

Maria Vittoria Salvetti

List of Publications by Year in descending order

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119
papers

2,696
citations

172457

29
h-index

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all docs

131
docs citations

131
times ranked

1744
citing authors

#	ARTICLE	IF	CITATIONS
1	A priori tests of a new dynamic subgrid-scale model for finite-difference large-eddy simulations. <i>Physics of Fluids</i> , 1995, 7, 2831-2847.	4.0	193
2	Benchmark on the Aerodynamics of a Rectangular 5:1 Cylinder: An overview after the first four years of activity. <i>Journal of Wind Engineering and Industrial Aerodynamics</i> , 2014, 126, 87-106.	3.9	136
3	Direct numerical simulation of particle wall transfer and deposition in upward turbulent pipe flow. <i>International Journal of Multiphase Flow</i> , 2003, 29, 1017-1038.	3.4	115
4	Steady and unsteady regimes in a T-shaped micro-mixer: Synergic experimental and numerical investigation. <i>Chemical Engineering Journal</i> , 2018, 341, 414-431.	12.7	93
5	Some issues concerning large-eddy simulation of inertial particle dispersion in turbulent bounded flows. <i>Physics of Fluids</i> , 2008, 20, .	4.0	88
6	Variational multiscale large-eddy simulations of the flow past a circular cylinder: Reynolds number effects. <i>Computers and Fluids</i> , 2011, 47, 44-50.	2.5	86
7	A parallel multiphase flow code for the 3D simulation of explosive volcanic eruptions. <i>Parallel Computing</i> , 2007, 33, 541-560.	2.1	85
8	Investigation of the steady engulfment regime in a three-dimensional T-mixer. <i>Physics of Fluids</i> , 2013, 25, .	4.0	80
9	Classical and variational multiscale LES of the flow around a circular cylinder on unstructured grids. <i>Computers and Fluids</i> , 2010, 39, 1083-1094.	2.5	77
10	Flow regimes in T-shaped micro-mixers. <i>Computers and Chemical Engineering</i> , 2015, 76, 150-159.	3.8	69
11	Impact of uncertainties in outflow boundary conditions on the predictions of hemodynamic simulations of ascending thoracic aortic aneurysms. <i>Computers and Fluids</i> , 2018, 165, 96-115.	2.5	66
12	A low-diffusion MUSCL scheme for LES on unstructured grids. <i>Computers and Fluids</i> , 2004, 33, 1101-1129.	2.5	64
13	Automatic evaluation of arterial diameter variation from vascular echographic images. <i>Ultrasound in Medicine and Biology</i> , 2001, 27, 1621-1629.	1.5	58
14	Low-dimensional modelling of a confined three-dimensional wake flow. <i>Journal of Fluid Mechanics</i> , 2006, 569, 141.	3.4	58
15	Mechanisms for deposition and resuspension of heavy particles in turbulent flow over wavy interfaces. <i>Physics of Fluids</i> , 2006, 18, 025102.	4.0	55
16	Validation of Numerical Simulations of Thoracic Aorta Hemodynamics: Comparison with In Vivo Measurements and Stochastic Sensitivity Analysis. <i>Cardiovascular Engineering and Technology</i> , 2018, 9, 688-706.	1.6	54
17	Separation control and drag reduction for boat-tailed axisymmetric bodies through contoured transverse grooves. <i>Journal of Fluid Mechanics</i> , 2017, 832, 514-549.	3.4	49
18	An Overview of Flow Features and Mixing in Micro T and Arrow Mixers. <i>Industrial & Engineering Chemistry Research</i> , 2020, 59, 3669-3686.	3.7	46

