Maria Vittoria Salvetti

List of Publications by Year
in descending order

119 papers	2,696 citations	172207 29 h-index	197535 49 g-index
131 all docs	131 docs citations	131 times ranked	1744 citing authors

#	Article	IF	Citations
1	A priori tests of a new dynamic subgridâ€scale model for finiteâ€difference largeâ€eddy simulations. Physics of Fluids, 1995, 7, 2831-2847.	1.6	193
2	Benchmark on the Aerodynamics of a Rectangular 5:1 Cylinder: An overview after the first four years of activity. Journal of Wind Engineering and Industrial Aerodynamics, 2014, 126, 87-106.	1.7	136
3	Direct numerical simulation of particle wall transfer and deposition in upward turbulent pipe flow. International Journal of Multiphase Flow, 2003, 29, 1017-1038.	1.6	115
4	Steady and unsteady regimes in a T-shaped micro-mixer: Synergic experimental and numerical investigation. Chemical Engineering Journal, 2018, 341, 414-431.	6.6	93
5	Some issues concerning large-eddy simulation of inertial particle dispersion in turbulent bounded flows. Physics of Fluids, 2008, 20, .	1.6	88
6	Variational multiscale large-eddy simulations of the flow past a circular cylinder: Reynolds number effects. Computers and Fluids, 2011, 47, 44-50.	1.3	86
7	A parallel multiphase flow code for the 3D simulation of explosive volcanic eruptions. Parallel Computing, 2007, 33, 541-560.	1.3	85
8	Investigation of the steady engulfment regime in a three-dimensional T-mixer. Physics of Fluids, 2013, 25, .	1.6	80
9	Classical and variational multiscale LES of the flow around a circular cylinder on unstructured grids. Computers and Fluids, 2010, 39, 1083-1094.	1.3	77
10	Flow regimes in T-shaped micro-mixers. Computers and Chemical Engineering, 2015, 76, 150-159.	2.0	69
11	Impact of uncertainties in outflow boundary conditions on the predictions of hemodynamic simulations of ascending thoracic aortic aneurysms. Computers and Fluids, 2018, 165, 96-115.	1.3	66
12	A low-diffusion MUSCL scheme for LES on unstructured grids. Computers and Fluids, 2004, 33, 1101-1129.	1.3	64
13	Automatic evaluation of arterial diameter variation from vascular echographic images. Ultrasound in Medicine and Biology, 2001, 27, 1621-1629.	0.7	58
14	Low-dimensional modelling of a confined three-dimensional wake flow. Journal of Fluid Mechanics, 2006, 569, 141.	1.4	58
15	Mechanisms for deposition and resuspension of heavy particles in turbulent flow over wavy interfaces. Physics of Fluids, 2006, 18, 025102.	1.6	55
16	Validation of Numerical Simulations of Thoracic Aorta Hemodynamics: Comparison with In Vivo Measurements and Stochastic Sensitivity Analysis. Cardiovascular Engineering and Technology, 2018, 9, 688-706.	0.7	54
17	Separation control and drag reduction for boat-tailed axisymmetric bodies through contoured transverse grooves. Journal of Fluid Mechanics, 2017, 832, 514-549.	1.4	49
18	An Overview of Flow Features and Mixing in Micro T and Arrow Mixers. Industrial & Engineering Chemistry Research, 2020, 59, 3669-3686.	1.8	46

