

# Surya Vanka

## List of Publications by Year in descending order

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47  
papers

1,733  
citations

257450

24  
h-index

276875

41  
g-index

51  
all docs

51  
docs citations

51  
times ranked

916  
citing authors

#	ARTICLE	IF	CITATIONS
1	Large eddy simulation of turbulence-driven secondary flow in a square duct. <i>Physics of Fluids A, Fluid Dynamics</i> , 1991, 3, 2734-2745.	1.6	169
2	Mathematical Modeling of Iron and Steel Making Processes. Comparison of Four Methods to Evaluate Fluid Velocities in a Continuous Slab Casting Mold.. <i>ISIJ International</i> , 2001, 41, 1262-1271.	1.4	106
3	Study of transient flow and particle transport in continuous steel caster molds: Part I. Fluid flow. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2004, 35, 685-702.	2.1	98
4	Effect of Electromagnetic Ruler Braking (EMBr) on Transient Turbulent Flow in Continuous Slab Casting using Large Eddy Simulations. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2012, 43, 532-553.	2.1	92
5	Study of transient flow and particle transport in continuous steel caster molds: Part II. Particle transport. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2004, 35, 703-714.	2.1	82
6	Computational and experimental study of turbulent flow in a 0.4-scale water model of a continuous steel caster. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2004, 35, 967-982.	2.1	73
7	Numerical study of scalar mixing in curved channels at low Reynolds numbers. <i>AIChE Journal</i> , 2004, 50, 2359-2368.	3.6	73
8	Simulations of the unsteady separated flow past a normal flat plate. <i>International Journal for Numerical Methods in Fluids</i> , 1995, 21, 525-547.	1.6	69
9	Effects of intrinsic three-dimensionalality on the drag characteristics of a normal flat plate. <i>Physics of Fluids</i> , 1995, 7, 2516-2518.	4.0	60
10	A numerical study of the effects of spanwise rotation on turbulent channel flow. <i>Physics of Fluids A, Fluid Dynamics</i> , 1991, 3, 642-656.	1.6	56
11	A ghost fluid Lattice Boltzmann method for complex geometries. <i>International Journal for Numerical Methods in Fluids</i> , 2012, 69, 481-498.	1.6	56
12	Transient Turbulent Flow in a Liquid-Metal Model of Continuous Casting, Including Comparison of Six Different Methods. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2011, 42, 987-1007.	2.1	55
13	A study of pressure-driven displacement flow of two immiscible liquids using a multiphase lattice Boltzmann approach. <i>Physics of Fluids</i> , 2012, 24, .	4.0	55
14	Transient fluid flow and superheat transport in continuous casting of steel slabs. <i>Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science</i> , 2005, 36, 801-823.	2.1	53
15	A three-dimensional numerical study of flow separation and reattachment on a blunt plate. <i>Physics of Fluids A, Fluid Dynamics</i> , 1991, 3, 2887-2909.	1.6	48
16	A numerical study of flow separation and reattachment on a blunt plate. <i>Physics of Fluids A, Fluid Dynamics</i> , 1991, 3, 1749-1759.	1.6	44
17	Investigation of a dual inlet side dump combustor using liquid fuel injection. <i>Journal of Propulsion and Power</i> , 1985, 1, 83-88.	2.2	43
18	Second-order upwind differencing in a recirculating flow. <i>AIAA Journal</i> , 1987, 25, 1435-1441.	2.6	43

