Vaughan R Voller

List of Publications by Year
in descending order

183 papers	10,842 citations	66343 42 h-index	32842 100 g-index
199 all docs	199 docs citations	199 times ranked	5363 citing authors

#	Article	IF	Citations
1	A fixed grid numerical modelling methodology for convection-diffusion mushy region phase-change problems. International Journal of Heat and Mass Transfer, 1987, 30, 1709-1719.	4.8	1,886
2	ENTHALPY-POROSITY TECHNIQUE FOR MODELING CONVECTION-DIFFUSION PHASE CHANGE: APPLICATION TO THE MELTING OF A PURE METAL. Numerical Heat Transfer, 1988, 13, 297-318.	0.5	978
3	An enthalpy method for convection/diffusion phase change. International Journal for Numerical Methods in Engineering, 1987, 24, 271-284.	2.8	509
4	ERAL SOURCE-BASED METHOD FOR SOLIDIFICATION PHASE CHANGE. Numerical Heat Transfer, Part B: Fundamentals, 1991, 19, 175-189.	0.9	474
5	Fixed grid techniques for phase change problems: A review. International Journal for Numerical Methods in Engineering, 1990, 30, 875-898.	2.8	443
6	The modelling of heat, mass and solute transport in solidification systems. International Journal of Heat and Mass Transfer, 1989, 32, 1719-1731.	4.8	435
7	Accurate solutions of moving boundary problems using the enthalpy method. International Journal of Heat and Mass Transfer, 1981, 24, 545-556.	4.8	427
8	FAST IMPLICIT FINITE-DIFFERENCE METHOD FOR THE ANALYSIS OF PHASE CHANGE PROBLEMS. Numerical Heat Transfer, Part B: Fundamentals, 1990, 17, 155-169.	0.9	299
9	A new framework for modeling the migration of meandering rivers. Earth Surface Processes and Landforms, 2011, 36, 70-86.	2.5	267
10	Natural Processes in Delta Restoration: Application to the Mississippi Delta. Annual Review of Marine Science, 2011, 3, 67-91.	11.6	246
11	A general enthalpy method for modeling solidification processes. Metallurgical and Materials Transactions B - Process Metallurgy and Materials Processing Science, 1992, 23, 651-664.	0.4	213
12	A generalized Exner equation for sediment mass balance. Journal of Geophysical Research, 2005, 110, n/a-n/a.	3.3	201
13	ON THE ENTHALPY METHOD. International Journal of Numerical Methods for Heat and Fluid Flow, 1993, 3, 233-244.	2.8	158
14	Fluvial and marine controls on combined subaerial and subaqueous delta progradation: Morphodynamic modeling of compound-clinoform development. Journal of Geophysical Research, 2005, 110, .	3.3	138
15	Fluvio-deltaic sedimentation: A generalized Stefan problem. European Journal of Applied Mathematics, 2000, 11, 433-452.	2.9	136
16	An analytical solution for a Stefan problem with variable latent heat. International Journal of Heat and Mass Transfer, 2004, 47, 5387-5390.	4.8	115
17	Towards a general numerical scheme for solidification systems. International Journal of Heat and Mass Transfer, 1997, 40, 2859-2868.	4.8	113
18	FINITE DIFFERENCE SOLUTIONS OF SOLIDIFICATION PHASE CHANGE PROBLEMS: TRANSFORMED VERSUS FIXED GRIDS. Numerical Heat Transfer, Part B: Fundamentals, 1990, 17, 25-41.	0.9	99

