wall spectral content with immersed boundary conditions. Computers and Fluids, 2020, 201, 104471.	2.5	5
11	Advanced Numerical Strategy for the Prediction of Unsteady Flow Aerodynamics Around Complex Geometries. Notes on Numerical Fluid Mechanics and Multidisciplinary Design, 2020, , 181-191.	0.3	0
12	A Rapid and Low Noise RANS-to-WMLES Condition in Curvilinear Compressible ZDES Simulations. Notes on Numerical Fluid Mechanics and Multidisciplinary Design, 2020, , 85-95.	0.3	0
13	Towards the Prediction of Fluctuating Wall Quantities Using Immersed Boundary Conditions. , 2019, , .		1
14	On the Resolution of Mean Skin Friction by Hybrid RANS/LES Simulations at High Reynolds Numbers. ERCOFTAC Series, 2019, , 367-372.	0.1	1
15	Large scale dynamics of a high Reynolds number axisymmetric separating/reattaching flow. Physics of Fluids, 2019, 31, .	4.0	14
16	Effects of upstream perturbations on the solution of the laminar and fully turbulent boundary layer equations with pressure gradients. Physics of Fluids, 2019, 31, .	4.0	8
17	Advanced simulations of turbulent boundary layers under pressure-gradient conditions. Physics of Fluids, 2019, 31, 115111.	4.0	10
18	On the WMLES use of ZDES in compressible flows. , 2019, , .		0

#	ARTICLE	IF	CITATIONS
19	A rapid and low noise switch from RANS to WMLES on curvilinear grids with compressible flow solvers. <i>Journal of Computational Physics</i> , 2018, 363, 231-255.	3.8	29
20	On the Convection Velocity of Wall-Bounded Turbulence Resolved by ZDES Mode III at $Re_{\eta} = 13000$ . <i>Notes on Numerical Fluid Mechanics and Multidisciplinary Design</i> , 2018, , 325-336.	0.3	2
21	On the coupling of a zonal body-fitted/immersed boundary method with ZDES: Application to the interactions on a realistic space launcher afterbody flow. <i>Computers and Fluids</i> , 2018, 176, 338-352.	2.5	15
22	On the Coupling of a Zonal Body-Fitted/Immersed Boundary Method with ZDES: Application to the Interactions on a Realistic Space Launcher Afterbody Flow. <i>Notes on Numerical Fluid Mechanics and Multidisciplinary Design</i> , 2018, , 263-270.	0.3	0
23	Effect of Upstream Turbulence on Single and Dual-Stream Jets. Assessment of Zonal Detached Eddy Simulation (ZDES). <i>Notes on Numerical Fluid Mechanics and Multidisciplinary Design</i> , 2018, , 79-89.	0.3	0
24	Zonal Detached Eddy Simulations of a Dual-Stream Jet: Turbulence Rate Sensitivity. <i>AIAA Journal</i> , 2017, 55, 2503-2521.	2.6	3
25	Towards a Physical Scale Decomposition of Mean Skin Friction Generation in the Turbulent Boundary Layer. <i>Springer Proceedings in Physics</i> , 2017, , 59-65.	0.2	1
26	Zonal Detached-Eddy Simulations of a Dual-Stream Jet. <i>AIAA Journal</i> , 2016, 54, 3176-3190.	2.6	21
27	A theoretical decomposition of mean skin friction generation into physical phenomena across the boundary layer. <i>Journal of Fluid Mechanics</i> , 2016, 790, 339-367.	3.4	106
28	Objectives, approach, and scope for the AVT-183 diamond-wing investigations. <i>Aerospace Science and Technology</i> , 2016, 57, 2-17.	4.8	13
29	Zonal Detached-Eddy Simulation Applied to the Tip-Clearance Flow in an Axial Compressor. <i>AIAA Journal</i> , 2016, 54, 2377-2391.	2.6	25
30	Zonal Detached Eddy Simulation (ZDES) of the flow around the AVT-183 diamond wing configuration. <i>Aerospace Science and Technology</i> , 2016, 57, 43-51.	4.8	6
31	Investigation of a Nonlinear Reynolds-Averaged Navier-Stokes Closure for Corner Flows. <i>AIAA Journal</i> , 2016, 54, 386-398.	2.6	16