#	ARTICLE	IF	CITATIONS
19	Direct numerical simulations of magnetic field effects on turbulent flow in a square duct. <i>Physics of Fluids</i> , 2010, 22, .	4.0	42
20	A multigrid procedure for three-dimensional flows on non-orthogonal collocated grids. <i>International Journal for Numerical Methods in Fluids</i> , 1993, 17, 887-904.	1.6	40
21	A SEMI-IMPLICIT CALCULATION PROCEDURE FOR FLOWS DESCRIBED IN BOUNDARY-FITTED COORDINATE SYSTEMS. <i>Numerical Heat Transfer</i> , 1980, 3, 1-19.	0.5	38
22	Rise of an argon bubble in liquid steel in the presence of a transverse magnetic field. <i>Physics of Fluids</i> , 2016, 28, .	4.0	33
23	Multigrid calculations of a jet in crossflow. <i>Journal of Propulsion and Power</i> , 1992, 8, 425-431.	2.2	27
24	Study of Computational Issues in Simulation of Transient Flow in Continuous Casting. <i>Steel Research International</i> , 2005, 76, 33-43.	1.8	26
25	Mixing, chemical reaction, and flowfield development in ducted rockets. <i>Journal of Propulsion and Power</i> , 1986, 2, 331-338.	2.2	24
26	A high-order accurate meshless method for solution of incompressible fluid flow problems. <i>Journal of Computational Physics</i> , 2021, 445, 110623.	3.8	24
27	MULTIGRID CALCULATION PROCEDURE FOR INTERNAL FLOWS IN COMPLEX GEOMETRIES. <i>Numerical Heat Transfer, Part B: Fundamentals</i> , 1991, 20, 61-80.	0.9	23
28	Optimization of solidification in die casting using numerical simulations and machine learning. <i>Journal of Manufacturing Processes</i> , 2020, 51, 130-141.	5.9	22
29	Separated flow in a driven trapezoidal cavity. <i>Physics of Fluids A, Fluid Dynamics</i> , 1991, 3, 385-392.	1.6	20
30	FINITE-VOLUME MULTIGRID CALCULATION OF NATURAL-CONVECTION FLOWS ON UNSTRUCTURED GRIDS. <i>Numerical Heat Transfer, Part B: Fundamentals</i> , 1996, 30, 1-22.	0.9	16
31	Calculation of axisymmetric turbulent, confined diffusion flames. <i>AIAA Journal</i> , 1986, 24, 462-469.	2.6	14
32	Uncertainty quantification in three dimensional natural convection using polynomial chaos expansion and deep neural networks. <i>International Journal of Heat and Mass Transfer</i> , 2019, 139, 613-631.	4.8	14
33	Performance of a multigrid calculation procedure in three-dimensional sudden expansion flows. <i>International Journal for Numerical Methods in Fluids</i> , 1986, 6, 459-477.	1.6	13
34	Finite volume simulation framework for die casting with uncertainty quantification. <i>Applied Mathematical Modelling</i> , 2019, 74, 132-150.	4.2	13
35	Numerical study of a separated-reattaching flow. <i>Theoretical and Computational Fluid Dynamics</i> , 1993, 5, 291-308.	2.2	12
36	Three-Dimensional Flow in a Driven Cavity Subjected to an External Magnetic Field. <i>Journal of Fluids Engineering, Transactions of the ASME</i> , 2015, 137, .	1.5	12

#	ARTICLE	IF	CITATIONS
37	Shear-driven flow in an elliptical enclosure generated by an inner rotating circular cylinder. <i>Physics of Fluids</i> , 2022, 34, .	4.0	9
38	Dominant Modes in a Gas Cyclone Flow Field Using Proper Orthogonal Decomposition. <i>Industrial &amp; Engineering Chemistry Research</i> , 2022, 61, 2562-2579.	3.7	8
39	Vectorized multigrid fluid flow calculations on a CRAY X-MP/48. <i>International Journal for Numerical Methods in Fluids</i> , 1987, 7, 635-648.	1.6	7
40	Efficient computational tool for ramjet combustor research. <i>Journal of Propulsion and Power</i> , 1989, 5, 431-437.	2.2	5
41	TECHNICAL NOTE: FAST NUMERICAL COMPUTATION OF VISCOUS FLOW IN A CUBE. <i>Numerical Heat Transfer, Part B: Fundamentals</i> , 1991, 20, 255-261.	0.9	4
42	Hot gas environment around STOVL aircraft in ground proximity. II - Numerical study. <i>Journal of Aircraft</i> , 1992, 29, 20-27.	2.4	4
43	A PARALLEL ADI ALGORITHM FOR HIGH-ORDER FINITE-DIFFERENCE SOLUTION OF THE UNSTEADY HEAT CONDUCTION EQUATION, AND ITS IMPLEMENTATION ON THE CM-5. <i>Numerical Heat Transfer, Part B: Fundamentals</i> , 1993, 24, 143-159.	0.9	4
44	A NEW ALGORITHM FOR COMPUTING BINARY COLLISIONS IN DISPERSED TWO-PHASE FLOWS. <i>Numerical Heat Transfer, Part B: Fundamentals</i> , 2004, 45, 99-107.	0.9	3
45	Transient Flow and Temperature Transport in Continuous Casting of Steel Slabs. <i>Journal of Heat Transfer</i> , 2005, 127, 807-807.	2.1	1
46	Calculations of hot gas ingestion for a STOVL aircraft model. <i>Journal of Aircraft</i> , 1994, 31, 236-242.	2.4	0
47	Special Issue on Fluids Engineering Research in Honor of the Life and Achievements of Professor Kirti Chaitanya "A Pioneer in Computational Fluid Dynamics. <i>Journal of Fluids Engineering, Transactions of the ASME</i> , 2022, 144, .	1.5	0