Eleuterio F Toro

List of Publications by Year
in descending order

82 papers	10,806 citations	76294 40 h-index	71651 76 g-index
82 all docs	82 docs citations	82 times ranked	4352 citing authors

#	Article	IF	Citations
1	Restoration of the contact surface in the HLL-Riemann solver. Shock Waves, 1994, 4, 25-34.	1.0	2,026
2	Riemann Solvers and Numerical Methods for Fluid Dynamics. , 2009, , .		1,327
3	A unified framework for the construction of one-step finite volume and discontinuous Galerkin schemes on unstructured meshes. Journal of Computational Physics, 2008, 227, 8209-8253.	1.9	761
4	Riemann Solvers and Numerical Methods for Fluid Dynamics. , 1997, , .		663
5	Quadrature-free non-oscillatory finite volume schemes on unstructured meshes for nonlinear hyperbolic systems. Journal of Computational Physics, 2007, 226, 204-243.	1.9	549
6	ADER: Arbitrary High Order Godunov Approach. Journal of Scientific Computing, 2002, 17, 609-618.	1.1	364
7	Finite-volume WENO schemes for three-dimensional conservation laws. Journal of Computational Physics, 2004, 201, 238-260.	1.9	330
8	Experimental and numerical assessment of the shallow water model for two-dimensional dam-break type problems. Journal of Hydraulic Research/De Recherches Hydrauliques, 1995, 33, 843-864.	0.7	305
9	ADER schemes for three-dimensional non-linear hyperbolic systems. Journal of Computational Physics, 2005, 204, 715-736.	1.9	289
10	Finite volume schemes of very high order of accuracy for stiff hyperbolic balance laws. Journal of Computational Physics, 2008, 227, 3971-4001.	1.9	259
11	An arbitrary high-order Discontinuous Galerkin method for elastic waves on unstructured meshes - V. Local time stepping andp-adaptivity. Geophysical Journal International, 2007, 171, 695-717.	1.0	233
12	Solution of the generalized Riemann problem for advectionâ€“reaction equations. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2002, 458, 271-281.	1.0	220
13	A Simple Extension of the Osher Riemann Solver toÂNon-conservative Hyperbolic Systems. Journal of Scientific Computing, 2011, 48, 70-88.	1.1	177
14	A global multiscale mathematical model for the human circulation with emphasis on the venous system. International Journal for Numerical Methods in Biomedical Engineering, 2014, 30, 681-725.	1.0	165
15	Derivative Riemann solvers for systems of conservation laws and ADER methods. Journal of Computational Physics, 2006, 212, 150-165.	1.9	154
16	AOn WAF-Type Schemes for Multidimensional Hyperbolic Conservation Laws. Journal of Computational Physics, 1997, 130, 1-24.	1.9	133
17	On Universal Osher-Type Schemes for General Nonlinear Hyperbolic Conservation Laws. Communications in Computational Physics, 2011, 10, 635-671.	0.7	125
18	HLLC-type Riemann solver for the Baerâ€“Nunziato equations of compressible two-phase flow. Journal of Computational Physics, 2010, 229, 3573-3604.	1.9	124

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19	FORCE schemes on unstructured meshes II: Non-conservative hyperbolic systems. Computer Methods in Applied Mechanics and Engineering, 2010, 199, 625-647.	3.4	119
20	Flux splitting schemes for the Euler equations. Computers and Fluids, 2012, 70, 1-12.	1.3	119
21	Towards Very High Order Godunov Schemes. , 2001, , 907-940.		113
22	Well-balanced high-order centred schemes for non-conservative hyperbolic systems. Applications to shallow water equations with fixed and mobile bed. Advances in Water Resources, 2009, 32, 834-844.	1.7	112
23	Godunov-type methods for free-surface shallow flows: A review. Journal of Hydraulic Research/De Recherches Hydrauliques, 2007, 45, 736-751.	0.7	108
24	ADER schemes for scalar non-linear hyperbolic conservation laws with source terms in three-space dimensions. Journal of Computational Physics, 2005, 202, 196-215.	1.9	105
25	ADER: A High-Order Approach for Linear Hyperbolic Systems in 2D. Journal of Scientific Computing, 2002, 17, 231-240.	1.1	104
26	FORCE schemes on unstructured meshes I: Conservative hyperbolic systems. Journal of Computational Physics, 2009, 228, 3368-3389.	1.9	104
27	Numerical study of wave propagation in compressible two-phase flow. International Journal for Numerical Methods in Fluids, 2007, 54, 393-417.	0.9	98
28	On Riemann solvers for compressible liquids. International Journal for Numerical Methods in Fluids, 1998, 28, 395-418.	0.9	94
29	Solvers for the high-order Riemann problem for hyperbolic balance laws. Journal of Computational Physics, 2008, 227, 2481-2513.	1.9	85
30	Well-balanced high-order numerical schemes for one-dimensional blood flow in vessels with varying mechanical properties. Journal of Computational Physics, 2013, 242, 53-85.	1.9	85
31	Wellâ€balanced highâ€order solver for blood flow in networks of vessels with variable properties. International Journal for Numerical Methods in Biomedical Engineering, 2013, 29, 1388-1411.	1.0	82
32	MUSTA fluxes for systems of conservation laws. Journal of Computational Physics, 2006, 216, 403-429.	1.9	68
33	Flow in Collapsible Tubes with Discontinuous Mechanical Properties: Mathematical Model and Exact Solutions. Communications in Computational Physics, 2013, 13, 361-385.	0.7	67
34	Enhanced global mathematical model for studying cerebral venous blood flow. Journal of Biomechanics, 2014, 47, 3361-3372.	0.9	66
35	WENO schemes based on upwind and centred TVD fluxes. Computers and Fluids, 2005, 34, 705-720.	1.3	54
36	Hyperbolic reformulation of a 1D viscoelastic blood flow model and ADER finite volume schemes. Journal of Computational Physics, 2014, 266, 101-123.	1.9	53

