

Carl F Ollivier-Gooch

List of Publications by Year in descending order

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82
papers

2,837
citations

430874

18
h-index

214800

47
g-index

84
all docs

84
docs citations

84
times ranked

1660
citing authors

#	ARTICLE	IF	CITATIONS
1	Phase-field simulations of interfacial dynamics in viscoelastic fluids using finite elements with adaptive meshing. <i>Journal of Computational Physics</i> , 2006, 219, 47-67.	3.8	345
2	Accuracy preserving limiter for the high-order accurate solution of the Euler equations. <i>Journal of Computational Physics</i> , 2009, 228, 8693-8711.	3.8	336
3	Obtaining and Verifying High-Order Unstructured Finite Volume Solutions to the Euler Equations. <i>AIAA Journal</i> , 2009, 47, 2105-2120.	2.6	323
4	A high-order accurate unstructured finite volume Newton-Krylov algorithm for inviscid compressible flows. <i>Journal of Computational Physics</i> , 2008, 227, 2582-2609.	3.8	322
5	A High-Order-Accurate Unstructured Mesh Finite-Volume Scheme for the Advection-Diffusion Equation. <i>Journal of Computational Physics</i> , 2002, 181, 729-752.	3.8	320
6	Tetrahedral mesh improvement using swapping and smoothing. <i>International Journal for Numerical Methods in Engineering</i> , 1997, 40, 3979-4002.	2.8	304
7	3D phase-field simulations of interfacial dynamics in Newtonian and viscoelastic fluids. <i>Journal of Computational Physics</i> , 2010, 229, 498-511.	3.8	108
8	Quasi-ENO Schemes for Unstructured Meshes Based on Unlimited Data-Dependent Least-Squares Reconstruction. <i>Journal of Computational Physics</i> , 1997, 133, 6-17.	3.8	101
9	Accuracy analysis of unstructured finite volume discretization schemes for diffusive fluxes. <i>Computers and Fluids</i> , 2014, 101, 220-232.	2.5	69
10	Multigrid acceleration of an upwind Euler solver on unstructured meshes. <i>AIAA Journal</i> , 1995, 33, 1822-1827.	2.6	39
11	Guaranteed-quality triangular mesh generation for domains with curved boundaries. <i>International Journal for Numerical Methods in Engineering</i> , 2002, 55, 1185-1213.	2.8	37
12	Effect of discretization order on preconditioning and convergence of a high-order unstructured Newton-GMRES solver for the Euler equations. <i>Journal of Computational Physics</i> , 2008, 227, 2366-2386.	3.8	35
13	Limiters for Unstructured Higher-Order Accurate Solutions of the Euler Equations. , 2008, , .		35
14	A COST/BENEFIT ANALYSIS OF SIMPLICIAL MESH IMPROVEMENT TECHNIQUES AS MEASURED BY SOLUTION EFFICIENCY. <i>International Journal of Computational Geometry and Applications</i> , 2000, 10, 361-382.	0.5	31
15	Globalized matrix-explicit Newton-GMRES for the high-order accurate solution of the Euler equations. <i>Computers and Fluids</i> , 2010, 39, 1156-1167.	2.5	28
16	Coarsening unstructured meshes by edge contraction. <i>International Journal for Numerical Methods in Engineering</i> , 2003, 57, 391-414.	2.8	26
17	On Obtaining High-Order Finite-Volume Solutions to the Euler Equations on Unstructured Meshes. , 2007, , .		26
18	Higher-order unstructured finite volume RANS solution of turbulent compressible flows. <i>Computers and Fluids</i> , 2017, 143, 32-47.	2.5	26