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19	Shoreline response to autogenic processes of sediment storage and release in the fluvial system. Journal of Geophysical Research, 2006, 111, .	3.3	93
20	A unified model of microsegregation and coarsening. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 1999, 30, 2183-2189.	2.2	92
21	Experimental Measurement of the Relative Importance of Controls on Shoreline Migration. Journal of Sedimentary Research, 2006, 76, 270-283.	1.6	87
22	Toward a unified science of the Earth's surface: Opportunities for synthesis among hydrology, geomorphology, geochemistry, and ecology. Water Resources Research, 2006, 42, .	4.2	83
23	Modelling the mushy region in a binary alloy. Applied Mathematical Modelling, 1990, 14, 320-326.	4.2	82
24	An enthalpy method for modeling dendritic growth in a binary alloy. International Journal of Heat and Mass Transfer, 2008, 51, 823-834.	4.8	77
25	Implicit Finiteâ€”difference Solutions of the Enthalpy Formulation of Stefan Problems. IMA Journal of Numerical Analysis, 1985, 5, 201-214.	2.9	76
26	Prediction of thermal crack spacing. International Journal of Solids and Structures, 2003, 40, 125-142.	2.7	73
27	An exact solution of a limit case Stefan problem governed by a fractional diffusion equation. International Journal of Heat and Mass Transfer, 2010, 53, 5622-5625.	4.8	73
28	A two-diffusion model of fluvial stratigraphy in closed depositional basins. Basin Research, 2000, 12, 381-398.	2.7	67
29	A reduced-complexity model for river delta formation â€“ Part 1: Modeling deltas with channel dynamics. Earth Surface Dynamics, 2015, 3, 67-86.	2.4	66
30	Moore's Law and Numerical Modeling. Journal of Computational Physics, 2002, 179, 698-703.	3.8	63
31	An algorithm for analysis of polymer filling of molds. Polymer Engineering and Science, 1995, 35, 1758-1765.	3.1	62
32	Role of Ponded Turbidity Currents in Reservoir Trap Efficiency. Journal of Hydraulic Engineering, 2007, 133, 579-595.	1.5	62
33	Experimental migration of knickpoints: influence of style of base-level fall and bed lithology. Earth Surface Dynamics, 2016, 4, 11-23.	2.4	59
34	Estimating the solidification/melting times of cylindrically symmetric regions. International Journal of Heat and Mass Transfer, 1981, 24, 1457-1462.	4.8	51
35	Modelling of microsegregation. Materials Science and Technology, 1993, 9, 474-482.	1.6	51
36	Fractional Stefan problems. International Journal of Heat and Mass Transfer, 2014, 74, 269-277.	4.8	51

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37	A model of inverse segregation: the role of microporosity. International Journal of Heat and Mass Transfer, 1995, 38, 1009-1018.	4.8	49
38	Analytical, numerical, and experimental analysis of inverse macrosegregation during upward unidirectional solidification of Al-Cu alloys. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2004, 35, 285-297.	2.1	47
39	Modeling Biofilms on Gas-Permeable Supports: Concentration and Activity Profiles. Journal of Environmental Engineering, ASCE, 2000, 126, 250-257.	1.4	46
40	An implicit enthalpy solution for phase change problems: with application to a binary alloy solidification. Applied Mathematical Modelling, 1987, 11, 110-116.	4.2	45
41	Biophysical stress analysis of restored teeth: modelling and analysis. Dental Materials, 1988, 4, 77-84.	3.5	44
42	An explicit scheme for coupling temperature and concentration fields in solidification models. Applied Mathematical Modelling, 2004, 28, 79-94.	4.2	44
43	An imageâ€based method for shoreline mapping on complex coasts. Geophysical Research Letters, 2008, 35, .	4.0	43
44	TREATMENT OF DISCONTINUOUS THERMAL CONDUCTIVITY IN CONTROL-VOLUME SOLUTIONS OF PHASE-CHANGE PROBLEMS. Numerical Heat Transfer, Part B: Fundamentals, 1993, 24, 161-180.	0.9	42
45	A similarity solution for the solidification of a multicomponent alloy. International Journal of Heat and Mass Transfer, 1997, 40, 2869-2877.	4.8	42
46	Calcool: A multi-layer Asphalt Pavement Cooling Tool for Temperature Prediction During Construction. International Journal of Pavement Engineering, 2001, 2, 169-185.	4.4	42
47	Analytical and numerical solution of a generalized Stefan problem exhibiting two moving boundaries with application to ocean delta formation. Journal of Mathematical Analysis and Applications, 2010, 366, 538-549.	1.0	42
48	Can anomalous diffusion describe depositional fluvial profiles?. Journal of Geophysical Research, 2010, 115, .	3.3	42
49	STREAMLINE UPWIND SCHEME FOR CONTROL-VOLUME FINITE ELEMENTS, PART I. FORMULATIONS. Numerical Heat Transfer, Part B: Fundamentals, 1992, 22, 95-107.	0.9	39
50	An explicitâ€“implicit time stepping scheme for solidification models. International Journal of Heat and Mass Transfer, 2008, 51, 3399-3409.	4.8	38
51	Fluoride Absorption from the Gastrointestinal Tract of Rats. Journal of Nutrition, 1989, 119, 1411-1417.	2.9	37
52	A time-implicit filling algorithm. Applied Mathematical Modelling, 1994, 18, 101-108.	4.2	37
53	A vertical dispersion model for solute exchange induced by underflow and periodic hyporheic flow in a stream gravel bed. Water Resources Research, 2008, 44, .	4.2	37
54	Two exact solutions of a Stefan problem with varying diffusivity. International Journal of Heat and Mass Transfer, 2013, 58, 80-85.	4.8	37

