

Rekha R Rao

List of Publications by Year in descending order

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38
papers

800
citations

623699

14
h-index

501174

28
g-index

43
all docs

43
docs citations

43
times ranked

702
citing authors

#	ARTICLE	IF	CITATIONS
1	A Newton-Raphson Pseudo-Solid Domain Mapping Technique for Free and Moving Boundary Problems: A Finite Element Implementation. <i>Journal of Computational Physics</i> , 1996, 125, 83-103.	3.8	158
2	A finite element method for free surface flows of incompressible fluids in three dimensions. Part I. Boundary fitted mesh motion. <i>International Journal for Numerical Methods in Fluids</i> , 2000, 33, 375-403.	1.6	100
3	A finite element method for free surface flows of incompressible fluids in three dimensions. Part II. Dynamic wetting lines. <i>International Journal for Numerical Methods in Fluids</i> , 2000, 33, 405-427.	1.6	60
4	A numerical and experimental study of batch sedimentation and viscous resuspension. <i>International Journal for Numerical Methods in Fluids</i> , 2002, 39, 465-483.	1.6	57
5	Comparison of monodisperse droplet generation in flow-focusing devices with hydrophilic and hydrophobic surfaces. <i>Lab on A Chip</i> , 2012, 12, 1540.	6.0	46
6	Nanoparticle transport in cellular blood flow. <i>Computers and Fluids</i> , 2018, 172, 609-620.	2.5	36
7	Highly conductive, melt processable polymer composites based on nickel and low melting eutectic metal. <i>Polymer</i> , 2010, 51, 2954-2958.	3.8	33
8	The kinetics of polyurethane structural foam formation: Foaming and polymerization. <i>AIChE Journal</i> , 2017, 63, 2945-2957.	3.6	24
9	Nanoparticle diffusion in sheared cellular blood flow. <i>Journal of Fluid Mechanics</i> , 2019, 871, 636-667.	3.4	24
10	Multiscale method based on coupled lattice-Boltzmann and Langevin dynamics for direct simulation of nanoscale particle/polymer suspensions in complex flows. <i>International Journal for Numerical Methods in Fluids</i> , 2019, 91, 228-246.	1.6	22
11	Simulations of the effects of proppant placement on the conductivity and mechanical stability of hydraulic fractures. <i>International Journal of Rock Mechanics and Minings Sciences</i> , 2017, 100, 188-198.	5.8	21
12	A level set method to study foam processing: a validation study. <i>International Journal for Numerical Methods in Fluids</i> , 2012, 68, 1362-1392.	1.6	20
13	NMR measurements and simulations of particle migration in non-newtonian fluids. <i>Chemical Engineering Communications</i> , 2002, 189, 1-22.	2.6	19
14	Heterogeneous partition of cellular blood-borne nanoparticles through microvascular bifurcations. <i>Physical Review E</i> , 2020, 102, 013310.	2.1	16
15	Adaptive refinement of a viscoelastic flow problem with the explicitly elliptic momentum equation. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 1991, 38, 223-246.	2.4	14
16	Instabilities during batch sedimentation in geometries containing obstacles: A numerical and experimental study. <i>International Journal for Numerical Methods in Fluids</i> , 2007, 55, 723-735.	1.6	14
17	Practical application of thixotropic suspension models. <i>Journal of Rheology</i> , 2009, 53, 169-189.	2.6	14
18	Numerical simulations of mounding and submerging flows of shear-thinning jets impinging in a container. <i>Journal of Non-Newtonian Fluid Mechanics</i> , 2011, 166, 1100-1115.	2.4	13

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19	Density predictions using a finite element/level set model of polyurethane foam expansion and polymerization. Computers and Fluids, 2018, 175, 20-35.	2.5	13
20	Finite element analysis of multicomponent two-phase flows with interphase mass and momentum transport. International Journal for Numerical Methods in Fluids, 1994, 18, 821-842.	1.6	12
21	On the quality of viscoelastic flow solutions: An adaptive refinement study of a Newtonian and a maxwell fluid. International Journal for Numerical Methods in Fluids, 1990, 11, 571-585.	1.6	11
22	Modeling of Liquid-Liquid Extraction (LLE) Equilibria Using Gibbs Energy Minimization (GEM) for the System TBP HNO_3 UO_2 H_2O Diluent. Solvent Extraction and Ion Exchange, 2013, 31, 634-651.	2.0	10
23	Circulation within confined droplets in Hele-Shaw channels. Physics of Fluids, 2014, 26, .	4.0	10
24	Drop mass transfer in a microfluidic chip compared to a centrifugal contactor. AIChE Journal, 2014, 60, 3071-3078.	3.6	9
25	Viscoelastic flow simulation using cubic stress finite elements. Journal of Non-Newtonian Fluid Mechanics, 1992, 43, 61-82.	2.4	7
26	Adaptive refinement of one-dimensional viscoelastic problem. Communications in Applied Numerical Methods, 1992, 8, 41-49.	0.5	7
27	A computational model for molten corium spreading and solidification. Computers and Fluids, 2019, 178, 1-14.	2.5	5
28	Computational modeling and experiments of an elastoviscoplastic fluid in a thin mold-filling geometry. Journal of Non-Newtonian Fluid Mechanics, 2022, 307, 104851.	2.4	5
29	Population balance modeling of polyurethane foam formation with pressure-dependent growth kernel. AIChE Journal, 2022, 68, e17529.	3.6	3
30	Finite element simulations of viscoelastic flow of blade coating using the log-conformation tensor. Computers and Fluids, 2019, 180, 117-127.	2.5	2
31	Complex Rheology in Particle-Laden Composite Materials. , 2003, , 2437.		1
32	Modeling coupled migration and settling of particulates in curing filled epoxies. Journal of Applied Polymer Science, 2011, 122, 1587-1598.	2.6	1
33	Measurements of Wall Slip during Rise of a Physically Blown Foam. AIP Conference Proceedings, 2008, , .	0.4	0
34	Computational fluid mechanics for free and moving boundary problems. International Journal for Numerical Methods in Fluids, 2012, 68, 1341-1342.	1.6	0
35	USNCCM-11: Computational fluid mechanics for free and moving boundary problems. Computers and Fluids, 2013, 87, 1.	2.5	0
36	Criteria for drop generation in multiphase microfluidic devices. Physical Review E, 2017, 95, 063103.	2.1	0

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37	Injectable Sacrificial Material System to Contain Ex-Vessel Molten Corium in Nuclear Accidents. , 2018, , .		0
38	Bubbleâ€scale observations of polyurethane foam expansion. AICHE Journal, 0, , .	3.6	0