32	Spectral Assessment of the Turbulent Convection Velocity in a Spatially Developing Flat Plate Turbulent Boundary Layer at Reynolds Number $Re_{\eta} = 13,000$ . <i>ERCOFTAC Series</i> , 2016, , 379-389.	0.1	0
33	On the scale-dependent turbulent convection velocity in a spatially developing flat plate turbulent boundary layer at Reynolds number. <i>Journal of Fluid Mechanics</i> , 2015, 775, 105-148.	3.4	35
34	Numerical and Theoretical Considerations for the Design of the AVT-183 Diamond-Wing Experimental Investigations (Invited). , 2015, , .		10
35	Recent improvements in the formulation of mode III of ZDES (Zonal Detached Eddy Simulation) for WMLES use at $Re_{\eta} > 10^4$ . , 2015, , .		3
36	Improvements in Zonal Detached Eddy Simulation for Wall Modeled Large Eddy Simulation. <i>AIAA Journal</i> , 2015, 53, 3499-3504.	2.6	24

#	ARTICLE	IF	CITATIONS
37	On the Interface Positioning in a Zonal Detached Eddy Simulation (ZDES) of a Spatially Developing Flat Plate Turbulent Boundary Layer. Notes on Numerical Fluid Mechanics and Multidisciplinary Design, 2015, , 203-213.	0.3	4
38	Combining ZDES with Immersed Boundary Conditions Technique for the Treatment of Complex Geometries. Notes on Numerical Fluid Mechanics and Multidisciplinary Design, 2015, , 175-185.	0.3	0
39	On the use of Zonal Immersed Boundary Conditions on a high Reynolds number afterbody flow with a serrated skirt using ZDES. , 2014, , .		1
40	Sensitivity to inflow conditions of a dual-stream nozzle. , 2014, , .		2
41	Zonal Immersed Boundary Conditions: Application to a High-Reynolds-Number Afterbody Flow. AIAA Journal, 2014, 52, 2782-2794.	2.6	26
42	Zonal detached eddy simulation (ZDES) of a spatially developing flat plate turbulent boundary layer over the Reynolds number range $3 \times 10^5 \leq Re \leq 1.4 \times 10^6$ . Physics of Fluids, 2014, 26, .	4.0	49
43	Aerothermal Prediction of Multiple Hot Jets in Crossflow for Aircraft Applications. AIAA Journal, 2014, 52, 1035-1046.	2.6	1
44	Zonal Detached Eddy Simulation of the Flow Around a Simplified Launcher Afterbody. AIAA Journal, 2014, 52, 1967-1979.	2.6	25
45	High-fidelity simulations of unsteady civil aircraft aerodynamics: stakes and perspectives. Application of zonal detached eddy simulation. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2014, 372, 20130325.	3.4	52
46	Comparative study of linear and non-linear RANS models for corner flows. , 2014, , .		0
47	Large-scale contribution to mean wall shear stress in high-Reynolds-number flat-plate boundary layers up to 13650. Journal of Fluid Mechanics, 2014, 743, 202-248.	3.4	92
48	Zonal Detached-Eddy Simulation of an Airfoil in Poststall Condition. AIAA Journal, 2013, 51, 1919-1931.	2.6	15
49	Assessment of Reynolds stresses tensor reconstruction methods for synthetic turbulent inflow conditions. Application to hybrid RANS/LES methods. International Journal of Heat and Fluid Flow, 2013, 42, 68-78.	2.4	29
50	Numerical Investigation of the Robustness of an Axisymmetric Separating/Reattaching Flow to an External Perturbation Using ZDES. Flow, Turbulence and Combustion, 2013, 91, 697-715.	2.6	16
51	Numerical investigation of the flow dynamics past a three-element aerofoil. Journal of Fluid Mechanics, 2013, 732, 401-444.	3.4	94
52	Application of the Scale-Adaptive Simulation to a Hot Jet in Cross Flow. AIAA Journal, 2013, 51, 674-685.	2.6	8
53	Three-dimensional Analysis of the Fluctuating Pressure Field of a Space Launcher Afterbody with Boosters using ZDES. , 2013, , .		0
54	Zonal Detached Eddy Simulation (ZDES) of an airfoil in post-stall condition. , 2012, , .		1

