

Mohammed Seaid

List of Publications by Year in descending order

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155
papers

1,922
citations

331259

21
h-index

377514

34
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159
all docs

159
docs citations

159
times ranked

847
citing authors

#	ARTICLE	IF	CITATIONS
1	Simplified PN Approximations to the Equations of Radiative Heat Transfer and Applications. Journal of Computational Physics, 2002, 183, 652-675.	1.9	152
2	Well-balanced finite volume schemes for pollutant transport by shallow water equations on unstructured meshes. Journal of Computational Physics, 2007, 226, 180-203.	1.9	98
3	NUMERICAL METHODS AND OPTIMAL CONTROL FOR GLASS COOLING PROCESSES. Transport Theory and Statistical Physics, 2002, 31, 513-529.	0.4	50
4	Lattice Boltzmann methods for shallow water flow applications. International Journal for Numerical Methods in Fluids, 2007, 55, 673-692.	0.9	50
5	Non-oscillatory relaxation methods for the shallow-water equations in one and two space dimensions. International Journal for Numerical Methods in Fluids, 2004, 46, 457-484.	0.9	45
6	Efficient numerical methods for radiation in gas turbines. Journal of Computational and Applied Mathematics, 2004, 170, 217-239.	1.1	43
7	A new finite volume method for flux-gradient and source-term balancing in shallow water equations. Computer Methods in Applied Mechanics and Engineering, 2010, 199, 3324-3335.	3.4	43
8	Adaptive solutions of P_N -approximations to radiative heat transfer in glass. International Journal of Thermal Sciences, 2005, 44, 1013-1023.	2.6	40
9	A simple finite volume method for the shallow water equations. Journal of Computational and Applied Mathematics, 2010, 234, 58-72.	1.1	38
10	A flux-limiter method for dam-break flows over erodible sediment beds. Applied Mathematical Modelling, 2012, 36, 4847-4861.	2.2	38
11	Semi-lagrangian integration schemes for viscous incompressible flows. Computational Methods in Applied Mathematics, 2002, 2, 392-409.	0.4	37
12	Radiation models for thermal flows at low Mach number. Journal of Computational Physics, 2006, 215, 506-525.	1.9	36
13	Numerical simulation of natural and mixed convection flows by Galerkin-characteristic method. International Journal for Numerical Methods in Fluids, 2007, 53, 1819-1845.	0.9	34
14	Solution of the Sediment Transport Equations Using a Finite Volume Method Based on Sign Matrix. SIAM Journal of Scientific Computing, 2009, 31, 2866-2889.	1.3	28
15	A partition of unity FEM for time-dependent diffusion problems using multiple enrichment functions. International Journal for Numerical Methods in Engineering, 2013, 93, 245-265.	1.5	28
16	Convergence and stability of finite element modified method of characteristics for the incompressible Navier-Stokes equations. Journal of Numerical Mathematics, 2007, 15, .	1.8	25
17	Stochastic model reduction for polynomial chaos expansion of acoustic waves using proper orthogonal decomposition. Reliability Engineering and System Safety, 2020, 195, 106733.	5.1	25
18	A lattice-Boltzmann relaxation scheme for coupled convection-radiation systems. Journal of Computational Physics, 2007, 226, 1408-1431.	1.9	24

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19	A finite volume method for scalar conservation laws with stochastic time-space dependent flux functions. <i>Journal of Computational and Applied Mathematics</i> , 2013, 237, 614-632.	1.1	23
20	Inverse algorithm for real-time road roughness estimation for autonomous vehicles. <i>Archive of Applied Mechanics</i> , 2020, 90, 1333-1348.	1.2	23
21	Simulation of transient gas flow at pipe-to-pipe intersections. <i>International Journal for Numerical Methods in Fluids</i> , 2008, 56, 485-506.	0.9	22
22	Method of lines for stochastic boundary-value problems with additive noise. <i>Applied Mathematics and Computation</i> , 2008, 199, 301-314.	1.4	22
23	A consistent approach for the coupling of radiation and hydrodynamics at low Mach number. <i>Journal of Computational Physics</i> , 2007, 225, 1039-1065.	1.9	21
24	A finite element modified method of characteristics for convective heat transport. <i>Numerical Methods for Partial Differential Equations</i> , 2008, 24, 776-798.	2.0	21
25	A fast finite volume solver for multi-layered shallow water flows with mass exchange. <i>Journal of Computational Physics</i> , 2014, 272, 23-45.	1.9	21
26	Time-independent hybrid enrichment for finite element solution of transient conduction-radiation in diffusive grey media. <i>Journal of Computational Physics</i> , 2013, 251, 81-101.	1.9	20
27	A comparison of approximate models for radiation in gas turbines. <i>Progress in Computational Fluid Dynamics</i> , 2004, 4, 191.	0.1	19
28	A two-dimensional finite volume morphodynamic model on unstructured triangular grids. <i>International Journal for Numerical Methods in Fluids</i> , 2010, 63, 1296-1327.	0.9	19
29	An essentially non-oscillatory semi-Lagrangian method for tidal flow simulations. <i>International Journal for Numerical Methods in Engineering</i> , 2010, 81, 805-834.	1.5	19
30	Mixed enrichment for the finite element method in heterogeneous media. <i>International Journal for Numerical Methods in Engineering</i> , 2015, 101, 54-78.	1.5	19
31	An enriched finite element model with q-refinement for radiative boundary layers in glass cooling. <i>Journal of Computational Physics</i> , 2014, 258, 718-737.	1.9	18
32	A partition of unity finite element method for three-dimensional transient diffusion problems with sharp gradients. <i>Journal of Computational Physics</i> , 2019, 396, 702-717.	1.9	18
33	On the Quasi-monotone Modified Method of Characteristics for Transport-diffusion Problems with Reactive Sources. <i>Computational Methods in Applied Mathematics</i> , 2001, 2, 186-210.	0.4	17
34	Numerical Solvers for Radiation and Conduction in High Temperature Gas Flows. <i>Flow, Turbulence and Combustion</i> , 2005, 75, 173-190.	1.4	17
35	An unstructured finite-volume method for coupled models of suspended sediment and bed load transport in shallow water flows. <i>International Journal for Numerical Methods in Fluids</i> , 2013, 72, 967-993.	0.9	17
36	A three-dimensional enriched finite element method for nonlinear transient heat transfer in functionally graded materials. <i>International Journal of Heat and Mass Transfer</i> , 2020, 155, 119804.	2.5	17

