Benoit Goyeau

List of Publications by Year
in descending order

64 papers	1,924 citations	218381 26 h-index	253896 43 g-index
66 all docs	66 docs citations	66 times ranked	1003 citing authors

#	Article	IF	Citations
1	Momentum transport at a fluidâ€"porous interface. International Journal of Heat and Mass Transfer, 2003, 46, 4071-4081.	2.5	255
2	Numerical study of double-diffusive natural convection in a porous cavity using the Darcy-Brinkman formulation. International Journal of Heat and Mass Transfer, 1996, 39, 1363-1378.	2.5	218
3	A falling film down a slippery inclined plane. Journal of Fluid Mechanics, 2011, 684, 353-383.	1.4	95
4	Stability analysis of thin film flow along a heated porous wall. Physics of Fluids, 2009, 21, .	1.6	77
5	Jump momentum boundary condition at a fluidâ€"porous dividing surface: Derivation of the closure problem. Chemical Engineering Science, 2007, 62, 4025-4039.	1.9	73
6	Call for contributions to a numerical benchmark problem for 2D columnar solidification of binary alloys. International Journal of Thermal Sciences, 2009, 48, 2013-2016.	2.6	66
7	Convective heat and solute transfer in partially porous cavities. International Journal of Heat and Mass Transfer, 2005, 48, 1898-1908.	2.5	63
8	Velocity and stress jump conditions between a porous medium and a fluid. Advances in Water Resources, 2013, 62, 327-339.	1.7	59
9	Numerical calculation of the permeability in a dendritic mushy zone. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 1999, 30, 613-622.	1.0	54
10	Linear stability of natural convection in superposed fluid and porous layers: Influence of the interfacial modelling. International Journal of Heat and Mass Transfer, 2007, 50, 1356-1367.	2.5	53
11	Convective heat transfer in a channel partially filled with a porous medium. International Journal of Thermal Sciences, 2011, 50, 1355-1368.	2.6	50
12	Direct numerical simulation of turbulent heat transfer in a fluid-porous domain. Physics of Fluids, 2013, 25, .	1.6	49
13	Diffusive mass transfer between a microporous medium and an homogeneous fluid: Jump boundary conditions. Chemical Engineering Science, 2006, 61, 1692-1704.	1.9	44
14	Average momentum equation for interdendritic flow in a solidifying columnar mushy zone. International Journal of Heat and Mass Transfer, 2002, 45, 3651-3665.	2.5	43
15	On the Equivalence of the Discontinuous One- and Two-Domain Approaches for the Modeling of Transport Phenomena at a Fluid/Porous Interface. Transport in Porous Media, 2009, 78, 403-418.	1.2	42
16	Stability of natural convection in superposed fluid and porous layers: Equivalence of the one- and two-domain approaches. International Journal of Heat and Mass Transfer, 2009, 52, 533-536.	2.5	40
17	A falling film on a porous medium. Journal of Fluid Mechanics, 2013, 716, 414-444.	1.4	40
18	Double Diffusive Natural Convection in a Composite Fluid-Porous Layer. Journal of Heat Transfer, 1998, 120, 234-242.	1.2	35

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19	Jump Condition for Diffusive and Convective Mass Transfer Between a Porous Medium and a Fluid Involving Adsorption and Chemical Reaction. Transport in Porous Media, 2009, 78, 459-476.	1.2	34
20	Computation of Jump Coefficients for Momentum Transfer Between a Porous Medium and a Fluid Using a Closed Generalized Transfer Equation. Transport in Porous Media, 2009, 78, 439.	1.2	33
21	Averaged Momentum Equation for Flow Through a Nonhomogenenous Porous Structure. Transport in Porous Media, 1997, 28, 19-50.	1.2	32
22	Asymptotic modeling of transport phenomena at the interface between a fluid and a porous layer: Jump conditions. Physical Review E, 2017, 95, 063302.	0.8	31
23	Stability of Thermosolutal Natural Convection in Superposed Fluid and Porous Layers. Transport in Porous Media, 2009, 78, 525-536.	1.2	30
24	Analysis of a numerical benchmark for columnar solidification of binary alloys. IOP Conference Series: Materials Science and Engineering, 2012, 33, 012086.	0.3	30
25	A macroscopic model for slightly compressible gas slip-flow in homogeneous porous media. Physics of Fluids, 2014, 26, .	1.6	30
26	One-domain approach for heat transfer between a porous medium and a fluid. International Journal of Heat and Mass Transfer, 2011, 54, 2089-2099.	2.5	27
27	Stability of Natural Convection in Superposed Fluid and Porous Layers Using Integral Transforms. Numerical Heat Transfer, Part B: Fundamentals, 2006, 50, 409-424.	0.6	26
28	Dual reciprocity boundary element method solution of natural convection in Darcyâ€"Brinkman porous media. Engineering Analysis With Boundary Elements, 2004, 28, 23-41.	2.0	24
29	Natural convection in porous media?dual reciprocity boundary element method solution of the Darcy model. International Journal for Numerical Methods in Fluids, 2000, 33, 279-312.	0.9	22
30	Stability of natural convection in superposed fluid and porous layers: Influence of the interfacial jump boundary condition. Physics of Fluids, 2007, 19, 058102.	1.6	20
31	Boundary conditions at a fluidâ€"porous interface for a convective heat transfer problem: Analysis of the jump relations. International Journal of Heat and Mass Transfer, 2011, 54, 3683-3693.	2.5	19
32	Coupled Upscaling Approaches For Conduction, Convection, and Radiation in Porous Media: Theoretical Developments. Transport in Porous Media, 2013, 98, 323-347.	1.2	18
33	Coupling a two-temperature model and a one-temperature model at a fluid-porous interface. International Journal of Heat and Mass Transfer, 2012, 55, 2510-2523.	2.5	17
34	Heat transfer by thermosolutal natural convection in a vertical composite fluid-porous cavity. International Communications in Heat and Mass Transfer, 1999, 26, 1115-1126.	2.9	16
35	Chemical non-equilibrium modelling of columnar solidification. International Journal of Heat and Mass Transfer, 2006, 49, 4496-4510.	2.5	16
36	Natural convection in partially porous media: a brief overview. International Journal of Numerical Methods for Heat and Fluid Flow, 2008, 18, 465-490.	1.6	14

