

# Frédéric Alauzet

## List of Publications by Year in descending order

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52  
papers

1,579  
citations

471509

17  
h-index

434195

31  
g-index

53  
all docs

53  
docs citations

53  
times ranked

636  
citing authors

#	ARTICLE	IF	CITATIONS
1	Continuous Mesh Framework Part I: Well-Posed Continuous Interpolation Error. SIAM Journal on Numerical Analysis, 2011, 49, 38-60.	2.3	197
2	High-order sonic boom modeling based on adaptive methods. Journal of Computational Physics, 2010, 229, 561-593.	3.8	150
3	Continuous Mesh Framework Part II: Validations and Applications. SIAM Journal on Numerical Analysis, 2011, 49, 61-86.	2.3	136
4	A decade of progress on anisotropic mesh adaptation for computational fluid dynamics. CAD Computer Aided Design, 2016, 72, 13-39.	2.7	133
5	Magnetic cage and rope as the key for solar eruptions. Nature, 2018, 554, 211-215.	27.8	108
6	3D transient fixed point mesh adaptation for time-dependent problems: Application to CFD simulations. Journal of Computational Physics, 2007, 222, 592-623.	3.8	104
7	A changing-topology moving mesh technique for large displacements. Engineering With Computers, 2014, 30, 175-200.	6.1	70
8	Nitsche-XFEM for the coupling of an incompressible fluid with immersed thin-walled structures. Computer Methods in Applied Mechanics and Engineering, 2016, 301, 300-335.	6.6	58
9	Conservative solution interpolation on unstructured triangular meshes. International Journal for Numerical Methods in Engineering, 2010, 84, 1552-1588.	2.8	57
10	Parallel anisotropic 3D mesh adaptation by mesh modification. Engineering With Computers, 2006, 21, 247-258.	6.1	50
11	Achievement of Global Second Order Mesh Convergence for Discontinuous Flows with Adapted Unstructured Meshes. , 2007, , .		50
12	Time accurate anisotropic goal-oriented mesh adaptation for unsteady flows. Journal of Computational Physics, 2012, 231, 6323-6348.	3.8	49
13	A parallel matrix-free conservative solution interpolation on unstructured tetrahedral meshes. Computer Methods in Applied Mechanics and Engineering, 2016, 299, 116-142.	6.6	41
14	Parallel Generation of Large-size Adapted Meshes. Procedia Engineering, 2015, 124, 57-69.	1.2	28
15	Aligned Metric-based Anisotropic Solution Adaptive Mesh Generation. Procedia Engineering, 2014, 82, 428-444.	1.2	27
16	On the Use of Space Filling Curves for Parallel Anisotropic Mesh Adaptation. , 2009, , 337-357.		27
17	Verification of Anisotropic Mesh Adaptation for Turbulent Simulations over ONERA M6 Wing. AIAA Journal, 2020, 58, 1550-1565.	2.6	25
18	A Numerical Study of Some Hessian Recovery Techniques on Isotropic and Anisotropic Meshes. SIAM Journal of Scientific Computing, 2011, 33, 1058-1076.	2.8	20