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55	Laboratory experiments demonstrate that bubble curtains can effectively inhibit movement of common carp. Ecological Engineering, 2014, 67, 95-103.	3.6	37
56	The Phase-Field Method in the Sharp-Interface Limit: A Comparison between Model Potentials. Journal of Computational Physics, 1997, 130, 256-265.	3.8	36
57	An enthalpy method for moving boundary problems on the earth's surface. International Journal of Numerical Methods for Heat and Fluid Flow, 2006, 16, 641-654.	2.8	35
58	Exploring the role of organic matter accumulation on delta evolution. Journal of Geophysical Research, 2012, 117, .	3.3	35
59	Enthalpy methods for tracking a phase change boundary in two dimensions. International Communications in Heat and Mass Transfer, 1984, 11, 239-249.	5.6	34
60	A model of microsegregation during binary alloy solidification. International Journal of Heat and Mass Transfer, 2000, 43, 2047-2052.	4.8	33
61	Fractional Stefan problems exhibiting lumped and distributed latent-heat memory effects. Physical Review E, 2013, 87, 042401.	2.1	33
62	The binary alloy problem in an expanding domain: the microsegregation problem. International Journal of Heat and Mass Transfer, 1993, 36, 713-723.	4.8	32
63	PREDICTION OF FILLING TIMES OF POROUS CAVITIES. International Journal for Numerical Methods in Fluids, 1996, 23, 661-672.	1.6	32
64	A similarity solution for a dual moving boundary problem associated with a coastal-plain depositional system. Journal of Fluid Mechanics, 2009, 628, 427-443.	3.4	32
65	On a fractional derivative form of the Greenâ€“Ampt infiltration model. Advances in Water Resources, 2011, 34, 257-262.	3.8	32
66	Creep in injection molded starch/synthetic polymer blends. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2002, 338, 60-69.	5.6	30
67	Control of Delta Avulsion by Downstream Sediment Sinks. Journal of Geophysical Research F: Earth Surface, 2018, 123, 142-166.	2.8	30
68	A twoâ€diffusion model of fluvial stratigraphy in closed depositional basins. Basin Research, 2000, 12, 381-398.	2.7	29
69	Infiltration experiments demonstrate an explicit connection between heterogeneity and anomalous diffusion behavior. Water Resources Research, 2016, 52, 5167-5178.	4.2	29
70	Computer simulation of moving-interface, convective, phase-change processes. International Journal of Heat and Mass Transfer, 1988, 31, 1785-1795.	4.8	28
71	A Numerical Scheme for Solidification of an Alloy. Canadian Metallurgical Quarterly, 1998, 37, 169-177.	1.2	28
72	A similarity solution for solidification of an under-cooled binary alloy. International Journal of Heat and Mass Transfer, 2006, 49, 1981-1985.	4.8	26