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19	Epistemic uncertainties in RANS model free coefficients. Computers and Fluids, 2014, 102, 315-335.	1.3	44
20	Large-eddy simulation of free-surface decaying turbulence with dynamic subgrid-scale models. Physics of Fluids, 1997, 9, 2405-2419.	1.6	43
21	Stability analysis and control of the flow in a symmetric channel with a sudden expansion. Physics of Fluids, 2012, 24, .	1.6	43
22	Intrinsic filtering errors of Lagrangian particle tracking in LES flow fields. Physics of Fluids, 2012, 24, .	1.6	41
23	Unsteady asymmetric engulfment regime in a T-mixer. Physics of Fluids, 2014, 26, 074101.	1.6	41
24	Appraisal of energy recovering sub-grid scale models for large-eddy simulation of turbulent dispersed flows. Acta Mechanica, 2008, 201, 277-296.	1.1	38
25	Stochastic sensitivity analysis of large-eddy simulation predictions of the flow around a 5:1 rectangular cylinder. European Journal of Mechanics, B/Fluids, 2017, 62, 149-165.	1.2	36
26	Unsteady Flow Regimes in a T-Shaped Micromixer: Mixing and Characteristic Frequencies. Industrial & Engineering Chemistry Research, 2019, 58, 13340-13356.	1.8	36
27	Large-eddy simulation of a bluff-body flow on unstructured grids. International Journal for Numerical Methods in Fluids, 2002, 40, 1431-1460.	0.9	35
28	Stochastic analysis of the impact of freestream conditions on the aerodynamics of a rectangular 5:1 cylinder. Computers and Fluids, 2016, 136, 170-192.	1.3	32
29	Simulation of the flow past a circular cylinder in the supercritical regime by blending RANS and variational-multiscale LES models. Journal of Fluids and Structures, 2014, 47, 114-123.	1.5	31
30	Unsteady flow regimes in arrow-shaped micro-mixers with different tilting angles. Physics of Fluids, 2021, 33, .	1.6	30
31	Steady flow regimes and mixing performance in arrow-shaped micro-mixers. Physical Review Fluids, 2019, 4, .	1.0	30
32	Large-eddy simulation of the flow around a triangular prism with moderate aspect ratio. Journal of Wind Engineering and Industrial Aerodynamics, 2006, 94, 309-322.	1.7	29
33	A numerical method for 3D barotropic flows in turbomachinery. Flow, Turbulence and Combustion, 2006, 76, 371-381.	1.4	29
34	Connection between base drag, separating boundary layer characteristics and wake mean recirculation length of an axisymmetric blunt-based body. Journal of Fluids and Structures, 2015, 55, 191-203.	1.5	29
35	The role of flow features and chemical kinetics on the reaction yield in a T-shaped micro-reactor. Chemical Engineering Journal, 2020, 396, 125223.	6.6	29
36	Quantification of errors in large-eddy simulations of a spatially evolving mixing layer using polynomial chaos. Physics of Fluids, 2012, 24, .	1.6	25

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37	Large-Eddy Simulations of Two In-Line Turbines in a Wind Tunnel with Different Inflow Conditions. Energies, 2017, 10, 821.	1.6	25
38	Flow around a 5:1 rectangular cylinder: Effects of upstream-edge rounding. Journal of Wind Engineering and Industrial Aerodynamics, 2020, 204, 104237.	1.7	25
39	Effect of geometry modifications on the engulfment in micromixers: Numerical simulations and stability analysis. European Journal of Mechanics, B/Fluids, 2016, 55, 360-366.	1.2	24
40	Numerical simulations of transitional axisymmetric coaxial jets. AIAA Journal, 1996, 34, 736-743.	1.5	23
41	Separation control and efficiency improvement in a 2D diffuser by means of contoured cavities. European Journal of Mechanics, B/Fluids, 2013, 41, 138-149.	1.2	23
42	Mechanisms for microparticle dispersion in a jet in crossflow. AICHE Journal, 2005, 51, 28-43.	1.8	22
43	Effect of stratification on the mixing and reaction yield in a T-shaped micro-mixer. Physical Review Fluids, 2021, 6, .	1.0	22
44	Separation delay through contoured transverse grooves on a 2D boat-tailed bluff body: Effects on drag reduction and wake flow features. European Journal of Mechanics, B/Fluids, 2019, 74, 351-362.	1.2	21
45	Control of the turbulent flow in a plane diffuser through optimized contoured cavities. European Journal of Mechanics, B/Fluids, 2014, 48, 254-265.	1.2	20
46	Impact of dynamic subgrid-scale modeling in variational multiscale large-eddy simulation of bluff-body flows. Acta Mechanica, 2014, 225, 3309-3323.	1.1	20
47	Use of multiple local recirculations to increase the efficiency in diffusers. European Journal of Mechanics, B/Fluids, 2015, 50, 27-37.	1.2	19
48	Three-dimensional coarse large-eddy simulations of the flow above two-dimensional sinusoidal waves. International Journal for Numerical Methods in Fluids, 2001, 35, 617-642.	0.9	18
49	An immersed boundary method for compressible multiphase flows: application to the dynamics of pyroclastic density currents. Computational Geosciences, 2007, 11, 183-198.	1.2	18
50	An implicit low-diffusive HLL scheme with complete time linearization: Application to cavitating barotropic flows. Computers and Fluids, 2010, 39, 1990-2006.	1.3	16
51	Hemodynamics and stresses in numerical simulations of the thoracic aorta: Stochastic sensitivity analysis to inlet flow-rate waveform. Computers and Fluids, 2021, 230, 105123.	1.3	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. Wind and Structures, an International Journal, 2003, 6, 419-436.	0.8	15
54	A non-linear observer for unsteady three-dimensional flows. Journal of Computational Physics, 2008, 227, 2626-2643.	1.9	14