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37	ADER finite volume schemes for nonlinear reactionâ€“diffusion equations. Applied Numerical Mathematics, 2009, 59, 73-100.	1.2	51
38	Comparison of solvers for the generalized Riemann problem for hyperbolic systems with source terms. Journal of Computational Physics, 2012, 231, 6472-6494.	1.9	51
39	TVD Fluxes for the High-Order ADER Schemes. Journal of Scientific Computing, 2005, 24, 285-309.	1.1	50
40	MUSTA-type upwind fluxes for non-linear elasticity. International Journal for Numerical Methods in Engineering, 2008, 73, 897-926.	1.5	50
41	Advection-Diffusion-Reaction Equations: Hyperbolization and High-Order ADER Discretizations. SIAM Journal of Scientific Computing, 2014, 36, A2423-A2457.	1.3	47
42	Brain venous haemodynamics, neurological diseases and mathematical modelling. A review. Applied Mathematics and Computation, 2016, 272, 542-579.	1.4	47
43	Reformulations for general advectionâ€“diffusionâ€“reaction equations and locally implicit ADER schemes. Journal of Computational Physics, 2014, 275, 415-442.	1.9	42
44	A projection hybrid high order finite volume/finite element method for incompressible turbulent flows. Journal of Computational Physics, 2018, 353, 169-192.	1.9	42
45	The HLLC Riemann solver. Shock Waves, 2019, 29, 1065-1082.	1.0	42
46	Riemann solvers with evolved initial conditions. International Journal for Numerical Methods in Fluids, 2006, 52, 433-453.	0.9	35
47	MUSTA schemes for multi-dimensional hyperbolic systems: analysis and improvements. International Journal for Numerical Methods in Fluids, 2005, 49, 117-147.	0.9	34
48	A Riemann solver and upwind methods for a two-phase flow model in non-conservative form. International Journal for Numerical Methods in Fluids, 2006, 50, 275-307.	0.9	33
49	Design and analysis of ADER-type schemes for model advectionâ€“diffusionâ€“reaction equations. Journal of Computational Physics, 2016, 327, 553-575.	1.9	28
50	Adaptive Osher-type scheme for the Euler equations with highly nonlinear equations of state. Journal of Computational Physics, 2013, 246, 165-183.	1.9	27
51	Impact of Jugular Vein Valve Function on Cerebral Venous Haemodynamics. Current Neurovascular Research, 2015, 12, 384-397.	0.4	26
52	The development of a Riemann solver for the steady supersonic Euler equations. Aeronautical Journal, 1994, 98, 325-339.	1.1	24
53	CENTERED DIFFERENCE SCHEMES FOR NONLINEAR HYPERBOLIC EQUATIONS. Journal of Hyperbolic Differential Equations, 2004, 01, 531-566.	0.3	24
54	Implicit, semi-analytical solution of the generalized Riemann problem for stiff hyperbolic balance laws. Journal of Computational Physics, 2015, 303, 146-172.	1.9	24

