Giuseppe Pontrelli

List of Publications by Year
in descending order

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78 papers	1,807 citations	279487 23 h-index	301761 39 g-index
80 all docs	80 docs citations	80 times ranked	1545 citing authors

#	Article	IF	Citations
1	Biomimetic Nanotherapies: Red Blood Cell Based Coreâ€"Shell Structured Nanocomplexes for Atherosclerosis Management. Advanced Science, 2019, 6, 1900172.	5.6	194
2	Macrophage membrane functionalized biomimetic nanoparticles for targeted anti-atherosclerosis applications. Theranostics, 2021, 11, 164-180.	4.6	184
3	Mass diffusion through two-layer porous media: an application to the drug-eluting stent. International Journal of Heat and Mass Transfer, 2007, 50, 3658-3669.	2.5	99
4	A general model of coupled drug release and tissue absorption for drug delivery devices. Journal of Controlled Release, 2015, 217, 327-336.	4.8	80
5	A multi-layer porous wall model for coronary drug-eluting stents. International Journal of Heat and Mass Transfer, 2010, 53, 3629-3637.	2.5	77
6	Blood flow through an axisymmetric stenosis. Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine, 2001, 215, 1-10.	1.0	54
7	Capillary Filling in Microchannels with Wall Corrugations: A Comparative Study of the Concusâˆ'Finn Criterion by Continuum, Kinetic, and Atomistic Approaches. Langmuir, 2009, 25, 12653-12660.	1.6	43
8	A two-phase two-layer model for transdermal drug delivery and percutaneous absorption. Mathematical Biosciences, 2014, 257, 96-103.	0.9	41
9	Mechanistic modelling of drug release from multi-layer capsules. Computers in Biology and Medicine, 2018, 93, 149-157.	3.9	41
10	On the role of specific drug binding in modelling arterial eluting stents. Journal of Mathematical Chemistry, 2016, 54, 967-976.	0.7	40
11	Design and testing of hydrophobic core/hydrophilic shell nano/micro particles for drug-eluting stent coating. NPG Asia Materials, 2018, 10, 642-658.	3.8	40
12	Penetration of the bloodâ€"brain barrier and the anti-tumour effect of a novel PLGA-lysoGM1/DOX micelle drug delivery system. Nanoscale, 2020, 12, 2946-2960.	2.8	39
13	Numerical modelling of the pressure wave propagation in the arterial flow. International Journal for Numerical Methods in Fluids, 2003, 43, 651-671.	0.9	37
14	Pulsatile blood flow in a pipe. Computers and Fluids, 1998, 27, 367-380.	1.3	36
15	Steady flows of non-Newtonian fluids past a porous plate with suction or injection. International Journal for Numerical Methods in Fluids, 1993, 17, 927-941.	0.9	34
16	Modeling of Mass Dynamics in Arterial Drug-Eluting Stents. Journal of Porous Media, 2009, 12, 19-28.	1.0	34
17	BLOOD FLOW THROUGH A CIRCULAR PIPE WITH AN IMPULSIVE PRESSURE GRADIENT. Mathematical Models and Methods in Applied Sciences, 2000, 10, 187-202.	1.7	32
18	Blood flow through an axisymmetric stenosis. Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine, 2001, 215, 1-10.	1.0	32