#	ARTICLE	IF	CITATIONS
19	An adaptive method for computing unsteady fluid flows. International Journal for Numerical Methods in Engineering, 2010, 84, 1376-1406.	2.8	18
20	High-order methods and mesh adaptation for Euler equations. International Journal for Numerical Methods in Fluids, 2008, 56, 1069-1076.	1.6	17
21	Extension of Metric-Based Anisotropic Mesh Adaptation to Time-Dependent Problems Involving Moving Geometries. , 2011, , .		17
22	Comparing Anisotropic Adaptive Strategies on the Second AIAA Sonic Boom Workshop Geometry. Journal of Aircraft, 2019, 56, 938-952.	2.4	17
23	Verification of Unstructured Grid Adaptation Components. AIAA Journal, 2020, 58, 3947-3962.	2.6	17
24	Time-accurate anisotropic mesh adaptation for three-dimensional time-dependent problems with body-fitted moving geometries. Journal of Computational Physics, 2017, 331, 157-187.	3.8	15
25	Comparing Unstructured Adaptive Mesh Solutions for the High Lift Common Research Airfoil. AIAA Journal, 2021, 59, 3566-3584.	2.6	14
26	Nearfield Anisotropic Mesh Adaptivity for the Third AIAA Sonic Boom Workshop. , 2021, , .		12
27	A New Changing-Topology ALE Scheme for Moving Mesh Unsteady Simulations.. , 2011, , .		11
28	Anisotropic Norm-Oriented Mesh Adaptation for Compressible Flows. , 2015, , .		11
29	Verification of Unstructured Grid Adaptation Components. , 2019, , .		11
30	3D RANS anisotropic mesh adaptation on the high-lift version of NASA's Common Research Model (HL-CRM). , 2019, , .		9
31	A closed advancing-layer method with connectivity optimization-based mesh movement for viscous mesh generation. Engineering With Computers, 2015, 31, 545-560.	6.1	8
32	Three-dimensional CFD simulations with large displacement of the geometries using a connectivity-change moving mesh approach. Engineering With Computers, 2019, 35, 397-422.	6.1	7
33	Comparing Unstructured Adaptive Mesh Solutions for the High Lift Common Research Model Airfoil. , 2020, , .		7
34	Two Mesh Deformation Methods Coupled with a Changing-connectivity Moving Mesh Method for CFD Applications. Procedia Engineering, 2014, 82, 213-227.	1.2	6
35	Optimization of $P^2$ meshes and applications. CAD Computer Aided Design, 2020, 124, 102846.	2.7	6
36	Metric-Based Anisotropic Mesh Adaptation for Three-Dimensional Time-Dependent Problems Involving Moving Geometries. , 2015, , .		5

#	ARTICLE	IF	CITATIONS
37	Some progress on CFD high lift prediction using metric-based anisotropic mesh adaptation. , 2022, , .		5
38	Adaptation de maillages non structurés pour des problèmes instationnaires. Comptes Rendus Mathematique, 2002, 335, 773-778.	0.3	4
39	Anisotropic mesh adaptation for turbomachinery applications. , 2017, , .		4
40	Nonlinear corrector for Reynolds-averaged Navier-Stokes equations. International Journal for Numerical Methods in Fluids, 2019, 91, 557-585.	1.6	4
41	Control of element shape and alignment for 3D solution adaptive mesh generation. CAD Computer Aided Design, 2020, 119, 102750.	2.7	4
42	Anisotropic Goal-Based Mesh Adaptation Metric Clarification and Development. , 2022, , .		4
43	Large displacement body-fitted FSI simulations using a mesh-connectivity-change moving mesh strategy. , 2014, , .		3
44	Anisotropic Goal-Oriented Mesh Adaptation for Time Dependent Problems. , 2011, , 99-121.		3
45	Near-Field Anisotropic Mesh Adaptation for the Third AIAA Sonic Boom Workshop. Journal of Aircraft, 2022, 59, 683-696.	2.4	3
46	Connectivity-change moving mesh methods for high-order meshes: Toward closed advancing-layer high-order boundary layer mesh generation. , 2018, , .		2
47	Verification of Viscous Goal-Based Anisotropic Mesh Adaptation. , 2021, , .		2
48	P2 Mesh Optimization Operators. Lecture Notes in Computational Science and Engineering, 2019, , 3-21.	0.3	1
49	Unstructured anisotropic mesh adaptation for 3D RANS turbomachinery applications. , 2019, , .		1
50	4th AIAA CFD High Lift Prediction Workshop results using metric-based anisotropic mesh adaptation. , 2022, , .		1
51	Mesh-converged adaptive simulations of the NASA Rotor 37 transonic compressor. , 2021, , .		0
52	Non-manifold anisotropic mesh adaptation: application to fluid-structure interaction. Engineering With Computers, 0, , 1.	6.1	0