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55	Linearized implicit time advancing and defect correction applied to sediment transport simulations. Computers and Fluids, 2012, 63, 82-104.	1.3	14
56	Particle tracking in LES flow fields: conditional Lagrangian statistics of filtering error. Journal of Turbulence, 2014, 15, 22-33.	0.5	14
57	A Lagrangian probability-density-function model for collisional turbulent fluidâ€“particle flows. Journal of Fluid Mechanics, 2019, 862, 449-489.	1.4	14
58	Appraisal of Numerical Methods in Predicting the Aerodynamics of Forward-Swept Wings. Journal of Aircraft, 1998, 35, 561-568.	1.7	11
59	Approximation and Reconstruction of the Electrostatic Field in Wireâ€“Plate Precipitators by a Low-Order Model. Journal of Computational Physics, 2001, 170, 893-916.	1.9	10
60	Correction of Wall Interference in Wind Tunnels: A Numerical Investigation. Journal of Aircraft, 2001, 38, 944-949.	1.7	9
61	Parallel simulation of three-dimensional complex flows: Application to two-phase compressible flows and turbulent wakes. Advances in Engineering Software, 2007, 38, 328-337.	1.8	9
62	Effects of the Subgrid-Scale Modeling in the Large-Eddy Simulations of Wind Turbines. ERCOFTAC Series, 2018, , 109-115.	0.1	9
63	Appraisal and calibration of the actuator line model for the prediction of turbulent separated wakes. Wind Energy, 2020, 23, 1231-1248.	1.9	9
64	Flow regimes, mixing and reaction yield of a mixture in an X-microreactor. Chemical Engineering Journal, 2022, 437, 135113.	6.6	8
65	Current-density approximation for efficient computation of the electrostatic field in wire-plate precipitators. IEEE Transactions on Industry Applications, 2002, 38, 858-865.	3.3	7
66	Grain size distribution uncertainty quantification in volcanic ash dispersal and deposition from weak plumes. Journal of Geophysical Research: Solid Earth, 2016, 121, 538-557.	1.4	7
67	A simple model for deep dynamic stall conditions. Wind Energy, 2020, 23, 915-938.	1.9	7
68	A Study on the Effect of Flow Unsteadiness on the Yield of a Chemical Reaction in a T Micro-Reactor. Micromachines, 2021, 12, 242.	1.4	7
69	T-mixer operating with water at different temperatures: Simulation and stability analysis. Physical Review Fluids, 2018, 3, .	1.0	7
70	Hybrid RANS/LES simulations of a bluff-body flow. Wind and Structures, an International Journal, 2005, 8, 407-426.	0.8	6
71	Mixing Improvement in a T-Shaped Micro-Junction through Small Rectangular Cavities. Micromachines, 2022, 13, 159.	1.4	6
72	Numerical Evaluation of Airfoil Friction Drag. Journal of Aircraft, 2000, 37, 354-356.	1.7	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.	1.3	5
75	Stochastic calibration of cavitation model parameters for simulations of 3-phase injector internal flows. Computers and Fluids, 2020, 205, 104581.	1.3	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.	0.3	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.	1.0	5
78	Mixing sensitivity to the inclination of the lateral walls in a T-mixer. Chemical Engineering and Processing: Process Intensification, 2022, 170, 108699.	1.8	5
79	Concurrent theoretical, experimental and numerical analyses of mixed-flow turbopump design. Aerospace Science and Technology, 2022, 123, 107459.	2.5	5
80	A conditional stability criterion based on generalized energies. Journal of Fluid Mechanics, 2007, 581, 277-286.	1.4	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.	2.7	4
82	Drag prediction over steep sinusoidal wavy surfaces. Physics of Fluids, 2001, 13, 2728-2731.	1.6	3
83	Further generalized energies for the application of an energy criterion of conditional stability. Acta Mechanica, 2011, 218, 357-366.	1.1	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.	0.8	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.	2.7	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.	2.4	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, .	1.4	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.	0.1	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.	0.1	1
99	Integrating in-vivo Data inÂCFD Simulations andÂin in-vitro Experiments ofÂtheÂHemodynamic inÂHealthy andÂPathologic Thoracic Aorta. Lecture Notes in Computer Science, 2022, , 208-219.	1.0	1
100	Non-equilibrium external flows including wall-catalysis effects by adaptive upwind finite elements. Russian Physics Journal, 1993, 36, 326-343.	0.2	0
101	Effect of a Splitter Plate on Transonic Wing Flow: A Numerical Study. Journal of Aircraft, 1999, 36, 718-720.	1.7	0
102	Validation of a Wall Interference Correction Procedure in Subsonic Flow. Journal of Aircraft, 2003, 40, 803-805.	1.7	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.	0.3	0
104	Large-eddy simulation of heavy particle dispersion in wall-bounded turbulent flows. AIP Conference Proceedings, 2015, , .	0.3	0
105	Numerical Simulation of Cavitating Flows in Complex Geometries. CISM International Centre for Mechanical Sciences, Courses and Lectures, 2017, , 235-258.	0.3	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.	0.3	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.	0.3	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.	0.2	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