Dr R PONALAGUSAMY

List of Publications by Year
in descending order

76 papers	1,143 citations	516710 16 h-index	454955 30 g-index
81 all docs	81 docs citations	81 times ranked	556 citing authors

#	Article	IF	Citations
1	Pulsatile flow of Cassonâ€™s fluid through stenosed arteries with applications to blood flow. Biorheology, 1986, 23, 499-511.	0.4	140
2	A study of non-newtonian aspects of blood flow through stenosed arteries and its applications in arterial diseases. Biorheology, 1985, 22, 521-531.	0.4	125
3	The effects of various reinforcements on dry sliding wear behaviour of AA 6061 nanocomposites. Materials & Design, 2014, 64, 783-793.	5.1	58
4	Blood flow in stenosed arteries with radially variable viscosity, peripheral plasma layer thickness and magnetic field. Meccanica, 2013, 48, 2427-2438.	2.0	44
5	Generalised yield criteria of porous sintered powder metallurgy metals. Journal of Materials Processing Technology, 2001, 110, 182-185.	6.3	41
6	Microstructural observation, consolidation and mechanical behaviour of AA 6061 nanocomposites reinforced by Î³-Al2O3 nanoparticles. Advanced Powder Technology, 2015, 26, 139-148.	4.1	40
7	A study on two-layered model (Cassonâ€“Newtonian) for blood flow through an arterial stenosis: Axially variable slip velocity at the wall. Journal of the Franklin Institute, 2011, 348, 2308-2321.	3.4	36
8	Influence of magnetic field and heat transfer on two-phase fluid model for oscillatory blood flow in an arterial stenosis. Meccanica, 2015, 50, 927-943.	2.0	35
9	Design and development of streamlined extrusion dies a Bezier curve approach. Journal of Materials Processing Technology, 2005, 161, 375-380.	6.3	34
10	An upper bound solution to extrusion of circular billet to circular shape through cosine dies. Materials & Design, 2006, 27, 411-415.	5.1	29
11	Mathematical model of pulsatile flow of non-Newtonian fluid in tubes of varying cross-sections and its implications to blood flow. Journal of the Franklin Institute, 2012, 349, 1681-1698.	3.4	29
12	Mathematical analysis on effect of non-Newtonian behavior of blood on optimal geometry of microvascular bifurcation system. Journal of the Franklin Institute, 2012, 349, 2861-2874.	3.4	25
13	A complete ranking of incomplete interval information. Expert Systems With Applications, 2014, 41, 1947-1954.	7.6	23
14	Biorheological Model on Flow of Herschel-Bulkley Fluid through a Tapered Arterial Stenosis with Dilatation. Applied Bionics and Biomechanics, 2015, 2015, 1-12.	1.1	21
15	Mathematical modelling for pulsatile flow of Casson fluid along with magnetic nanoparticles in a stenosed artery under external magnetic field and body acceleration. Neural Computing and Applications, 2019, 31, 813-826.	5.6	19
16	The effects of double-diffusion and viscous dissipation on the oscillatory convection in a viscoelastic fluid saturated porous layer. Physics of Fluids, 2020, 32, .	4.0	19
17	Numerical investigation on two-fluid model (micropolar-Newtonian) for pulsatile flow of blood in a tapered arterial stenosis with radially variable magnetic field and core fluid viscosity. Computational and Applied Mathematics, 2018, 37, 719-743.	1.3	18
18	Particleâ€“fluid two phase modeling of electro-magneto hydrodynamic pulsatile flow of Jeffrey fluid in a constricted tube under periodic body acceleration. European Journal of Mechanics, B/Fluids, 2020, 81, 76-92.	2.5	18