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19	Modelling mass diffusion for a multi-layer sphere immersed in a semi-infinite medium: application to drug delivery. Mathematical Biosciences, 2018, 303, 1-9.	0.9	28
20	Combining mathematical modelling with in vitro experiments to predict in vivo drug-eluting stent performance. Journal of Controlled Release, 2019, 303, 151-161.	4.8	28
21	Novel design of drug delivery in stented arteries: A numerical comparative study. Mathematical Biosciences and Engineering, 2009, 6, 493-508.	1.0	27
22	Flow of a fluid of second grade over a stretching sheet. International Journal of Non-Linear Mechanics, 1995, 30, 287-293.	1.4	23
23	A mathematical model of flow in a liquid-filled visco-elastic tube. Medical and Biological Engineering and Computing, 2002, 40, 550-556.	1.6	23
24	The unstructured lattice Boltzmann method for non-Newtonian flows. Journal of Statistical Mechanics: Theory and Experiment, 2009, 2009, P06005.	0.9	23
25	A chemo-mechano-biological formulation for the effects of biochemical alterations on arterial mechanics: the role of molecular transport and multiscale tissue remodelling. Journal of the Royal Society Interface, 2017, 14, 20170615.	1.5	23
26	A Multiscale Approach for Modelling Wave Propagation in an Arterial Segment. Computer Methods in Biomechanics and Biomedical Engineering, 2004, 7, 79-89.	0.9	21
27	Effects of orthogonal rotating electric fields on electrospinning process. Physics of Fluids, 2017, 29, .	1.6	20
28	FLOW OF A VISCOELASTIC FLUID BETWEEN TWO ROTATING CIRCULAR CYLINDERS SUBJECT TO SUCTION OR INJECTION. International Journal for Numerical Methods in Fluids, 1997, 24, 337-349.	0.9	19
29	JETSPIN: A specific-purpose open-source software for simulations of nanofiber electrospinning. Computer Physics Communications, 2015, 197, 227-238.	3.0	19
30	Entropic lattice Boltzmann model for charged leaky dielectric multiphase fluids in electrified jets. Physical Review E, 2018, 97, 033308.	0.8	19
31	Local mass non-equilibrium dynamics in multi-layered porous media: application to the drug-eluting stent. International Journal of Heat and Mass Transfer, 2013, 66, 844-854.	2.5	18
32	Effects of non-linear rheology on electrospinning process: A model study. Mechanics Research Communications, 2014, 61, 41-46.	1.0	18
33	Modeling drug delivery from multiple emulsions. Physical Review E, 2020, 102, 023114.	0.8	17
34	Longitudinal and torsional oscillations of a rod in an Oldroyd-B fluid with suction or injection. Acta Mechanica, 1997, 123, 57-68.	1.1	16
35	Modelling the glycocalyxâ€“endotheliumâ€“erythrocyte interaction in the microcirculation: a computational study. Computer Methods in Biomechanics and Biomedical Engineering, 2015, 18, 351-361.	0.9	15
36	Mathematical modelling of NABD release from endoluminal gel paved stent. Computational Biology and Chemistry, 2009, 33, 33-40.	1.1	14

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37	Modelling wall shear stress in small arteries using the Lattice Boltzmann method: influence of the endothelial wall profile. Medical Engineering and Physics, 2011, 33, 832-839.	0.8	14
38	Mathematical modelling of variable porosity coatings for controlled drug release. Medical Engineering and Physics, 2017, 45, 51-60.	0.8	14
39	Mathematical modelling of drug delivery from pH-responsive nanocontainers. Computers in Biology and Medicine, 2021, 131, 104238.	3.9	14
40	Multiple-component lattice Boltzmann equation for fluid-filled vesicles in flow. Physical Review E, 2013, 87, 023307.	0.8	13
41	Theoretical model for diffusion-reaction based drug delivery from a multilayer spherical capsule. International Journal of Heat and Mass Transfer, 2022, 183, 122072.	2.5	13
42	Non-similar flow of a non-newtonian fluid past a wedge. International Journal of Engineering Science, 1993, 31, 637-647.	2.7	12
43	Lattice Boltzmann method as a computational framework for multiscale haemodynamics. Mathematical and Computer Modelling of Dynamical Systems, 2014, 20, 470-490.	1.4	12
44	Dynamic mesh refinement for discrete models of jet electro-hydrodynamics. Journal of Computational Science, 2016, 17, 325-333.	1.5	12
45	Theoretical modeling of endovascular drug delivery into a multilayer arterial wall from a drug-coated balloon. International Journal of Heat and Mass Transfer, 2022, 187, 122572.	2.5	12
46	Jefferey-Hamel flow of power-law fluids for exponent values close to the critical value. International Journal of Non-Linear Mechanics, 1991, 26, 761-767.	1.4	11
47	Spline approximation of advectionâ€“diffusion problems using upwind type collocation nodes. Journal of Computational and Applied Mathematics, 1999, 110, 141-153.	1.1	11
48	A one-dimensional model for blood flow in prestressed vessels. European Journal of Mechanics, A/Solids, 2005, 24, 23-33.	2.1	11
49	UNSTRUCTURED LATTICE BOLTZMANN METHOD FOR HEMODYNAMIC FLOWS WITH SHEAR-DEPENDENT VISCOSITY. International Journal of Modern Physics C, 2010, 21, 795-811.	0.8	11
50	Different regimes of the uniaxial elongation of electrically charged viscoelastic jets due to dissipative air drag. Mechanics Research Communications, 2015, 69, 97-102.	1.0	11
51	Ultrathin Fibers from Electrospinning Experiments under Driven Fast-Oscillating Perturbations. Physical Review Applied, 2014, 2, .	1.5	10
52	Drug delivery from microcapsules: How can we estimate the release time?. Mathematical Biosciences, 2019, 315, 108216.	0.9	10
53	Nonlinear Langevin model for the early-stage dynamics of electrospinning jets. Molecular Physics, 2015, 113, 2435-2441.	0.8	9
54	A discrete in continuous mathematical model of cardiac progenitor cells formation and growth as spheroid clusters (Cardiospheres). Mathematical Medicine and Biology, 2017, 35, dqw022.	0.8	8