#	ARTICLE	IF	CITATIONS
55	Numerical simulations and physical analysis of an overexpanded reactive gas flow in a planar nozzle. <i>Combustion and Flame</i> , 2012, 159, 2856-2871.	5.2	15
56	Recent improvements in the Zonal Detached Eddy Simulation (ZDES) formulation. <i>Theoretical and Computational Fluid Dynamics</i> , 2012, 26, 523-550.	2.2	302
57	Experimental and Numerical Investigation of a Wing-Body Junction Flow. <i>AIAA Journal</i> , 2012, 50, 2711-2719.	2.6	21
58	Numerical Investigation of the Flow around a Three-Element High-Lift Airfoil Using Two Zonal Hybrid RANS/LES Methods: ZDES and NLDE. <i>Notes on Numerical Fluid Mechanics and Multidisciplinary Design</i> , 2012, , 345-355.	0.3	8
59	Zonal Detached Eddy Simulation (ZDES) study of a 3D curved duct. , 2012, , .		2
60	A dynamic forcing method for unsteady turbulent inflow conditions. <i>Journal of Computational Physics</i> , 2011, 230, 8647-8663.	3.8	57
61	Zonal Detached Eddy Simulation of a spatially developing flat plate turbulent boundary layer. <i>Computers and Fluids</i> , 2011, 48, 1-15.	2.5	71
62	Control of the antisymmetric mode ( $\langle i \rangle_m \langle i \rangle_{\hat{\omega}} = \hat{\omega} \langle i \rangle_1$ ) for high Reynolds axisymmetric turbulent separating/reattaching flows. <i>Physics of Fluids</i> , 2011, 23, .	4.0	41
63	From pressure fluctuations to dynamic loads on axisymmetric step flows with minimal number of kulites. <i>Computers and Fluids</i> , 2010, 39, 747-755.	2.5	7
64	A Combined Experimental, RANS and LES Investigation of a Wing Body Junction Flow. , 2010, , .		6
65	Advanced Experimental and Numerical Investigations of an Aircraft Powerplant Configuration. , 2010, , .		9
66	On the Control of Turbulent Axisymmetric Separating/Reattaching Flows Using Zonal Detached Eddy Simulation. , 2010, , .		1
67	Flow dynamics past a simplified wing body junction. <i>Physics of Fluids</i> , 2010, 22, .	4.0	85
68	Numerical Simulations of a Massively Separated Reactive Flow Using a DDES Approach for Turbulence Modelling. <i>Notes on Numerical Fluid Mechanics and Multidisciplinary Design</i> , 2010, , 303-310.	0.3	1
69	Zonal-Detached Eddy Simulation of a Civil Aircraft Engine Jet Configuration. <i>Notes on Numerical Fluid Mechanics and Multidisciplinary Design</i> , 2010, , 147-156.	0.3	10
70	Large-Eddy Simulation of Transonic Buffet over a Supercritical Airfoil. <i>ERCOFTAC Series</i> , 2010, , 549-554.	0.1	27
71	On the Dynamics of High Reynolds Number Turbulent Axisymmetric and Plane Separating/Reattaching Flows. <i>Notes on Numerical Fluid Mechanics and Multidisciplinary Design</i> , 2010, , 393-400.	0.3	0
72	Improvement of Delayed-Detached Eddy Simulation Applied to Separated Flow over Missile Fin. <i>AIAA Journal</i> , 2009, 47, 345-360.	2.6	28

#	ARTICLE	IF	CITATIONS
73	Experimental Study of Shock Oscillation over a Transonic Supercritical Profile. AIAA Journal, 2009, 47, 1985-1994.	2.6	209
74	On the dynamics of axisymmetric turbulent separating/reattaching flows. Physics of Fluids, 2009, 21, .	4.0	66
75	Delayed detached eddy simulation of the end-effect regime and side-loads in an overexpanded nozzle flow. Shock Waves, 2009, 19, 239-249.	1.9	40
76	Numerical simulation of magnus force control for projectiles configurations. Computers and Fluids, 2009, 38, 965-968.	2.5	6
77	A DES method applied to a Backward Facing Step reactive flow. Comptes Rendus - Mecanique, 2009, 337, 340-351.	2.1	22
78	Large eddy simulation for aerodynamics: status and perspectives. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2009, 367, 2849-2860.	3.4	101