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19	A generalized framework for high order anisotropic mesh adaptation. Computers and Structures, 2009, 87, 670-679.	4.4	19
20	Toward interoperable mesh, geometry and field components for PDE simulation development. Engineering With Computers, 2008, 24, 165-182.	6.1	18
21	Tetrahedral mesh generation using Delaunay refinement with non-standard quality measures. International Journal for Numerical Methods in Engineering, 2011, 87, 795-820.	2.8	15
22	Matrix-Explicit GMRES for a Higher-Order Accurate Inviscid Compressible Flow Solver. , 2007, , .		14
23	Unstructured High-Order Accurate Finite-Volume Solutions of the Navier-Stokes Equations. , 2009, , .		14
24	An Interoperable, Data-Structure-Neutral Component for Mesh Query and Manipulation. ACM Transactions on Mathematical Software, 2010, 37, 1-28.	2.9	14
25	A variational flexible multibody formulation for partitioned fluid-structure interaction: Application to bat-inspired drones and unmanned air-vehicles. Computers and Mathematics With Applications, 2020, 80, 2707-2737.	2.7	14
26	Guaranteed-Quality Simplicial Mesh Generation with Cell Size and Grading Control. Engineering With Computers, 2001, 17, 269-286.	6.1	13
27	Improving finite-volume diffusive fluxes through better reconstruction. Computers and Fluids, 2016, 139, 216-232.	2.5	12
28	Adjoint-Based Functional Correction for Unstructured Mesh Finite Volume Methods. Journal of Scientific Computing, 2018, 76, 1-23.	2.3	11
29	Relinearization of the error transport equations for arbitrarily high-order error estimates. Journal of Computational Physics, 2019, 397, 108867.	3.8	10
30	Mesh optimization to improve the stability of finite-volume methods on unstructured meshes. Computers and Fluids, 2017, 156, 590-601.	2.5	9
31	On Efficiently Obtaining Higher Order Accurate Discretization Error Estimates for Unstructured Finite Volume Methods Using the Error Transport Equation. Journal of Verification, Validation and Uncertainty Quantification, 2017, 2, .	0.4	9
32	CONSTRUCTING CONSTRAINED DELAUNAY TETRAHEDRALIZATIONS OF VOLUMES BOUNDED BY PIECEWISE SMOOTH SURFACES. International Journal of Computational Geometry and Applications, 2011, 21, 571-594.	0.5	8
33	Smoothed truncation error in functional error estimation and correction using adjoint methods in an unstructured finite volume solver. Computers and Fluids, 2016, 140, 406-421.	2.5	8
34	Inserting a surface into an existing unstructured mesh. International Journal for Numerical Methods in Engineering, 2016, 106, 484-500.	2.8	8
35	A toolkit for numerical simulation of PDEs: I. Fundamentals of generic finite-volume simulation. Computer Methods in Applied Mechanics and Engineering, 2003, 192, 1147-1175.	6.6	7
36	Towards higher order discretization error estimation by error transport using unstructured finite-volume methods for unsteady problems. Computers and Fluids, 2017, 154, 245-255.	2.5	7

#	ARTICLE	IF	CITATIONS
37	A toolkit for numerical simulation of PDEs. II. Solving generic multiphysics problems. Computer Methods in Applied Mechanics and Engineering, 2004, 193, 3891-3918.	6.6	6
38	Numerical Simulation and Experimental Measurement of Pressure Pulses Produced by a Pulp Screen Foil Rotor. Journal of Fluids Engineering, Transactions of the ASME, 2005, 127, 347-357.	1.5	6
39	A High-Order Accurate Unstructured GMRES Algorithm for Inviscid Compressible Flows. , 2005, , .		6
40	Two-dimensional Delaunay-based anisotropic mesh adaptation. Engineering With Computers, 2010, 26, 407-418.	6.1	6
41	Applications of the Unsteady Error Transport Equation on Unstructured Meshes. AIAA Journal, 2018, 56, 4463-4473.	2.6	6
42	A new class of ENO schemes based on unlimited data-dependent least-squares reconstruction. , 1996, , .		5
43	An unstructured mesh improvement toolkit with application to mesh improvement, generation and (de-)refinement. , 1998, , .		5
44	The TSTT Mesh Interface. , 2006, , .		5
45	Interoperable mesh and geometry tools for advanced petascale simulations. Journal of Physics: Conference Series, 2007, 78, 012015.	0.4	5
46	A novel approach to mesh optimization to stabilize unstructured finite volume simulations. Journal of Computational Physics, 2022, 453, 110959.	3.8	5
47	A Mesh-Database-Independent Edge- and Face-Swapping Tool. , 2006, , .		4
48	High Order Aerodynamic Optimization Using New Hybrid Sequential Quadratic Programming-Particle Swarm Intelligence Technique. , 2012, , .		4
49	An efficient implicit unstructured finite volume solver for generalised Newtonian fluids. International Journal of Computational Fluid Dynamics, 2016, 30, 201-217.	1.2	4
50	An hp-Adaptive Unstructured Finite Volume Solver for Compressible Aerodynamic Flows. , 2017, , .		4
51	An <i>hp</i> -adaptive unstructured finite volume solver for compressible flows. International Journal for Numerical Methods in Fluids, 2017, 85, 563-582.	1.6	4
52	Accuracy Assessment Methodology for a Higher-Order Unstructured Finite Volume Solver. , 2007, , .		3
53	Effect of Discretization Order on Preconditioning and Convergence of a Higher-Order Unstructured Newton-Krylov Solver for Inviscid Compressible Flows. , 2007, , .		3
54	Interoperable mesh components for large-scale, distributed-memory simulations. Journal of Physics: Conference Series, 2009, 180, 012011.	0.4	3