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55	Wave propagation in a fluid flowing through a curved thin-walled elastic tube. European Journal of Mechanics, B/Fluids, 2006, 25, 987-1007.	1.2	7
56	Multi-scale interaction of particulate flow and the artery wall. Medical Engineering and Physics, 2011, 33, 840-848.	0.8	7
57	Drug diffusion and release from a bioerodible spherical capsule. International Journal of Pharmaceutics, 2022, 616, 121442.	2.6	7
58	Nonlinear problems in arterial flows. Nonlinear Analysis: Theory, Methods & Applications, 2001, 47, 4905-4915.	0.6	6
59	The Lattice Boltzmann Method and Multiscale Hemodynamics: Recent Advances and Perspectives. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 30-39.	0.4	6
60	MODELING FLUID FLOWS IN DISTENSIBLE TUBES FOR APPLICATIONS IN HEMODYNAMICS. International Journal of Modern Physics C, 2013, 24, 1350030.	0.8	6
61	Iontophoretic transdermal drug delivery: a multi-layered approach. Mathematical Medicine and Biology, 2016, 34, dqw017.	0.8	6
62	A numerical study of a nonlocal model of damage propagation under chemical aggression. European Journal of Applied Mathematics, 2003, 14, 447-464.	1.4	5
63	The role of the arterial prestress in blood flow dynamics. Medical Engineering and Physics, 2006, 28, 6-12.	0.8	5
64	Transdermal Drug Delivery and Percutaneous Absorption. , 2015, , 273-304.		5
65	Local membrane length conservation in two-dimensional vesicle simulation using a multicomponent lattice Boltzmann equation method. Physical Review E, 2016, 94, 023306.	0.8	5
66	A Langevin dynamics approach for multi-layer mass transfer problems. Computers in Biology and Medicine, 2020, 124, 103932.	3.9	4
67	On the influence of solidâ€“liquid mass transfer in the modelling of drug release from stents. Journal of Coupled Systems and Multiscale Dynamics, 2015, 3, 47-56.	0.2	4
68	Coupling Microscale Transport and Tissue Mechanics: Modeling Strategies for Arterial Multiphysics. , 2017, , 77-112.		3
69	Characterization of the Shells in Layer-By-Layer Nanofunctionalized Particles: A Computational Study. Frontiers in Bioengineering and Biotechnology, 0, 10, .	2.0	3
70	Concentration wave of a solute in an artery: the influence of curvature. Computer Methods in Biomechanics and Biomedical Engineering, 2007, 10, 129-136.	0.9	2
71	Drug Release in Biological Tissues. , 2013, , 59-118.		2
72	Mass diffusion in multi-layer systems: an electrical analogue modelling approach. Computers in Biology and Medicine, 2022, 148, 105774.	3.9	2

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73	Non-radial flow of an incompressible fluid of second grade in a contracting channel. Meccanica, 1995, 30, 53-62.	1.2	1
74	Mathematical modelling for viscoelastic fluids. Nonlinear Analysis: Theory, Methods & Applications, 1997, 30, 349-357.	0.6	1
75	Multicomponent Lattice Boltzmann Models for Biological Applications. , 2018, , 357-370.		1
76	Drug Delivery in Biological Tissues: A Two-Layer Reaction-Diffusion-Convection Model. Mathematics in Industry, 2016, , 355-363.	0.1	1
77	The Choice of a Performance Indicator of Release in Transdermal Drug Delivery Systems. Lecture Notes in Applied and Computational Mechanics, 2018, , 49-64.	2.0	0
78	Model of Drug Delivery to Populations Composed of Two Cell Types. Journal of Theoretical Biology, 2021, 534, 110947.	0.8	0