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37	A numerical simulation of columnar solidification: influence of inertia on channel segregation. Modelling and Simulation in Materials Science and Engineering, 2013, 21, 045016.	0.8	13
38	Averaged model for momentum and dispersion in hierarchical porous media. Physical Review E, 2015, 92, 023201.	0.8	13
39	Histological Method to Study the Effect of Shear Stress on Cell Proliferation and Tissue Morphology in a Bioreactor. Tissue Engineering and Regenerative Medicine, 2019, 16, 225-235.	1.6	13
40	Averaged solute transport during solidification of a binary mixture: Active dispersion in dendritic structures. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2002, 33, 365-376.	1.0	10
41	A pore network modelling approach to investigate the interplay between local and Darcy viscosities during the flow of shear-thinning fluids in porous media. Journal of Colloid and Interface Science, 2021, 590, 446-457.	5.0	10
42	Large-scale model of flow in heterogeneous and hierarchical porous media. Advances in Water Resources, 2017, 109, 41-57.	1.7	8
43	A nonlinear asymptotic model for the inertial flow at a fluid-porous interface. Advances in Water Resources, 2021, 149, 103798.	1.7	7
44	Passive dispersion in dendritic structures. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2002, 323, 367-376.	2.6	6
45	Diffusion and reaction in three-phase systems: Average transport equations and jump boundary conditions. Chemical Engineering Journal, 2008, 138, 307-332.	6.6	6
46	Onset of convective instabilities in under-ice melt ponds. Physical Review E, 2012, 85, 066306.	0.8	6
47	Thermosolutal Natural Convection in Partially Porous Domains. Journal of Heat Transfer, 2012, 134, .	1.2	6
48	Large Particle Transport in Porous Media: Effect of Pore Plugging on the Macroscopic Transport Properties. Journal of Porous Media, 2008, 11, 343-360.	1.0	4
49	Numerical analysis of the pore-scale mechanisms controlling the efficiency of immiscible displacement of a pollutant phase by a shear-thinning fluid. Chemical Engineering Science, 2022, 251, 117462.	1.9	4
50	Numerical simulation of channel segregates during alloy solidification using TVD schemes. International Journal of Numerical Methods for Heat and Fluid Flow, 2010, 20, 841-866.	1.6	3
51	Macroscopic modeling of columnar dendritic solidification. Computational and Applied Mathematics, 2004, 23, .	1.3	3
52	Macroscopic model for solidification in porous media. International Journal of Heat and Mass Transfer, 2017, 113, 704-715.	2.5	2
53	DOWNSCALING PROCEDURE FOR CONVECTIVE HEAT TRANSFER IN PERIODIC POROUS MEDIA. Journal of Porous Media, 2013, 16, 123-135.	1.0	2
54	Macroscopic Conduction Models by Volume Averaging for Two-Phase Systems. Topics in Applied Physics, 2009, , 95-105.	0.4	1

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55	Downscaling Method from Macroscopic to Microscopic Scale in a Periodic Two-Dimensional Porous Medium. , 2010, , .		1
56	Discrete model combined with mimetic microfluidic chips to study cell growth in porous scaffold under flow conditions. Computer Methods in Biomechanics and Biomedical Engineering, 2012, 15, 25-26.	0.9	1
57	Effect of Reaction and Adsorption at the Surface of Porous Pellets on the Concentration of Slurries. Industrial & Engineering Chemistry Research, 2012, 51, 12739-12750.	1.8	1
58	Channeling Effect and Tissue Morphology in a Perfusion Bioreactor Imaged by X-Ray Microtomography. Tissue Engineering and Regenerative Medicine, 2020, 17, 301-311.	1.6	1
59	Momentum transport in the free fluid-porous medium transition layer: one-domain approach. Chemical Engineering Science, 2022, 248, 117111.	1.9	1
60	Numerical Modeling of Hot Water Storage in Aquifer by Finite Element Method. Developments in Water Science, 1988, 36, 325-330.	0.1	0
61	One-Domain Approach for Heat Transfer At The Fluid-Porous Medium Inter-Region. , 2010, , .		0
62	Derivation of Complete Jump Boundary Conditions Between Homogeneous Media. , 2010, , .		0
63	Channel segregation during columnar solidification influence of inertia. , 2012, , .		0
64	Modeling of MF/UF Membrane Fouling by a Protein: A New Multiscale Approach. Procedia Engineering, 2012, 44, 1842-1843.	1.2	0