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19	Epistemic uncertainties in RANS model free coefficients. <i>Computers and Fluids</i> , 2014, 102, 315-335.	2.5	44
20	Large-eddy simulation of free-surface decaying turbulence with dynamic subgrid-scale models. <i>Physics of Fluids</i> , 1997, 9, 2405-2419.	4.0	43
21	Stability analysis and control of the flow in a symmetric channel with a sudden expansion. <i>Physics of Fluids</i> , 2012, 24, .	4.0	43
22	Intrinsic filtering errors of Lagrangian particle tracking in LES flow fields. <i>Physics of Fluids</i> , 2012, 24, .	4.0	41
23	Unsteady asymmetric engulfment regime in a T-mixer. <i>Physics of Fluids</i> , 2014, 26, 074101.	4.0	41
24	Appraisal of energy recovering sub-grid scale models for large-eddy simulation of turbulent dispersed flows. <i>Acta Mechanica</i> , 2008, 201, 277-296.	2.1	38
25	Stochastic sensitivity analysis of large-eddy simulation predictions of the flow around a 5:1 rectangular cylinder. <i>European Journal of Mechanics, B/Fluids</i> , 2017, 62, 149-165.	2.5	36
26	Unsteady Flow Regimes in a T-Shaped Micromixer: Mixing and Characteristic Frequencies. <i>Industrial & Engineering Chemistry Research</i> , 2019, 58, 13340-13356.	3.7	36
27	Large-eddy simulation of a bluff-body flow on unstructured grids. <i>International Journal for Numerical Methods in Fluids</i> , 2002, 40, 1431-1460.	1.6	35
28	Stochastic analysis of the impact of freestream conditions on the aerodynamics of a rectangular 5:1 cylinder. <i>Computers and Fluids</i> , 2016, 136, 170-192.	2.5	32
29	Simulation of the flow past a circular cylinder in the supercritical regime by blending RANS and variational-multiscale LES models. <i>Journal of Fluids and Structures</i> , 2014, 47, 114-123.	3.4	31
30	Unsteady flow regimes in arrow-shaped micro-mixers with different tilting angles. <i>Physics of Fluids</i> , 2021, 33, .	4.0	30
31	Steady flow regimes and mixing performance in arrow-shaped micro-mixers. <i>Physical Review Fluids</i> , 2019, 4, .	2.5	30
32	Large-eddy simulation of the flow around a triangular prism with moderate aspect ratio. <i>Journal of Wind Engineering and Industrial Aerodynamics</i> , 2006, 94, 309-322.	3.9	29
33	A numerical method for 3D barotropic flows in turbomachinery. <i>Flow, Turbulence and Combustion</i> , 2006, 76, 371-381.	2.6	29
34	Connection between base drag, separating boundary layer characteristics and wake mean recirculation length of an axisymmetric blunt-based body. <i>Journal of Fluids and Structures</i> , 2015, 55, 191-203.	3.4	29
35	The role of flow features and chemical kinetics on the reaction yield in a T-shaped micro-reactor. <i>Chemical Engineering Journal</i> , 2020, 396, 125223.	12.7	29
36	Quantification of errors in large-eddy simulations of a spatially evolving mixing layer using polynomial chaos. <i>Physics of Fluids</i> , 2012, 24, .	4.0	25

