

Ruben Scardovelli

List of Publications by Year in descending order

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34
papers

5,445
citations

304368

22
h-index

500791

28
g-index

38
all docs

38
docs citations

38
times ranked

3184
citing authors

#	ARTICLE	IF	CITATIONS
1	Computing curvature for volume of fluid methods using machine learning. Journal of Computational Physics, 2019, 377, 155-161.	1.9	30
2	VofI – A library to initialize the volume fraction scalar field. Computer Physics Communications, 2016, 200, 291-299.	3.0	25
3	Multiscale simulation of atomization with small droplets represented by a Lagrangian point-particle model. International Journal of Multiphase Flow, 2015, 76, 122-143.	1.6	111
4	Numerical integration of implicit functions for the initialization of the VOF function. Computers and Fluids, 2015, 113, 42-52.	1.3	23
5	Height function based Volume of Fluid code for simulations of multiphase magnetic fluids. Computers and Fluids, 2015, 113, 112-118.	1.3	4
6	Review of split and unsplit geometric advection algorithms. , 2013, , .		3
7	An optimal constrained approach for divergence-free velocity interpolation and multilevel VOF method. Computers and Fluids, 2011, 47, 101-114.	1.3	13
8	Parallel simulation of multiphase flows using octree adaptivity and the volume-of-fluid method. Comptes Rendus - Mecanique, 2011, 339, 194-207.	2.1	66
9	On the properties and limitations of the height function method in two-dimensional Cartesian geometry. Journal of Computational Physics, 2011, 230, 851-862.	1.9	43
10	Simulation of axisymmetric jets with a finite element Navier–Stokes solver and a multilevel VOF approach. Journal of Computational Physics, 2010, 229, 6853-6873.	1.9	23
11	Instability growth rate of two-phase mixing layers from a linear eigenvalue problem and an initial-value problem. Physics of Fluids, 2010, 22, 092104.	1.6	32
12	Numerical, experimental, and theoretical investigation of bubble aggregation and deformation in magnetic fluids. Physical Review E, 2010, 82, 016302.	0.8	28
13	A FEM SOLVER COUPLED TO A MULTILEVEL VOF METHOD FOR SIMULATION OF AXISYMMETRIC JETS AND TO A FRONT-TRACKING METHOD FOR SIMULATION OF SPREADING DROPLETS. Atomization and Sprays, 2010, 20, 115-131.	0.3	2
14	Simulation of primary atomization with an octree adaptive mesh refinement and VOF method. International Journal of Multiphase Flow, 2009, 35, 550-565.	1.6	212
15	A geometrical predictor–corrector advection scheme and its application to the volume fraction function. Journal of Computational Physics, 2009, 228, 406-419.	1.9	42
16	A variational approach to the contact angle dynamics of spreading droplets. Computers and Fluids, 2009, 38, 406-424.	1.3	51
17	Interface reconstruction with least-squares fit and split advection in three-dimensional Cartesian geometry. Journal of Computational Physics, 2007, 225, 2301-2319.	1.9	200
18	A novel representation of the surface tension force for two-phase flow with reduced spurious currents. Computer Methods in Applied Mechanics and Engineering, 2006, 195, 6239-6257.	3.4	30

#	ARTICLE	IF	CITATIONS
19	Interface tracking with dynamically-redistributed surface markers in unstructured quadrangular grids. <i>Computers and Fluids</i> , 2006, 35, 1332-1343.	1.3	7
20	A Quasi-Direct 3D Simulation of the Atomization of High-Speed Liquid Jets. , 2005, , 295.		7
21	Biased Monte Carlo optimization: the basic approach. <i>Reliability Engineering and System Safety</i> , 2005, 87, 387-394.	5.1	3
22	Improving the Knowledge of High-Speed Liquid Jets Atomization by Using Quasi-Direct 3D Simulation. , 2005, , .		7
23	A surface marker algorithm coupled to an area-preserving marker redistribution method for three-dimensional interface tracking. <i>Journal of Computational Physics</i> , 2004, 197, 555-584.	1.9	72
24	Interface reconstruction with least-square fit and split Eulerian-Lagrangian advection. <i>International Journal for Numerical Methods in Fluids</i> , 2003, 41, 251-274.	0.9	211
25	A geometrical area-preserving Volume-of-Fluid advection method. <i>Journal of Computational Physics</i> , 2003, 192, 355-364.	1.9	122
26	A mixed markers and volume-of-fluid method for the reconstruction and advection of interfaces in two-phase and free-boundary flows. <i>Journal of Computational Physics</i> , 2003, 188, 611-639.	1.9	115
27	A Marker-VOF Algorithm for Incompressible Flows With Interfaces. , 2002, , 905.		4
28	Analytical Relations Connecting Linear Interfaces and Volume Fractions in Rectangular Grids. <i>Journal of Computational Physics</i> , 2000, 164, 228-237.	1.9	217
29	Volume-of-Fluid Interface Tracking with Smoothed Surface Stress Methods for Three-Dimensional Flows. <i>Journal of Computational Physics</i> , 1999, 152, 423-456.	1.9	793
30	DIRECT NUMERICAL SIMULATION OF FREE-SURFACE AND INTERFACIAL FLOW. <i>Annual Review of Fluid Mechanics</i> , 1999, 31, 567-603.	10.8	1,615
31	Scaling and intermittency in two-dimensional turbulence. <i>Meccanica</i> , 1994, 29, 479-488.	1.2	0
32	Modelling Merging and Fragmentation in Multiphase Flows with SURFER. <i>Journal of Computational Physics</i> , 1994, 113, 134-147.	1.9	893
33	Physics and Engineering Design for Wendelstein VII-X. <i>Fusion Science and Technology</i> , 1990, 17, 148-168.	0.6	235
34	3D Large Scale Simulation of the High-Speed Liquid Jet Atomization. , 0, , .		27