79	Generation of synthetic turbulent inflow data for large eddy simulation of spatially evolving wall-bounded flows. Physics of Fluids, 2009, 21, .	4.0	138
80	Delayed Detached-Eddy Simulation of Supersonic Inlet Buzz. , 2008, , 242-251.		4
81	Zonal-Detached Eddy Simulation of Transonic Buffet on a Civil Aircraft Type Configuration. , 2008, , .		29
82	Zonal-Detached-Eddy-Simulation of a Two-Dimensional and Axisymmetric Separating/Reattaching Flow. , 2008, , .		4
83	Delayed Detached Eddy Simulation of a Premixed Methan Air Flame behind a Backward Facing Step. , 2008, , .		4
84	Delayed Detached-Eddy Simulation and Analysis of Supersonic Inlet Buzz. AIAA Journal, 2008, 46, 118-131.	2.6	98
85	Zonal-Detached Eddy Simulation of Transonic Buffet on a Civil Aircraft Type Configuration. , 2008, , 182-191.		20
86	On the Use of Stimulated Detached Eddy Simulation (SDES) for Spatially Developing Boundary Layers. , 2008, , 67-76.		8
87	Zonal-Detached-Eddy Simulation of Projectiles in the Subsonic and Transonic Regimes. AIAA Journal, 2007, 45, 1606-1619.	2.6	38
88	Zonal Detached Eddy Simulation of a Controlled Propulsive Jet. AIAA Journal, 2007, 45, 2458-2473.	2.6	125
89	Shock patterns in a slightly underexpanded sonic jet controlled by radial injections. Physics of Fluids, 2007, 19, 048104.	4.0	14
90	Unsteadiness of an axisymmetric separating-reattaching flow: Numerical investigation. Physics of Fluids, 2007, 19, 065103.	4.0	121

#	ARTICLE	IF	CITATIONS
91	Delayed Detached-Eddy Simulation of Supersonic Inlet Buzz. , 2007, , .		4
92	Time-Frequency Analysis and Detection of Supersonic Inlet Buzz. AIAA Journal, 2007, 45, 2273-2284.	2.6	70
93	Numerical Study of Mixing Enhancement in a Supersonic Round Jet. AIAA Journal, 2007, 45, 1675-1687.	2.6	49
94	Numerical simulation of the compressible mixing layer past an axisymmetric trailing edge. Journal of Fluid Mechanics, 2007, 591, 215-253.	3.4	103
95	Experimental Study of Supersonic Inlet Buzz. AIAA Journal, 2006, 44, 2354-2365.	2.6	127
96	Numerical Simulations of Projectile Base Flow. , 2006, , .		9
97	Experimental-Numerical Investigation of Mixing Enhancement in Under-expanded Jet. , 2006, , .		1
98	RANS-LES Simulations of Supersonic Base Flow. , 2006, , .		5
99	A New Version of Detached-eddy Simulation, Resistant to Ambiguous Grid Densities. Theoretical and Computational Fluid Dynamics, 2006, 20, 181-195.	2.2	1,908
100	Reynolds-Averaged Navier-Stokes/Large-Eddy Simulations of Supersonic Base Flow. AIAA Journal, 2006, 44, 2578-2590.	2.6	74
101	Zonal-Detached-Eddy Simulation of the Flow Around a High-Lift Configuration. AIAA Journal, 2005, 43, 2372-2384.	2.6	256
102	An Experimental Study of Shock Oscillation over a Transonic Supercritical Profile. , 2005, , .		27
103	Numerical Simulation of Transonic Buffet over a Supercritical Airfoil. AIAA Journal, 2005, 43, 1556-1566.	2.6	297
104	Unsteady Side Loads in a Thrust-Optimized Contour Nozzle at Hysteresis Regime. AIAA Journal, 2004, 42, 1878-1888.	2.6	63
105	Detached-Eddy Simulation of Transonic Buffet over a Supercritical Airfoil. , 2004, , .		4
106	Numerical Simulation of Side Loads in an Ideal Truncated Nozzle. Journal of Propulsion and Power, 2002, 18, 261-269.	2.2	52
107	Turbulence modelling applied to space launcher configurations. Journal of Turbulence, 2002, 3, N57.	1.4	17
108	Development and application of Spalartâ€™Allmaras one equation turbulence model to three-dimensional supersonic complex configurations. Aerospace Science and Technology, 2002, 6, 171-183.	4.8	120