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37	Large-Eddy Simulations of Two In-Line Turbines in a Wind Tunnel with Different Inflow Conditions. <i>Energies</i> , 2017, 10, 821.	3.1	25
38	Flow around a 5:1 rectangular cylinder: Effects of upstream-edge rounding. <i>Journal of Wind Engineering and Industrial Aerodynamics</i> , 2020, 204, 104237.	3.9	25
39	Effect of geometry modifications on the engulfment in micromixers: Numerical simulations and stability analysis. <i>European Journal of Mechanics, B/Fluids</i> , 2016, 55, 360-366.	2.5	24
40	Numerical simulations of transitional axisymmetric coaxial jets. <i>AIAA Journal</i> , 1996, 34, 736-743.	2.6	23
41	Separation control and efficiency improvement in a 2D diffuser by means of contoured cavities. <i>European Journal of Mechanics, B/Fluids</i> , 2013, 41, 138-149.	2.5	23
42	Mechanisms for microparticle dispersion in a jet in crossflow. <i>AIChE Journal</i> , 2005, 51, 28-43.	3.6	22
43	Effect of stratification on the mixing and reaction yield in a T-shaped micro-mixer. <i>Physical Review Fluids</i> , 2021, 6, .	2.5	22
44	Separation delay through contoured transverse grooves on a 2D boat-tailed bluff body: Effects on drag reduction and wake flow features. <i>European Journal of Mechanics, B/Fluids</i> , 2019, 74, 351-362.	2.5	21
45	Control of the turbulent flow in a plane diffuser through optimized contoured cavities. <i>European Journal of Mechanics, B/Fluids</i> , 2014, 48, 254-265.	2.5	20
46	Impact of dynamic subgrid-scale modeling in variational multiscale large-eddy simulation of bluff-body flows. <i>Acta Mechanica</i> , 2014, 225, 3309-3323.	2.1	20
47	Use of multiple local recirculations to increase the efficiency in diffusers. <i>European Journal of Mechanics, B/Fluids</i> , 2015, 50, 27-37.	2.5	19
48	Three-dimensional coarse large-eddy simulations of the flow above two-dimensional sinusoidal waves. <i>International Journal for Numerical Methods in Fluids</i> , 2001, 35, 617-642.	1.6	18
49	An immersed boundary method for compressible multiphase flows: application to the dynamics of pyroclastic density currents. <i>Computational Geosciences</i> , 2007, 11, 183-198.	2.4	18
50	An implicit low-diffusive HLL scheme with complete time linearization: Application to cavitating barotropic flows. <i>Computers and Fluids</i> , 2010, 39, 1990-2006.	2.5	16
51	Hemodynamics and stresses in numerical simulations of the thoracic aorta: Stochastic sensitivity analysis to inlet flow-rate waveform. <i>Computers and Fluids</i> , 2021, 230, 105123.	2.5	16
52	UNCERTAINTY QUANTIFICATION IN NUMERICAL SIMULATIONS OF THE FLOW IN THORACIC AORTIC ANEURYSMS. , 2016, , .		16
53	Large eddy simulations of the flow around a circular cylinder: effects of grid resolution and subgrid scale modeling. <i>Wind and Structures, an International Journal</i> , 2003, 6, 419-436.	0.8	15
54	A non-linear observer for unsteady three-dimensional flows. <i>Journal of Computational Physics</i> , 2008, 227, 2626-2643.	3.8	14

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55	Linearized implicit time advancing and defect correction applied to sediment transport simulations. <i>Computers and Fluids</i> , 2012, 63, 82-104.	2.5	14
56	Particle tracking in LES flow fields: conditional Lagrangian statistics of filtering error. <i>Journal of Turbulence</i> , 2014, 15, 22-33.	1.4	14
57	A Lagrangian probability-density-function model for collisional turbulent fluid-particle flows. <i>Journal of Fluid Mechanics</i> , 2019, 862, 449-489.	3.4	14
58	Appraisal of Numerical Methods in Predicting the Aerodynamics of Forward-Swept Wings. <i>Journal of Aircraft</i> , 1998, 35, 561-568.	2.4	11
59	Approximation and Reconstruction of the Electrostatic Field in Wire-Plate Precipitators by a Low-Order Model. <i>Journal of Computational Physics</i> , 2001, 170, 893-916.	3.8	10
60	Correction of Wall Interference in Wind Tunnels: A Numerical Investigation. <i>Journal of Aircraft</i> , 2001, 38, 944-949.	2.4	9
61	Parallel simulation of three-dimensional complex flows: Application to two-phase compressible flows and turbulent wakes. <i>Advances in Engineering Software</i> , 2007, 38, 328-337.	3.8	9
62	Effects of the Subgrid-Scale Modeling in the Large-Eddy Simulations of Wind Turbines. <i>ERCOTAC Series</i> , 2018, , 109-115.	0.1	9
63	Appraisal and calibration of the actuator line model for the prediction of turbulent separated wakes. <i>Wind Energy</i> , 2020, 23, 1231-1248.	4.2	9
64	Flow regimes, mixing and reaction yield of a mixture in an X-microreactor. <i>Chemical Engineering Journal</i> , 2022, 437, 135113.	12.7	8
65	Current-density approximation for efficient computation of the electrostatic field in wire-plate precipitators. <i>IEEE Transactions on Industry Applications</i> , 2002, 38, 858-865.	4.9	7
66	Grain size distribution uncertainty quantification in volcanic ash dispersal and deposition from weak plumes. <i>Journal of Geophysical Research: Solid Earth</i> , 2016, 121, 538-557.	3.4	7
67	A simple model for deep dynamic stall conditions. <i>Wind Energy</i> , 2020, 23, 915-938.	4.2	7
68	A Study on the Effect of Flow Unsteadiness on the Yield of a Chemical Reaction in a T Micro-Reactor. <i>Micromachines</i> , 2021, 12, 242.	2.9	7
69	T-mixer operating with water at different temperatures: Simulation and stability analysis. <i>Physical Review Fluids</i> , 2018, 3, .	2.5	7
70	Hybrid RANS/LES simulations of a bluff-body flow. <i>Wind and Structures, an International Journal</i> , 2005, 8, 407-426.	0.8	6
71	Mixing Improvement in a T-Shaped Micro-Junction through Small Rectangular Cavities. <i>Micromachines</i> , 2022, 13, 159.	2.9	6
72	Numerical Evaluation of Airfoil Friction Drag. <i>Journal of Aircraft</i> , 2000, 37, 354-356.	2.4	5