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55	A novel numerical flux for the 3D Euler equations with general equation of state. Journal of Computational Physics, 2015, 303, 80-94.	1.9	24
56	NUMERICAL SOLUTION FOR HYPERBOLIC CONSERVATIVE TWO-PHASE FLOW EQUATIONS. International Journal of Computational Methods, 2007, 04, 299-333.	0.8	23
57	Cerebrospinal fluid dynamics coupled to the global circulation in holistic setting: Mathematical models, numerical methods and applications. International Journal for Numerical Methods in Biomedical Engineering, 2022, 38, e3532.	1.0	20
58	Impact of CCSVI on cerebral haemodynamics: a mathematical study using MRI angiographic and flow data. Phlebology, 2016, 31, 305-324.	0.6	19
59	Exploring various flux vector splittings for the magnetohydrodynamic system. Journal of Computational Physics, 2016, 311, 1-21.	1.9	17
60	A fully well-balanced scheme for the 1D blood flow equations with friction source term. Journal of Computational Physics, 2020, 421, 109750.	1.9	17
61	Analysis of ADER and ADER-WAF schemes. IMA Journal of Numerical Analysis, 2006, 27, 616-630.	1.5	16
62	A one-dimensional mathematical model of collecting lymphatics coupled with an electro-fluid-mechanical contraction model and valve dynamics. Biomechanics and Modeling in Mechanobiology, 2018, 17, 1687-1714.	1.4	16
63	A flux splitting method for the Baerâ€“Nunziato equations of compressible two-phase flow. Journal of Computational Physics, 2016, 323, 45-74.	1.9	14
64	On the exact solution of the Riemann problem for blood flow in human veins, including collapse. Applied Mathematics and Computation, 2017, 303, 178-189.	1.4	12
65	A Second-Order Cell-Centered Lagrangian Method for Two-Dimensional Elastic-Plastic Flows. Communications in Computational Physics, 2017, 22, 1224-1257.	0.7	12
66	A Finite Volume Upwind-Biased Centred Scheme for Hyperbolic Systems of Conservation Laws: Application to Shallow Water Equations. Communications in Computational Physics, 2012, 12, 1183-1214.	0.7	11
67	ADER Methods for Hyperbolic Equations with a Time-Reconstruction Solver for the Generalized Riemann Problem: the Scalar Case. Communications on Applied Mathematics and Computation, 2020, 2, 369-402.	0.7	11
68	Roeâ€type Riemann solvers for general hyperbolic systems. International Journal for Numerical Methods in Fluids, 2014, 75, 467-486.	0.9	10
69	FULLY DISCRETE HIGH-ORDER SHOCK-CAPTURING NUMERICAL SCHEMES. International Journal for Numerical Methods in Fluids, 1996, 23, 241-269.	0.9	8
70	On Hybrid High Resolution Upwind Methods for Multicomponent Flows. ZAMM Zeitschrift Fur Angewandte Mathematik Und Mechanik, 1997, 77, 645-668.	0.9	8
71	AENO: a Novel Reconstruction Method in Conjunction with ADER Schemes for Hyperbolic Equations. Communications on Applied Mathematics and Computation, 0, , 1.	0.7	7
72	On the Accuracy and Stability of Explicit Schemes for Multidimensional Linear Homogeneous Advection Equations. Journal of Computational Physics, 1997, 131, 247-250.	1.9	6

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73	The Riemann Problem. Handbook of Numerical Analysis, 2016, 17, 19-54.	0.9	6
74	Low-dissipation centred schemes for hyperbolic equations in conservative and non-conservative form. Journal of Computational Physics, 2020, 416, 109545.	1.9	6
75	A splitting scheme for the coupled Saint-Venant-Exner model. Advances in Water Resources, 2022, 159, 104062.	1.7	6
76	A Computational Model for the Dynamics of Cerebrospinal Fluid in the Spinal Subarachnoid Space. Journal of Biomechanical Engineering, 2019, 141, .	0.6	5
77	On Riemann solvers for compressible liquids. , 1998, 28, 395.		5
78	Total Effective Vascular Compliance of a Global Mathematical Model for the Cardiovascular System. Symmetry, 2021, 13, 1858.	1.1	4
79	A fluxâ€vector splitting scheme for the shallow water equations extended to highâ€order on unstructured meshes. International Journal for Numerical Methods in Fluids, 2022, 94, 1679-1705.	0.9	3
80	FULLY DISCRETE HIGH-RESOLUTION SCHEMES FOR HYPERBOLIC CONSERVATION LAWS. International Journal for Numerical Methods in Fluids, 1996, 23, 309-323.	0.9	2
81	Exact solution of some hyperbolic systems with source terms. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2003, 459, 263-271.	1.0	1
82	A Projection Hybrid Finite Volume-ADER/Finite Element Method for Turbulent Navier-Stokes. SEMA SIMAI Springer Series, 2017, , 201-206.	0.4	0