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37	Efficient Preconditioning of Linear Systems Arising from the Discretization of Radiative Transfer Equation. Lecture Notes in Computational Science and Engineering, 2003, , 211-236.	0.1	17
38	High-resolution relaxation scheme for the two-dimensional Riemann problems in gas dynamics. Numerical Methods for Partial Differential Equations, 2006, 22, 397-413.	2.0	16
39	A Semi-Lagrangian Method for a Fokker-Planck Equation Describing Fiber Dynamics. Journal of Scientific Computing, 2009, 38, 349-367.	1.1	16
40	Explicit time integration with lumped mass matrix for enriched finite elements solution of time domain wave problems. Applied Mathematical Modelling, 2020, 77, 1273-1293.	2.2	16
41	Stable numerical methods for conservation laws with discontinuous flux function. Applied Mathematics and Computation, 2006, 175, 383-400.	1.4	15
42	Simplified radiative models for low-Mach number reactive flows. Applied Mathematical Modelling, 2008, 32, 971-991.	2.2	15
43	An L^2 -Projection for the Galerkin-Characteristic Solution of Incompressible Flows. SIAM Journal of Scientific Computing, 2011, 33, 3110-3131.	1.3	15
44	A non-homogeneous Riemann solver for shallow water equations in porous media. Applicable Analysis, 2016, 95, 2181-2202.	0.6	15
45	A stabilized meshless method for time-dependent convection-dominated flow problems. Mathematics and Computers in Simulation, 2017, 137, 159-176.	2.4	15
46	Discrete Velocity Models and Relaxation Schemes for Traffic Flows. SIAM Journal of Scientific Computing, 2006, 28, 1582-1596.	1.3	14
47	Lattice Boltzmann simulation of dispersion in two-dimensional tidal flows. International Journal for Numerical Methods in Engineering, 2009, 77, 878-900.	1.5	14
48	Multigrid Newton-Krylov method for radiation in diffusive semitransparent media. Journal of Computational and Applied Mathematics, 2007, 203, 498-515.	1.1	13
49	An Eulerian-Lagrangian method for coupled parabolic-hyperbolic equations. Applied Numerical Mathematics, 2009, 59, 754-768.	1.2	13
50	A finite element semi-Lagrangian method with L^2 interpolation. International Journal for Numerical Methods in Engineering, 2012, 90, 1485-1507.	1.5	13
51	Projection finite volume method for shallow water flows. Mathematics and Computers in Simulation, 2015, 118, 87-101.	2.4	13
52	A discontinuous Galerkin method for two-layer shallow water equations. Mathematics and Computers in Simulation, 2016, 120, 12-23.	2.4	13
53	Identifying the wavenumber for the inverse Helmholtz problem using an enriched finite element formulation. Computer Methods in Applied Mechanics and Engineering, 2018, 340, 615-629.	3.4	13
54	A local radial basis function projection method for incompressible flows in water eutrophication. Engineering Analysis With Boundary Elements, 2019, 106, 528-540.	2.0	13