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73	Development of a BEM-CFD tool for Vertical Axis Wind Turbines based on the Actuator Disk Model. Energy Procedia, 2018, 148, 1010-1017.	1.8	5
74	Stochastic sensitivity analysis of numerical simulations of injector internal flows to cavitation modeling parameters. Computers and Fluids, 2019, 183, 130-147.	2.5	5
75	Stochastic calibration of cavitation model parameters for simulations of 3-phase injector internal flows. Computers and Fluids, 2020, 205, 104581.	2.5	5
76	Comparison Between Numerical and MRI Data of Ascending Aorta Hemodynamics in a Circulatory Mock Loop. Lecture Notes in Mechanical Engineering, 2020, , 898-907.	0.4	5
77	Effects of the Distribution in Space of the Velocity-Inlet Condition in Hemodynamic Simulations of the Thoracic Aorta. Lecture Notes in Computer Science, 2020, , 63-74.	1.3	5
78	Mixing sensitivity to the inclination of the lateral walls in a T-mixer. Chemical Engineering and Processing: Process Intensification, 2022, 170, 108699.	3.6	5
79	Concurrent theoretical, experimental and numerical analyses of mixed-flow turbopump design. Aerospace Science and Technology, 2022, 123, 107459.	4.8	5
80	A conditional stability criterion based on generalized energies. Journal of Fluid Mechanics, 2007, 581, 277-286.	3.4	4
81	Effects of flow unsteadiness and chemical kinetics on the reaction yield in a T-microreactor. Chemical Engineering Research and Design, 2022, 179, 1-15.	5.6	4
82	Drag prediction over steep sinusoidal wavy surfaces. Physics of Fluids, 2001, 13, 2728-2731.	4.0	3
83	Further generalized energies for the application of an energy criterion of conditional stability. Acta Mechanica, 2011, 218, 357-366.	2.1	3
84	Reliability of Large-Eddy Simulations: Benchmarking and Uncertainty Quantification. ERCOFTAC Series, 2018, , 15-23.	0.1	3
85	Benchmark test on particle-laden channel flow with point-particle LES. ERCOFTAC Series, 2011, , 177-182.	0.1	3
86	Spanwise-Discontinuous Grooves for Separation Delay and Drag Reduction of Bodies with Vortex Shedding. Fluids, 2022, 7, 121.	1.7	3
87	A UQ based calibration for the CFD modeling of the gas dispersion from an LNG pool. Chemical Engineering Research and Design, 2022, 162, 1043-1056.	5.6	3
88	Implicit time advancing combined with two finite-volume methods in the simulation of morphodynamic flows. Mathematics and Computers in Simulation, 2014, 99, 153-169.	4.4	2
89	Stochastic Sensitivity Analysis of Numerical Simulations of High-Pressure Injectors to Cavitation Modeling Parameters. , 2017, , .		2
90	Benchmark on the Aerodynamics of a 5:1 Rectangular Cylinder: Further Experimental and LES Results. ERCOFTAC Series, 2019, , 427-432.	0.1	2

