

# Phillip Colella

## List of Publications by Year in descending order

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62  
papers

12,571  
citations

117625

34  
h-index

197818

49  
g-index

62  
all docs

62  
docs citations

62  
times ranked

6083  
citing authors

#	ARTICLE	IF	CITATIONS
1	A single-stage flux-corrected transport algorithm for high-order finite-volume methods. Communications in Applied Mathematics and Computational Science, 2017, 12, 1-24.	1.8	3
2	High-order finite-volume methods on locally-structured grids. Discrete and Continuous Dynamical Systems, 2016, 36, 4247-4270.	0.9	3
3	High-accuracy embedded boundary grid generation using the divergence theorem. Communications in Applied Mathematics and Computational Science, 2015, 10, 83-96.	1.8	9
4	A freestream-preserving fourth-order finite-volume method in mapped coordinates with adaptive-mesh refinement. Computers and Fluids, 2015, 123, 202-217.	2.5	40
5	A cartesian grid embedded boundary method for the compressible Navier–Stokes equations. Communications in Applied Mathematics and Computational Science, 2013, 8, 99-122.	1.8	22
6	A Freestream-Preserving High-Order Finite-Volume Method for Mapped Grids with Adaptive-Mesh Refinement. , 2012, , .		10
7	A Fourth-Order Accurate Finite-Volume Method with Structured Adaptive Mesh Refinement for Solving the Advection-Diffusion Equation. SIAM Journal of Scientific Computing, 2012, 34, B179-B201.	2.8	55
8	A high-order finite-volume method for conservation laws on locally refined grids. Communications in Applied Mathematics and Computational Science, 2011, 6, 1-25.	1.8	132
9	An adaptive cut-cell method for environmental fluid mechanics. International Journal for Numerical Methods in Fluids, 2009, 60, 473-514.	1.6	33
10	A higher-order upwind method for viscoelastic flow. Communications in Applied Mathematics and Computational Science, 2009, 4, 57-83.	1.8	6
11	A limiter for PPM that preserves accuracy at smooth extrema. Journal of Computational Physics, 2008, 227, 7069-7076.	3.8	132
12	A cell-centered adaptive projection method for the incompressible Navier–Stokes equations in three dimensions. Journal of Computational Physics, 2008, 227, 1863-1886.	3.8	65
13	Performance and scaling of locally-structured grid methods for partial differential equations. Journal of Physics: Conference Series, 2007, 78, 012013.	0.4	24
14	A local corrections algorithm for solving Poisson’s equation in three dimensions. Communications in Applied Mathematics and Computational Science, 2007, 2, 57-81.	1.8	26
15	A modified higher order Godunov’s scheme for stiff source conservative hydrodynamics. Journal of Computational Physics, 2007, 224, 519-538.	3.8	25
16	Block structured adaptive mesh and time refinement for hybrid, hyperbolic+N-body systems. Journal of Computational Physics, 2007, 227, 400-430.	3.8	47
17	A Cartesian grid embedded boundary method for hyperbolic conservation laws. Journal of Computational Physics, 2006, 211, 347-366.	3.8	161
18	A Cartesian grid embedded boundary method for the heat equation and Poisson’s equation in three dimensions. Journal of Computational Physics, 2006, 211, 531-550.	3.8	101

#	ARTICLE	IF	CITATIONS
19	An anelastic allspeed projection method for gravitationally stratified flows. Journal of Computational Physics, 2006, 216, 589-615.	3.8	29
20	A fourth-order accurate local refinement method for Poisson's equation. Journal of Computational Physics, 2005, 209, 1-18.	3.8	60
21	An unsplit, cell-centered Godunov method for ideal MHD. Journal of Computational Physics, 2005, 203, 422-448.	3.8	48
22	Numerical computation of diffusion on a surface. Proceedings of the National Academy of Sciences of the United States of America, 2005, 102, 11151-11156.	7.1	43
23	A node-centered local refinement algorithm for Poisson's equation in complex geometries. Journal of Computational Physics, 2004, 201, 34-60.	3.8	39
24	Volume-of-Fluid Methods for Partial Differential Equations. , 2001, , 161-177.		15
25	A Projection Method for Incompressible Viscous Flow on Moving Quadrilateral Grids. Journal of Computational Physics, 2001, 166, 191-217.	3.8	21
26	A Cartesian Grid Embedded Boundary Method for the Heat Equation on Irregular Domains. Journal of Computational Physics, 2001, 173, 620-635.	3.8	126
27	A Cell-Centered Adaptive Projection Method for the Incompressible Euler Equations. Journal of Computational Physics, 2000, 163, 271-312.	3.8	91
28	A Numerical Model for Trickle Bed Reactors. Journal of Computational Physics, 2000, 165, 311-333.	3.8	29
29	An Adaptive Level Set Approach for Incompressible Two-Phase Flows. Journal of Computational Physics, 1999, 148, 81-124.	3.8	560
30	A Conservative Finite Difference Method for the Numerical Solution of Plasma Fluid Equations. Journal of Computational Physics, 1999, 149, 168-193.	3.8	40
31	A Projection Method for Low Speed Flows. Journal of Computational Physics, 1999, 149, 245-269.	3.8	51
32	Numerical Solution of Plasma Fluid Equations Using Locally Refined Grids. Journal of Computational Physics, 1999, 152, 550-583.	3.8	35
33	A Conservative Adaptive Projection Method for the Variable Density Incompressible Navier-Stokes Equations. Journal of Computational Physics, 1998, 142, 1-46.	3.8	430
34	A Cartesian Grid Embedded Boundary Method for Poisson's Equation on Irregular Domains. Journal of Computational Physics, 1998, 147, 60-85.	3.8	367
35	Sequential Semi-Implicit Algorithm for Computing Discontinuous Flows in Porous Media. SPE Journal, 1998, 3, 200-208.	3.1	0
36	Steady-state solution-adaptive Euler computations on structured grids. , 1998, , .		1