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19	The effect of strain rate sensitivity on theoretical prediction of limiting draw ratio for cylindrical cup drawing process. Materials & Design, 2008, 29, 884-890.	5.1	17
20	Modeling of pulsatile EMHD flow of Au-blood in an inclined porous tapered atherosclerotic vessel under periodic body acceleration. Archive of Applied Mechanics, 2021, 91, 3421-3447.	2.2	17
21	Mathematical modeling of electro hydrodynamic non-Newtonian fluid flow through tapered arterial stenosis with periodic body acceleration and applied magnetic field. Applied Mathematics and Computation, 2019, 362, 124453.	2.2	16
22	A study on barrelling in magnesium alloy solid cylinders during cold upset forming. Journal of Materials Processing Technology, 2000, 101, 64-69.	6.3	15
23	Computational model on pulsatile flow of blood through a tapered arterial stenosis with radially variable viscosity and magnetic field. Sadhana - Academy Proceedings in Engineering Sciences, 2017, 42, 1901-1913.	1.3	15
24	Particulate suspension Jeffrey fluid flow in a stenosed artery with a particle-free plasma layer near the wall. Korea Australia Rheology Journal, 2016, 28, 217-227.	1.7	14
25	Pulsatile MHD flow of a Casson fluid through a porous bifurcated arterial stenosis under periodic body acceleration. Applied Mathematics and Computation, 2018, 333, 325-343.	2.2	14
26	Numerical modelling on pulsatile flow of Casson nanofluid through an inclined artery with stenosis and tapering under the influence of magnetic field and periodic body acceleration. Korea Australia Rheology Journal, 2017, 29, 303-316.	1.7	13
27	Mathematical model on magneto-hydrodynamic dispersion in a porous medium under the influence of bulk chemical reaction. Korea Australia Rheology Journal, 2020, 32, 287-299.	1.7	13
28	A mathematical theory of plasticity for the upsetting of compressible P/M materials. Journal of Materials Processing Technology, 2000, 97, 107-109.	6.3	12
29	A novel generalized design methodology and realization of Boolean operations using DNA. BioSystems, 2009, 97, 146-153.	2.0	12
30	Effects of slip and magnetic field on the pulsatile flow of a Jeffrey fluid with magnetic nanoparticles in a stenosed artery. European Physical Journal Plus, 2019, 134, 1.	2.6	12
31	Mathematical analysis of flow of non-Newtonian fluid due to metachronal beating of cilia in a tube and its physiological applications. Applied Mathematics and Computation, 2018, 337, 545-561.	2.2	11
32	A new fourth order embedded RKAHeM(4,4) method with error control on multilayer raster cellular neural network. Signal, Image and Video Processing, 2009, 3, 1-11.	2.7	9
33	A two-layered suspension (particle-fluid) model for non-Newtonian fluid flow in a catheterized arterial stenosis with slip condition at the wall of stenosed artery. Korea Australia Rheology Journal, 2017, 29, 87-100.	1.7	9
34	Uniaxial tensile behaviour of ZM-21 magnesium alloy at room temperature. Journal of Materials Processing Technology, 2000, 102, 56-58.	6.3	8
35	A mathematical theory of plasticity for compressible powder metallurgy materials â€" Part II. Journal of Materials Processing Technology, 2000, 97, 110-113.	6.3	8
36	A new method of embedded fourth order with four stages to study raster CNN simulation. International Journal of Automation and Computing, 2009, 6, 285-294.	4.5	8

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37	Role of hybrid reinforcement on microstructural observation, characterization and consolidation behavior of AA 6061 nanocomposite. Advanced Powder Technology, 2015, 26, 1171-1182.	4.1	8
38	Influence of Electromagnetic Field and Thermal Radiation on Pulsatile Blood Flow with Nanoparticles in a Constricted Porous Artery. International Journal of Applied and Computational Mathematics, 2021, 7, 1.	1.6	8
39	Pulsatile Flow of EMHD Micropolar Hybrid Nanofluid in a Porous Bifurcated Artery With an Overlapping Stenosis in the Presence of Body Acceleration and Joule Heating. Brazilian Journal of Physics, 2022, 52, 1.	1.4	8
40	Modeling of pulsatile EMHD flow of non-Newtonian blood with magnetic particles in a tapered stenosed tube: a comparative study of actual and approximated drag force. European Physical Journal Plus, 2022, 137, 1.	2.6	8
41	A four-layered model for flow of non-Newtonian fluid in an artery with mild stenosis. Sadhana - Academy Proceedings in Engineering Sciences, 2019, 44, 1.	1.3	7
42	A numerical model on pulsatile flow of magnetic nanoparticles as drug carrier suspended in Herschelâ€“Bulkley fluid through an arterial stenosis under external magnetic field and body force. International Journal of Computer Mathematics, 2019, 96, 1763-1786.	1.8	7
43	A mathematical theory of plasticity for compressible powder metallurgy materials â€” Part III. Journal of Materials Processing Technology, 2000, 100, 262-265.	6.3	6
44	A Novel Generalized Model for Constructing Reusable and Reliable Logic Gates Using DNA. , 2008, , .		6
45	Statistical evaluation of forming limit diagram for annealed Al 1350 alloy sheets using first order reliability method. Applied Mathematical Modelling, 2014, 38, 145-167.	4.2	6
46	Nonlinear model on pulsatile flow of blood through a porous bifurcated arterial stenosis in the presence of magnetic field and periodic body acceleration. Computer Methods and Programs in Biomedicine, 2017, 142, 31-41.	4.7	6
47	COUPLE STRESS FLUID MODEL FOR PULSATILE FLOW OF BLOOD IN A POROUS TAPERED ARTERIAL STENOSIS UNDER MAGNETIC FIELD AND PERIODIC BODY ACCELERATION. Journal of Mechanics in Medicine and Biology, 2017, 17, 1750109.	0.7	6
48	A study on two-layered (K.L-Newtonian) model of blood flow in an artery with six types of mild stenoses. Applied Mathematics and Computation, 2020, 367, 124767.	2.2	6
49	A Comparison of RK-Fourth Orders of Variety of Means on Multilayer Raster CNN Simulation. Trends in Applied Sciences Research, 2008, 3, 242-252.	0.4	6
50	Prediction of limit strains in sheet metals by using new generalized yield criteria. Materials & Design, 2007, 28, 913-920.	5.1	5
51	DNA algorithm employing temperature gradient for Freeze-Tag Problem in swarm robotics. Transactions of the Institute of Measurement and Control, 2012, 34, 278-290.	1.7	5
52	Two-Fluid Model for Blood Flow Through a Tapered Arterial Stenosis: Effect of Non-zero Couple Stress Boundary Condition at the Interface. International Journal of Applied and Computational Mathematics, 2017, 3, 807-824.	1.6	5
53	An unsteady flow of magnetic nanoparticles as drug carrier suspended in micropolar fluid through a porous tapered arterial stenosis under non-uniform magnetic field and periodic body acceleration. Computational and Applied Mathematics, 2018, 37, 4259-4280.	1.3	5
54	Biorheological Model on Pulsatile Flow of Blood (Kâ€“L Fluid) Through Flexible Stenotic Tapered Blood Vessels. International Journal of Applied and Computational Mathematics, 2021, 7, 1.	1.6	5

