

Andrea Lani

List of Publications by Year in descending order

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54
papers

894
citations

430874

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501196

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g-index

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all docs

55
docs citations

55
times ranked

439
citing authors

#	ARTICLE	IF	CITATIONS
1	Assessment of CFD capability for prediction of hypersonic shock interactions. Progress in Aerospace Sciences, 2012, 48-49, 8-26.	12.1	104
2	Collisional radiative coarse-grain model for ionization in air. Physics of Fluids, 2013, 25, .	4.0	73
3	Assessment of predictive capabilities for aerodynamic heating in hypersonic flow. Progress in Aerospace Sciences, 2017, 90, 39-53.	12.1	65
4	Modeling of non-equilibrium phenomena in expanding flows by means of a collisional-radiative model. Physics of Plasmas, 2013, 20, .	1.9	56
5	A finite volume implicit time integration method for solving the equations of ideal magnetohydrodynamics for the hyperbolic divergence cleaning approach. Journal of Computational Physics, 2011, 230, 6136-6154.	3.8	38
6	Multi-fluid Modeling of Magnetosonic Wave Propagation in the Solar Chromosphere: Effects of Impact Ionization and Radiative Recombination. Astrophysical Journal, 2017, 836, 197.	4.5	37
7	The COOLfluid Framework: Design Solutions for High Performance Object Oriented Scientific Computing Software. Lecture Notes in Computer Science, 2005, , 279-286.	1.3	36
8	A fully-implicit finite-volume method for multi-fluid reactive and collisional magnetized plasmas on unstructured meshes. Journal of Computational Physics, 2016, 318, 252-276.	3.8	33
9	Effect of Radiation on Chromospheric Magnetic Reconnection: Reactive and Collisional Multi-fluid Simulations. Astrophysical Journal, 2017, 842, 117.	4.5	29
10	A GPU-enabled Finite Volume solver for global magnetospheric simulations on unstructured grids. Computer Physics Communications, 2014, 185, 2538-2557.	7.5	28
11	Conservative Residual Distribution Method for Viscous Double Cone Flows in Thermochemical Nonequilibrium. Communications in Computational Physics, 2013, 13, 479-501.	1.7	27
12	COOLfluid: an open computational platform for multi-physics simulation and research. , 2013, , .		25
13	Analysis of non-equilibrium phenomena in inductively coupled plasma generators. Physics of Plasmas, 2016, 23, .	1.9	24
14	Fully-implicit finite volume method for the ideal two-fluid plasma model. Computer Physics Communications, 2018, 231, 31-44.	7.5	23
15	Implicit high-order flux reconstruction solver for high-speed compressible flows. Computer Physics Communications, 2019, 242, 1-24.	7.5	23
16	Reusable Object-Oriented Solutions for Numerical Simulation of PDEs in a High Performance Environment. Scientific Programming, 2006, 14, 111-139.	0.7	21
17	EUropean Heliospheric FORecasting Information Asset 2.0. Journal of Space Weather and Space Climate, 2020, 10, 57.	3.3	21
18	Modelling of high-enthalpy, high-Mach number flows. Journal Physics D: Applied Physics, 2009, 42, 194004.	2.8	20