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73	Depth-Dependent Dispersion Coefficient for Modeling of Vertical Solute Exchange in a Lake Bed under Surface Waves. Journal of Hydraulic Engineering, 2009, 135, 187-197.	1.5	26
74	Development and application of a heat balance integral method for analysis of metallurgical solidification. Applied Mathematical Modelling, 1989, 13, 3-11.	4.2	24
75	A semi-analytical model of microsegregation in a binary alloy. Journal of Crystal Growth, 1999, 197, 325-332.	1.5	24
76	Approximate models of microsegregation with coarsening. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 1999, 30, 3016-3019.	2.2	23
77	Numerical treatment of rapidly changing and discontinuous conductivities. International Journal of Heat and Mass Transfer, 2001, 44, 4553-4556.	4.8	23
78	Timeâ€“Temperature Superposition and AASHTO MP1a Critical Temperature for Low-temperature Cracking. International Journal of Pavement Engineering, 2004, 5, 31-38.	4.4	23
79	A heat balance integral method based on an enthalpy formulation. International Journal of Heat and Mass Transfer, 1987, 30, 604-607.	4.8	22
80	Characterization of river delta shorelines. Geophysical Research Letters, 2012, 39, .	4.0	22
81	On a general back-diffusion parameter. Journal of Crystal Growth, 2001, 226, 562-568.	1.5	21
82	A direct simulation demonstrating the role of spacial heterogeneity in determining anomalous diffusive transport. Water Resources Research, 2015, 51, 2119-2127.	4.2	21
83	Reduced-complexity probabilistic reconstruction of alluvial aquifer stratigraphy, and application to sedimentary fans in northwestern India. Journal of Hydrology, 2016, 541, 1241-1257.	5.4	21
84	An enthalpy formulation based on an arbitrarily deforming mesh for solution of the Stefan problem. Computational Mechanics, 1994, 14, 492-502.	4.0	20
85	A physiologically inspired agent-based approach to model upstream passage of invasive fish at a lock-and-dam. Ecological Modelling, 2018, 382, 18-32.	2.5	20
86	An efficient algorithm for mineral processing data adjustment. International Journal of Mineral Processing, 1991, 31, 73-96.	2.6	19
87	Enhanced Latent Heat Method to Incorporate Superheat Effects into Fixed-Grid Multiphysics Simulations. Numerical Heat Transfer, Part B: Fundamentals, 2010, 57, 396-413.	0.9	19
88	Does the flow of information in a landscape have direction?. Geophysical Research Letters, 2012, 39, .	4.0	19
89	Estimating and scaling stream ecosystem metabolism along channels with heterogeneous substrate. Ecohydrology, 2013, 6, 679-688.	2.4	19
90	NUMERICAL SOLUTION OF TRANSIENT, FREE SURFACE PROBLEMS IN POROUS MEDIA. International Journal for Numerical Methods in Engineering, 1996, 39, 2889-2906.	2.8	18

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91	Interpretation of the enthalpy in a discretised multidimensional region undergoing a melting/freezing phase change. International Communications in Heat and Mass Transfer, 1983, 10, 323-328.	5.6	17
92	Analysis of Flow Patterns and Solidification Phenomena in the Die Casting Process. Journal of Engineering Materials and Technology, Transactions of the ASME, 1991, 113, 296-302.	1.4	17
93	ENTHALPY METHOD FOR INVERSE STEFAN PROBLEMS. Numerical Heat Transfer, Part B: Fundamentals, 1992, 21, 41-55.	0.9	17
94	A numerical scheme for solidification of an alloy. Canadian Metallurgical Quarterly, 1998, 37, 169-177.	1.2	17
95	An explicit scheme for tracking the filling front during polymer mold filling. Applied Mathematical Modelling, 2000, 24, 575-590.	4.2	16
96	APPROXIMATE MODEL OF THERMAL RESIDUAL STRESS IN AN INJECTION MOLDED PART. Journal of Thermal Stresses, 2002, 25, 523-538.	2.0	16
97	Two-dimensional numerical model for the analysis of macrosegregation during solidification. Computational Materials Science, 2009, 46, 358-366.	3.0	16
98	Self-similar growth of a bimodal laboratory fan. Earth Surface Dynamics, 2017, 5, 239-252.	2.4	16
99	STREAMLINE UPWIND SCHEME FOR CONTROL-VOLUME FINITE ELEMENTS, PART II. IMPLEMENTATION AND COMPARISON WITH THE SUPG FINITE-ELEMENT SCHEME. Numerical Heat Transfer, Part B: Fundamentals, 1992, 22, 109-124.	0.9	15
100	A semi-analytical model of microsegregation and coarsening in a binary alloy. Journal of Crystal Growth, 1999, 197, 333-340.	1.5	15
101	Effects of overburden on joint spacing in layered rocks. Journal of Structural Geology, 2007, 29, 288-297.	2.3	15
102	Frequency analysis of macrosegregation measurements and simulations. International Journal of Heat and Mass Transfer, 2014, 79, 468-471.	4.8	15
103	Modeling anomalous heat diffusion: Comparing fractional derivative and non-linear diffusivity treatments. International Journal of Thermal Sciences, 2019, 137, 584-588.	4.9	15
104	A note on energy-size reduction relationships in comminution. Powder Technology, 1983, 36, 281-286.	4.2	14
105	A streamline upwind control volume finite element method for modeling fluid flow and heat transfer problems. Finite Elements in Analysis and Design, 1993, 13, 169-184.	3.2	14
106	Anomalous behaviors during infiltration into heterogeneous porous media. Advances in Water Resources, 2018, 113, 180-188.	3.8	14
107	Hydromechanical Impacts of Pleistocene Glaciations on Pore Fluid Pressure Evolution, Rock Failure, and Brine Migration Within Sedimentary Basins and the Crystalline Basement. Water Resources Research, 2018, 54, 7577-7602.	4.2	13
108	Hyporheic exchange in a gravel bed flume with and without traveling surface waves. Advances in Water Resources, 2019, 123, 120-133.	3.8	13