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55	Mathematical study on two-fluid model for flow of Kâ€“L fluid in a stenosed artery with porous wall. SN Applied Sciences, 2021, 3, 1.	2.9	5
56	A mathematical theory of plasticity for compressible P/M materials. Journal of Materials Processing Technology, 1999, 86, 159-162.	6.3	4
57	Parallel algorithms for robot path planning with simpler VLSI architecture. International Journal of Computer Applications in Technology, 2006, 26, 157.	0.5	4
58	Finite difference method for analysis of open-die forging of sintered cylindrical billets. Materials & Design, 2008, 29, 1886-1892.	5.1	4
59	A Numerical Study on Unsteady Flow of Herschelâ€“Bulkley Nanofluid Through an Inclined Artery with Body Acceleration and Magnetic Field. International Journal of Applied and Computational Mathematics, 2019, 5, 1.	1.6	4
60	Electromagnetic control of non-Newtonian fluid (blood) suspended with magnetic nanoparticles in the tapered constricted inclined tube. AIP Conference Proceedings, 2021, , .	0.4	4
61	NUMERICAL STUDY ON STEADY STATE THREE-DIMENSIONAL ATMOSPHERIC DIFFUSION OF SULFUR DIOXIDE AND SULFATE DISPERSION WITH NON-LINEAR KINETICS. International Journal of Computational Fluid Dynamics, 1993, 1, 339-349.	1.2	3
62	Computer-aided metal flow investigation in streamlined extrusion dies. Materials & Design, 2008, 29, 1228-1239.	5.1	3
63	Suspension model for blood flow through a catheterized arterial stenosis with peripheral layer of plasma free from cells. European Physical Journal Plus, 2016, 131, 1.	2.6	3
64	Biological Study on Pulsatile Flow of Herschel-Bulkley Fluid in Tapered Blood Vessels. , 2015, , 39-50.		3
65	ANALYSIS OF MEDICAL IMAGE COMPRESSION USING STATISTICAL CODING METHODS. , 2007, , .		3
66	A NEW FIFTH-ORDER WEIGHTED RUNGE-KUTTA ALGORITHM BASED ON HERONIAN MEAN FOR INITIAL VALUE PROBLEMS IN ORDINARY DIFFERENTIAL EQUATIONS. Journal of Applied Mathematics & Informatics, 2017, 35, 191-204.	0.1	3
67	Analysis of MHD pulsatile flow of Jeffrey fluid in a diseased inclined tapered porous artery exposed to an inclined magnetic field. Journal of Physics: Conference Series, 2021, 1850, 012039.	0.4	2
68	A Parallel Solution for the Unconstrained Maximum Elements Problem. , 2006, , .		1
69	A Parallel Fourth Order Rosenbrock Method: Construction, Analysis and Numerical Comparison. International Journal of Applied and Computational Mathematics, 2015, 1, 45-68.	1.6	1
70	Effects of magnetic force and nonâ€Newtonian characteristics on squeeze film bearings. Asia-Pacific Journal of Chemical Engineering, 2020, 15, e2510.	1.5	1
71	Dispersion of a Solute in Blood Flowing Through Narrow Arteries with Homogeneous First-order Chemical Reaction. Proceedings of the National Academy of Sciences India Section A - Physical Sciences, 0, , 1.	1.2	1
72	Impact of Variable Viscosity, Chemical Reaction and Electro-Osmotic Mechanism on the Dispersal of solute through a Uniform Channel with Permeable walls. International Journal of Applied and Computational Mathematics, 2022, 8, 1.	1.6	1

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73	Effect of electro-magneto-hemodynamic environs on dispersion of solute in the peristaltic motion through a channel with chemical reaction, wall properties and porous medium. Korea Australia Rheology Journal, 2022, 34, 69-90.	1.7	1
74	Sheet metals forming limit stress and strain prediction based on new generalised yield criterion. International Journal of Computational Materials Science and Surface Engineering, 2011, 4, 311.	0.2	0
75	A CONSTANT-TIME SELECTION ALGORITHM ON AN LARPBS. , 2007, , .		0
76	Effects of Rheology of Non-Newtonian Fluid and Chemical Reaction on a Dispersion of a Solute and Implications to Blood Flow. International Journal of Applied and Computational Mathematics, 2022, 8, 1.	1.6	0