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55	Inserting a Curve into an Existing Two Dimensional Unstructured Mesh. , 2014, , 93-107.		3
56	Accuracy of Discretization Error Estimation by the Error Transport Equation on Unstructured Meshes. , 2015, , .		3
57	Thread-parallel mesh improvement using face and edge swapping and vertex insertion. Computational Geometry: Theory and Applications, 2018, 70-71, 31-48.	0.5	3
58	Mesh adaptation using C^1 interpolation of the solution in an unstructured finite volume solver. International Journal for Numerical Methods in Fluids, 2018, 86, 637-654.	1.6	3
59	Stability analysis and improvement of the solution reconstruction for cell-centered finite volume methods on unstructured meshes. Journal of Computational Physics, 2019, 393, 375-405.	3.8	3
60	Robust coarsening of unstructured meshes for multigrid methods. , 1999, , .		2
61	A Language-Independent API for Unstructured Mesh Access and Manipulation. , 2007, , .		2
62	Numerical Calculation of Quench Distance for Laminar Premixed Flames Under Engine Relevant Conditions. , 0, , .		2
63	Tetrahedral mesh improvement using swapping and smoothing. , 1997, 40, 3979.		2
64	High-Order Accurate Reconstruction-Based Unstructured Mesh Finite-Volume Schemes: Status and Challenges. , 2009, , .		1
65	A Numerical Investigation into the Effectiveness of Multi-Element Pressure Screen Rotor Foils. Journal of Fluids Engineering, Transactions of the ASME, 2009, 131, .	1.5	1
66	Reconstruction Map Stability Analysis for Cell Centered Finite Volume Methods on Unstructured Meshes. , 2017, , .		1
67	Boundary condition optimization to improve the stability of inviscid and compressible finite-volume methods on unstructured meshes. Computers and Fluids, 2020, 199, 104418.	2.5	1
68	Smooth Gradation of Anisotropic Meshes Using Log-Euclidean Metrics. AIAA Journal, 0, , 1-18.	2.6	1
69	Delaunay-Based Anisotropic Mesh Adaptation. , 2008, , 141-157.		1
70	Computational Study of the Flow Around a Ducted Tip Hydrofoil. , 2002, , .		1
71	Yield surface and strain-hardening properties of Cordova cream limestone. International Journal of Rock Mechanics and Mining Sciences, 1989, 26, 373-380.	0.0	0
72	Numerical Experiments for Flow Around a Ducted Tip Hydrofoil. , 2002, , 289.		0

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73	Computational Study of the Flow Around a Ducted Tip Hydrofoil. Journal of Fluids Engineering, Transactions of the ASME, 2005, 127, 172-176.	1.5	0
74	Higher Order Two Dimensional Aerodynamic Optimization Using Unstructured Grids and Adjoint Sensitivity Computations. , 2010, , .		0
75	Constrained and Unconstrained Aerodynamic Quadratic Programming Optimization Using High Order Finite Volume Method and Adjoint Sensitivity Computations. , 2011, , .		0
76	HIGH-ORDER FINITE-VOLUME DISCRETIZATION OF THE EULER EQUATIONS ON UNSTRUCTURED MESHES. Advances in Computational Fluid Dynamics, 2011, , 235-268.	0.1	0
77	Output Error Correction and Mesh Adaptation for Unstructured Mesh Finite Volume Method. , 2017, , .		0
78	A Posteriori Stability Analysis and Improvement for Finite Volume Methods on Unstructured Meshes. , 2017, , .		0
79	Efficient Convergence for a Higher-Order Unstructured Finite Volume Solver for Compressible Flows. AIAA Journal, 2020, 58, 1490-1505.	2.6	0
80	Experimental Measurement of Pressure Pulses From a Pulp Screen Rotor. , 2010, , .		0
81	Anisotropic Tetrahedral Mesh Adaptation with Improved Metric Alignment and Orthogonality. CAD Computer Aided Design, 2021, 143, 103136.	2.7	0
82	A High-Order Accurate Unstructured GMRES Solver for the Compressible Euler Equations. , 2006, , 435-440.		0