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109	An aqueous concentration model for riverine spills. Journal of Hazardous Materials, 1999, 64, 37-53.	12.4	12
110	A numerical method for the Rubinstein binary-alloy problem in the presence of an under-cooled liquid. International Journal of Heat and Mass Transfer, 2008, 51, 696-706.	4.8	12
111	A geometric model for the dynamics of a fluvially dominated deltaic system under base-level change. Computers and Geosciences, 2013, 53, 39-47.	4.2	12
112	Calculation of particle heating times of reclaimed asphalt pavement material. Road Materials and Pavement Design, 2014, 15, 721-732.	4.0	12
113	Computations of anomalous phase change. International Journal of Numerical Methods for Heat and Fluid Flow, 2016, 26, 624-638.	2.8	12
114	Modelling of microsegregation. Materials Science and Technology, 1993, 9, 474-482.	1.6	12
115	Modification of mathematical analyses and related physical descriptions used to describe channel segregation. Metals Technology, 1983, 10, 81-84.	0.3	11
116	Reducing the number of unknowns in a constrained minimisation problemâ€"an appliation to material balances. Applied Mathematical Modelling, 1988, 12, 204-212.	4.2	11
117	A physically based flux limiter for QUICK calculations of advective scalar transport. International Journal for Numerical Methods in Fluids, 2007, 55, 899-915.	1.6	11
118	A combined nonlinear and nonlocal model for topographic evolution in channelized depositional systems. Journal of Geophysical Research F: Earth Surface, 2013, 118, 1617-1627.	2.8	11
119	How does the downstream boundary affect avulsion dynamics in a laboratory bifurcation?. Earth Surface Dynamics, 2019, 7, 911-927.	2.4	11
120	Cyclic phase change with fluid flow. International Journal of Numerical Methods for Heat and Fluid Flow, 1996, 6, 57-64.	2.8	10
121	Modeling of solute transport into sub-aqueous sediments. Applied Mathematical Modelling, 2007, 31, 1461-1478.	4.2	10
122	Mathematical evaluation of behavioral deterrent systems to disrupt fish movement. Ecological Modelling, 2014, 272, 150-159.	2.5	10
123	Anomalous Heat Transfer. Advances in Heat Transfer, 2018, , 333-380.	0.9	10
124	A geomorphic enthalpy method: Description and application to the evolution of fluvial-deltas under sea-level cycles. Computers and Geosciences, 2019, 130, 1-10.	4.2	10
125	Two Numerical Methods for Modeling Variably Saturated Flow in Layered Media. Vadose Zone Journal, 2004, 3, 1031-1037.	2.2	10
126	Morphology of a melt front under a condition of spatial varying latent heat. International Communications in Heat and Mass Transfer, 2009, 36, 535-538.	5.6	9