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91	Numerical investigation of skewed spatially evolving mixing layers. Journal of Fluid Mechanics, 2020, 897, .	3.4	2
92	Uncertainty Quantification Applied to Hemodynamic Simulations of Thoracic Aorta Aneurysms: Sensitivity to Inlet Conditions. Lecture Notes in Computational Science and Engineering, 2020, , 171-192.	0.3	2
93	Flow Separation Control and Drag Reduction for a Two-Dimensional Boat-Tailed Bluff Body Through Transverse Grooves. , 2018, , .		1
94	Large Eddy Simulation of a Wind Farm Experiment. ERCOFTAC Series, 2019, , 595-601.	0.1	1
95	On the closure of particle motion equations in large-eddy simulation. , 2006, , 311-318.		1
96	Reliability of LES Simulations in the Context of a Benchmark on the Aerodynamics of a Rectangular 5:1 Cylinder. ERCOFTAC Series, 2015, , 161-167.	0.1	1
97	Inertial particle segregation and deposition in large-eddy simulation of turbulent wall-bounded flows. ERCOFTAC Series, 2011, , 191-200.	0.1	1
98	Simulation of Bluff-Body Flows Through a Hybrid RANS/VMS-LES Model. IUTAM Symposium on Cellular, Molecular and Tissue Mechanics, 2009, , 429-440.	0.2	1
99	Integrating in-vivo Data in CFD Simulations and in in-vitro Experiments of the Hemodynamic in Healthy and Pathologic Thoracic Aorta. Lecture Notes in Computer Science, 2022, , 208-219.	1.3	1
100	Non-equilibrium external flows including wall-catalysis effects by adaptive upwind finite elements. Russian Physics Journal, 1993, 36, 326-343.	0.4	0
101	Effect of a Splitter Plate on Transonic Wing Flow: A Numerical Study. Journal of Aircraft, 1999, 36, 718-720.	2.4	0
102	Validation of a Wall Interference Correction Procedure in Subsonic Flow. Journal of Aircraft, 2003, 40, 803-805.	2.4	0
103	Statistical properties of an ideal subgrid-scale correction for Lagrangian particle tracking in turbulent channel flow. Journal of Physics: Conference Series, 2011, 333, 012004.	0.4	0
104	Large-eddy simulation of heavy particle dispersion in wall-bounded turbulent flows. AIP Conference Proceedings, 2015, , .	0.4	0
105	Numerical Simulation of Cavitating Flows in Complex Geometries. CISM International Centre for Mechanical Sciences, Courses and Lectures, 2017, , 235-258.	0.6	0
106	Experimental and Numerical Analyses of Unsteady Flow Regimes and Mixing in a Micro T-Mixer. , 2018, , .		0
107	Flow Separation Delay and Drag Reduction Through Contoured Transverse Grooves. Lecture Notes in Civil Engineering, 2019, , 483-495.	0.4	0
108	Comparison of Numerical Simulations to a Reduced-Order Model Extended with Splitter Blades. , 2020, , .		0

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109	10.1063/5.0033765.3., 2021, , .		0
110	Turbopump Design: Comparison of Numerical Simulations to an Already Validated Reduced-Order Model. Journal of Physics: Conference Series, 2021, 1909, 012029.	0.4	0
111	A locally superconvergent scheme for the simulation of turbulent flows in complex geometries. , 2009, , 493-498.		0
112	Mixed subgrid scale models for classical and variational multiscale large-eddy simulations on unstructured grids. ERCOFTAC Series, 2011, , 107-112.	0.1	0
113	Comparison of Explicit and Implicit Time Advancing in the Simulation of a 2D Sediment Transport Problem. Springer Proceedings in Mathematics, 2011, , 125-133.	0.5	0
114	Numerical Simulation of the Flow in a Turbopump Inducer in Non-Cavitating and Cavitating Conditions. Springer Proceedings in Mathematics, 2011, , 135-143.	0.5	0
115	Probability Distribution of Intrinsic Filtering Errors in Lagrangian Particle Tracking in LES Flow Fields. Notes on Numerical Fluid Mechanics and Multidisciplinary Design, 2014, , 149-156.	0.3	0
116	Uncertainty Quantification in Large-Eddy Simulations of the Flow Around a 5:1 Rectangular Cylinder. ERCOFTAC Series, 2018, , 101-107.	0.1	0
117	Drag Reduction of Boat-Tailed Bluff Bodies Through Transverse Grooves. ERCOFTAC Series, 2019, , 489-495.	0.1	0
118	Flow Around a 5:1 Rectangular Cylinder: Effects of the Rounding of the Upstream Corners. ERCOFTAC Series, 2020, , 85-90.	0.1	0
119	Effects of Spanwise-Discontinuous Contoured Transverse Grooves on Flow Separation and Vortex Shedding. ERCOFTAC Series, 2020, , 97-102.	0.1	0