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37	A Cartesian Grid Projection Method for the Incompressible Euler Equations in Complex Geometries. SIAM Journal of Scientific Computing, 1997, 18, 1289-1309.	2.8	97
38	An Adaptive Cartesian Grid Method for Unsteady Compressible Flow in Irregular Regions. Journal of Computational Physics, 1995, 120, 278-304.	3.8	256
39	An adaptive multifluid interface-capturing method for compressible flow in complex geometries. , 1995, , .		9
40	An adaptive semi-implicit scheme for simulations of unsteady viscous compressible flows. , 1995, , .		7
41	A cell-centered Cartesian grid projection method for the incompressible Euler equations in complex geometries. , 1995, , .		7
42	A Front Tracking Method for Compressible Flames in One Dimension. SIAM Journal of Scientific Computing, 1995, 16, 755-772.	2.8	22
43	A Higher-Order Godunov Method for Multidimensional Ideal Magnetohydrodynamics. SIAM Journal of Scientific Computing, 1994, 15, 263-284.	2.8	158
44	An adaptive projection method for the incompressible Euler equations. , 1993, , .		15
45	An efficient second-order projection method for viscous incompressible flow. , 1991, , .		44
46	Conservative front-tracking for inviscid compressible flow. , 1991, , .		15
47	A higher-order Godunov method for modeling finite deformation in elastic-plastic solids. Communications on Pure and Applied Mathematics, 1991, 44, 41-100.	3.1	96
48	Multidimensional upwind methods for hyperbolic conservation laws. Journal of Computational Physics, 1990, 87, 171-200.	3.8	694
49	A second-order projection method for the incompressible navier-stokes equations. Journal of Computational Physics, 1989, 85, 257-283.	3.8	1,037
50	Higher order Godunov methods for general systems of hyperbolic conservation laws. Journal of Computational Physics, 1989, 82, 362-397.	3.8	152
51	Nonequilibrium effects in oblique shock-wave reflection. AIAA Journal, 1988, 26, 698-705.	2.6	23
52	Adaptive methods for high Mach number reacting flow. , 1987, , .		5
53	Theoretical and Numerical Structure for Reacting Shock Waves. SIAM Journal on Scientific and Statistical Computing, 1986, 7, 1059-1080.	1.5	174
54	An implicit-explicit hybrid method for Lagrangian hydrodynamics. Journal of Computational Physics, 1986, 63, 283-310.	3.8	43

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55	Efficient solution algorithms for the Riemann problem for real gases. Journal of Computational Physics, 1985, 59, 264-289.	3.8	456
56	A Direct Eulerian MUSCL Scheme for Gas Dynamics. SIAM Journal on Scientific and Statistical Computing, 1985, 6, 104-117.	1.5	286
57	Numerical calculation of complex shock reflections in gases. , 1985, , 154-158.		5
58	Application of the Godunov method and its second-order extension to cascade flow modeling. AIAA Journal, 1984, 22, 1609-1615.	2.6	70
59	The numerical simulation of two-dimensional fluid flow with strong shocks. Journal of Computational Physics, 1984, 54, 115-173.	3.8	2,600
60	The Piecewise Parabolic Method (PPM) for gas-dynamical simulations. Journal of Computational Physics, 1984, 54, 174-201.	3.8	3,220
61	Glimm's Method for Gas Dynamics. SIAM Journal on Scientific and Statistical Computing, 1982, 3, 76-110.	1.5	182
62	High resolution difference schemes for compressible gas dynamics. , 1981, , 434-441.		19