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127	The Control-Volume Weighted Flux Scheme (CVWFS) for Nonlocal Diffusion and Its Relationship to Fractional Calculus. Numerical Heat Transfer, Part B: Fundamentals, 2011, 59, 421-441.	0.9	9
128	Understanding Channel Segregates in Numerical Models of Alloy Solidification: A Case of Converge First and Ask Questions Later. Materials Science Forum, 2014, 790-791, 73-78.	0.3	9
129	A Heat Balance Integral Method for Estimating Practical Solidification Parameters. IMA Journal of Applied Mathematics, 1985, 35, 223-232.	1.6	8
130	Modeling of Vertical Solute Dispersion in a Sediment Bed Enhanced by Waveâ€Induced Interstitial Flow¹. Journal of the American Water Resources Association, 2009, 45, 343-354.	2.4	8
131	A random walk solution for fractional diffusion equations. International Journal of Numerical Methods for Heat and Fluid Flow, 2013, 23, 7-22.	2.8	8
132	Chaos in a simple model of a delta network. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 27179-27187.	7.1	8
133	A control volume finite element method with spines for solutions of fractional heat conduction equations. Numerical Heat Transfer, Part B: Fundamentals, 2016, 70, 503-516.	0.9	7
134	Effect of macro scale phenomena on microsegregation. International Communications in Heat and Mass Transfer, 1994, 21, 189-197.	5.6	6
135	Analytical models of solidification phenomena. Transactions of the Indian Institute of Metals, 2009, 62, 279-283.	1.5	6
136	A model of sedimentary delta growth: a novel application of numerical heat transfer methods. International Journal of Numerical Methods for Heat and Fluid Flow, 2010, 20, 570-586.	2.8	6
137	The Effect of Modifying a CFD-AB Approach on Fish Passage through a Model Hydraulic Dam. Water (Switzerland), 2019, 11, 1776.	2.7	6
138	Models of infiltration into homogeneous and fractal porous media with localized sources. Physical Review E, 2019, 99, 042111.	2.1	6
139	The thin blue line: A review of shoreline dynamics across time scales and environments. Earth Surface Processes and Landforms, 2020, 45, 96-108.	2.5	6
140	Some comments on using fractional derivative operators in modeling non-local diffusion processes. Journal of Computational and Applied Mathematics, 2021, 381, 113040.	2.0	6
141	Determining effective conductivities of fractal objects. International Journal of Thermal Sciences, 2021, 159, 106577.	4.9	6
142	Development and validation of a tenable process for quantifying texture spikiness for pavement noise prediction. International Journal of Pavement Engineering, 2013, 14, 190-205.	4.4	5
143	Can the growth of deltaic shorelines be unstable?. Earth Surface Dynamics, 2019, 7, 505-513.	2.4	5
144	A generalized Stefan model accounting for system memory and non-locality. International Communications in Heat and Mass Transfer, 2020, 114, 104584.	5.6	5

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145	Measurement and Scaling of Lake Surface Skin Temperatures. Geophysical Research Letters, 2022, 49, .	4.0	5
146	Automated material balance and assay data adjustment around a piece of mineral processing equipment. International Journal of Mineral Processing, 1983, 10, 279-288.	2.6	4
147	Computational issues in using a dualâ€scale model of the segregation process in a binary alloy. International Journal of Numerical Methods for Heat and Fluid Flow, 1997, 7, 181-199.	2.8	4
148	An identification and control strategy for a liquid composite molding process. Applied Mathematical Modelling, 1998, 22, 207-218.	4.2	4
149	Abiotic Drivers of a Deep Cyanobacteria Layer in a Stratified and Eutrophic Lake. Water Resources Research, 2021, 57, e2020WR027987.	4.2	4
150	A TWO-PHASE RIVERINE SPILL MODEL. International Oil Spill Conference Proceedings, 1997, 1997, 567-571.	0.1	4
151	A knowledge-based computer tool for casting process design. Jom, 1994, 46, 27-30.	1.9	3
152	ESTIMATING THE LAST POINT TO SOLIDIFY IN A CASTING. Numerical Heat Transfer, Part B: Fundamentals, 1998, 33, 417-432.	0.9	3
153	Two Numerical Methods for Modeling Variably Saturated Flow in Layered Media. Vadose Zone Journal, 2004, 3, 1031-1037.	2.2	3
154	Conditions when anisotropy is negligible for solute transfer in sediment beds of lakes or streams. Advances in Water Resources, 2010, 33, 1542-1550.	3.8	3
155	Best practice for measuring grid convergence in numerical models of alloy solidification. International Journal of Numerical Methods for Heat and Fluid Flow, 2016, 26, 427-439.	2.8	3
156	A theoretical modeling framework for motile and colonial harmful algae. Ecology and Evolution, 2022, 12, .	1.9	3
157	A model of thermally induced strain development in coke oven walls during carbonization. Mathematical Modelling, 1982, 3, 279-291.	0.2	2
158	Recent Developments in the Modelling of Solidification Processes. , 1991, , 3-20.		2
159	Time-implicit fixed and deforming grid solutions for compression mold filling. Polymer Composites, 1996, 17, 414-422.	4.6	2
160	A Monte Carlo scheme for tracking filling fronts. Journal of Computational Physics, 2004, 200, 399-411.	3.8	2
161	Fixed and Deforming Grid Solutions of Solidification in an Undercooled Melt: A Benchmark Problem. Numerical Heat Transfer, Part B: Fundamentals, 2011, 60, 1-17.	0.9	2
162	Introducing Non-locality into Solidification Models. Transactions of the Indian Institute of Metals, 2012, 65, 515-519.	1.5	2