#	ARTICLE	IF	CITATIONS
19	An object-oriented implementation of a parallel Monte Carlo code for radiation transport. <i>Computer Physics Communications</i> , 2016, 202, 233-261.	7.5	19
20	Two-fluid Modeling of Acoustic Wave Propagation in Gravitationally Stratified Isothermal Media. <i>Astrophysical Journal</i> , 2021, 911, 119.	4.5	18
21	Blackout analysis of Mars entry missions. <i>Journal of Fluid Mechanics</i> , 2020, 904, .	3.4	14
22	Assessment of Heat Flux Prediction Capabilities of Residual Distribution Method: Application to Atmospheric Entry Problems. <i>Communications in Computational Physics</i> , 2015, 17, 682-702.	1.7	12
23	A GPU-enabled implicit Finite Volume solver for the ideal two-fluid plasma model on unstructured grids. <i>Computer Physics Communications</i> , 2019, 239, 16-32.	7.5	12
24	Numerical Investigation of the Non Equilibrium Shock-Layer Around the EXPERT Vehicle. , 2007, , .		11
25	The Virtual Space Weather Modelling Centre. <i>Journal of Space Weather and Space Climate</i> , 2020, 10, 14.	3.3	11
26	A Residual Distribution Method for Symmetrized Systems in Thermochemical Nonequilibrium. , 2011, , .		10
27	Variable High-Order Multiblock Overlapping Grid Methods for Mixed Steady and Unsteady Multiscale Viscous Flows, Part II: Hypersonic Nonequilibrium Flows. <i>Communications in Computational Physics</i> , 2013, 13, 583-602.	1.7	9
28	An energy-dissipative remedy against carbuncle: Application to hypersonic flows around blunt bodies. <i>Computers and Fluids</i> , 2016, 133, 43-54.	2.5	9
29	Effects of mesh topology on MHD solution features in coronal simulations. <i>Journal of Plasma Physics</i> , 2022, 88, .	2.1	9
30	Numerical Simulation of Hypersonic Flow in VKI-Longshot Contoured Nozzle. , 2010, , .		7
31	r-adaptive algorithms for high-speed flows and plasma simulations. <i>Computer Physics Communications</i> , 2021, 261, 107700.	7.5	7
32	SF: An Open Source Object-Oriented Platform for Unstructured Shock-Fitting Methods. <i>Shock Wave and High Pressure Phenomena</i> , 2017, , 85-112.	0.1	7
33	A Versatile Numerical Method for the Multi-Fluid Plasma Model in Partially- and Fully-Ionized Plasmas. <i>Journal of Physics: Conference Series</i> , 2018, 1031, 012015.	0.4	6
34	Conservative Residual Distribution Method for Hypersonic Flows in Thermochemical Nonequilibrium. , 2009, , .		5
35	An entropy-variables-based formulation of residual distribution schemes for non-equilibrium flows. <i>Journal of Computational Physics</i> , 2018, 362, 163-189.	3.8	5
36	Unsteady simulation of hypersonic flow around a heat flux probe in ground testing conditions. <i>International Journal of Heat and Mass Transfer</i> , 2017, 113, 889-897.	4.8	4

#	ARTICLE	IF	CITATIONS
37	Development of an implicit high-order flux reconstruction solver for the Langtry-Menter Laminar-Turbulent Transition RANS model. Computer Physics Communications, 2022, 278, 108408.	7.5	4
38	Numerical Investigations of Local Correlation-Based Transition Model in Hypersonic Flows. , 2012, , .		3
39	Arbitrary Lagrangian Eulerian Simulation of a Moving Piston in Hypersonic Ground Test Facility. , 2012, , .		3
40	3D Radiative Heat Transfer Calculations using Monte Carlo Ray Tracing and the Hybrid Statistical Narrow Band Model for Hypersonic Vehicles. , 2017, , .		3
41	Implicit High-Order Flux Reconstruction Positivity Preserving LLAV Scheme for Viscous High-Speed Flows. , 2019, , .		3
42	An efficient Monte Carlo method for radiation transport in aerothermodynamic simulations. , 2013, , .		2
43	Development of a GPU-Enabled High-Order Flux Reconstruction Solver for High-Speed Flows. , 2021, , .		2
44	Reduced Kinetic Mechanism for CFD Applications. , 2009, , .		1
45	Assessment and Validation of the Rebuilding process of Test conditions in VKI-Longshot Hypersonic facility. , 2011, , .		1
46	Assessment of Residual Distribution Method Heat Flux Prediction Capabilities: Application to Atmospheric Entry Problems. , 2014, , .		1
47	Physics-Based Mesh Fitting Algorithms for Hypersonic Flows Simulations. , 2019, , .		1
48	High-Order Flux Reconstruction Scheme for Thermo-Chemical Nonequilibrium High-Speed Flows. , 2019, , .		1
49	r-adaptive Mesh Algorithms with High-order Flux Reconstruction Scheme for High-speed Flows. , 2021, , .		1
50	Radio communication blackout analysis of ExoMars re-entry mission using raytracing method. , 2021, , .		1
51	r-adaptive algorithms for supersonic flows with high-order Flux Reconstruction methods. Computer Physics Communications, 2022, 276, 108373.	7.5	1
52	Numerical exploration of transient flow phenomena in hypersonic gun tunnel. , 2013, , .		0
53	Modeling of Non-equilibrium Plasmas in an Inductively Coupled Plasma Facility. , 2014, , .		0
54	Computational Multi-Fluid Model for Partially Ionized and Magnetized Plasma. , 2016, , .		0