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163	Reduced complexity solidification models. International Journal of Heat and Mass Transfer, 2021, 169, 120923.	4.8	2
164	Conductivity Estimates of Fractal Models of Geological Media. Water Resources Research, 2021, 57, e2021WR029953.	4.2	2
165	The Stefan Problem Solved Via Conjugate Gradientâ€"Like Iterative Methods On a Parallel Vector Machine. The International Journal of Supercomputer Applications, 1991, 5, 74-91.	0.5	1
166	Some comments on: Benchmark problems and testing of a finite element code for solidification in investment castings. International Journal for Numerical Methods in Engineering, 1992, 33, 213-215.	2.8	1
167	Modeling Microsegregation in Metal Alloys. Materials Science Forum, 2006, 508, 349-360.	0.3	1
168	A Dual Scale Model for Macrosegregation in Alloy Solidification. Numerical Heat Transfer; Part A: Applications, 2011, 59, 934-953.	2.1	1
169	Experimental Study of the Solute Transport in the Interfacial Exchange Zone (IEZ) of a Gravel Stream Bed. , 2013, , .		1
170	Deployment of the Next Generation Concrete Surface in Minnesota. Transportation Research Record, 2017, 2640, 95-103.	1.9	1
171	PREDICTION OF FILLING TIMES OF POROUS CAVITIES. , 1996, 23, 661.		1
172	The symposium on materials processing in the computer age. Jom, 1991, 43, 6-6.	1.9	0
173	Closure to â€œModeling Biofilms on Gas-Permeable Supports: Concentration and Activity Profilesâ€•by Neil J. Essila, Michael J. Semmens, and Vaughan R. Voller. Journal of Environmental Engineering, ASCE, 2002, 128, 202-203.	1.4	0
174	A control volume finite element solution of unsaturated flow in layered soils. Developments in Water Science, 2002, 47, 105-112.	0.1	0
175	Crack spacing in strained films. European Physical Journal Special Topics, 2004, 120, 201-208.	0.2	0
176	Designing Graduate Curriculum for Stream Restoration. , 2011, , .		0
177	Modeling of Solute Transport in Pore Scale Sediment Beds: A Summary of Hydrodynamic Interactions Induced by Surface Wave, Bed Form, and Near Bed Turbulence. , 2014, , .		0
178	Simple metrics for verification and validation of macrosegregation model predictions. IOP Conference Series: Materials Science and Engineering, 2016, 117, 012062.	0.6	0
179	The St. Anthony Falls Laboratory: 80 Years of Progress Part 2A Transition to Environmental Research. , 2018, , .		0
180	A General Method for Coupling Macro and Micro Phenomena During the Solidification of an Alloy. , 2001, , 91-98.		0

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181	Modeling of Transport Phenomena and Electromagnetics. , 2008, , 425-434.		0
182	Exploring the Commonality Between Filling: Porous Media and Phase Change. Solid Mechanics and Its Applications, 1999, , 113-119.	0.2	0
183	Nonlinear simulation of shape-preserving delta growth. Journal of Computational and Applied Mathematics, 2020, 380, 112967.	2.0	0