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73	A Generalized Rusanov method for Saint-Venant Equations with Variable Horizontal Density. Springer Proceedings in Mathematics, 2011, , 89-96.	0.5	9
74	Uniformly accurate schemes for relaxation approximations to fluid dynamic equations. Applied Mathematics Letters, 2003, 16, 1123-1127.	1.5	8
75	Optimal control in radiative transfer. Optimization Methods and Software, 2007, 22, 917-936.	1.6	8
76	A domain decomposition method for conservation laws with discontinuous flux function. Applied Numerical Mathematics, 2007, 57, 361-373.	1.2	8
77	Coupled finite elementâ€“lattice Boltzmann analysis. Computer Methods in Applied Mechanics and Engineering, 2008, 197, 4505-4511.	3.4	8
78	Application of mesh-adaptation for pollutant transport by water flow. Mathematics and Computers in Simulation, 2009, 79, 3415-3423.	2.4	8
79	Solving Wick-stochastic water waves using a Galerkin finite element method. Mathematics and Computers in Simulation, 2009, 79, 3523-3533.	2.4	8
80	Assessment of coupling conditions in water way intersections. International Journal for Numerical Methods in Fluids, 2013, 71, 1438-1460.	0.9	8
81	A meshless method for numerical simulation of depthâ€“averaged turbulence flows using a $k-\mu$ model. International Journal for Numerical Methods in Fluids, 2016, 80, 3-22.	0.9	8
82	Slope limiters for radial basis functions applied to conservation laws with discontinuous flux function. Engineering Analysis With Boundary Elements, 2016, 66, 49-65.	2.0	8
83	Numerical solution of Rosseland model for transient thermal radiation in non-grey optically thick media using enriched basis functions. Mathematics and Computers in Simulation, 2021, 180, 258-275.	2.4	8
84	A Class of the Relaxation Schemes for Two-Dimensional Euler Systems of Gas Dynamics. Lecture Notes in Computer Science, 2002, , 930-939.	1.0	8
85	Multilayer Saint-Venant equations over movable beds. Discrete and Continuous Dynamical Systems - Series B, 2011, 15, 917-934.	0.5	7
86	Iterative solvers for generalized finite element solution of boundaryâ€“value problems. Numerical Linear Algebra With Applications, 2018, 25, e2205.	0.9	7
87	A Highly Accurate Modified Method of Characteristics for Convectionâ€“dominated Flow Problems. Computational Methods in Applied Mathematics, 2003, 3, 623-646.	0.4	6
88	Validation of simplified PN models for radiative transfer in combustion systems. Communications in Numerical Methods in Engineering, 2006, 24, 85-96.	1.3	6
89	A Galerkin-Characteristic Method for Large-Eddy Simulation of Turbulent Flow and Heat Transfer. SIAM Journal of Scientific Computing, 2008, 30, 2734-2754.	1.3	6
90	A Spectral Stochastic Semi-Lagrangian Method for Convection-Diffusion Equations with Uncertainty. Journal of Scientific Computing, 2009, 39, 371-393.	1.1	6

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91	Numerical modelling of sediment transport in the Nador lagoon (Morocco). Applied Numerical Mathematics, 2012, 62, 1749-1766.	1.2	6
92	A Conservative Semi-Lagrangian Finite Volume Method for Convection–Diffusion Problems on Unstructured Grids. Journal of Scientific Computing, 2020, 85, 1.	1.1	6
93	A surrogate model for efficient quantification of uncertainties in multilayer shallow water flows. Environmental Modelling and Software, 2021, 144, 105176.	1.9	6
94	Simplified PN Models and Natural Convection–Radiation. Mathematics in Industry, 2008, , 397-401.	0.1	6
95	Improved Applications of Relaxation Schemes for Hyperbolic Systems of Conservation Laws and Convection-diffusion Problems. Computational Methods in Applied Mathematics, 2006, 6, 56-86.	0.4	5
96	Discrete-velocity relaxation methods for large eddy simulation. Applied Mathematics and Computation, 2006, 182, 739-753.	1.4	5
97	Lattice-Boltzmann type relaxation systems and high order relaxation schemes for the incompressible Navier-Stokes equations. Mathematics of Computation, 2007, 77, 943-966.	1.1	5
98	Numerical simulation of stochastic replicator models in catalyzed RNA-like polymers. Mathematics and Computers in Simulation, 2009, 79, 3577-3586.	2.4	5
99	Combined characteristics and finite volume methods for sediment transport and bed morphology in surface water flows. Mathematics and Computers in Simulation, 2011, 81, 2073-2086.	2.4	5
100	Comparison of unstructured finite-volume morphodynamic models in contracting channel flows. Mathematics and Computers in Simulation, 2011, 81, 2087-2097.	2.4	5
101	Simulation of the Lock-Exchange Hydraulics using the Discontinuous Galerkin Method. International Journal of Computer Applications, 2012, 43, 20-28.	0.2	5
102	A Galerkin-characteristic unified finite element method for moving thermal fronts in porous media. Journal of Computational and Applied Mathematics, 2022, 404, 113159.	1.1	5
103	Analysis of a Galerkin-characteristic finite element method for convection-diffusion problems in porous media. Advances in Pure and Applied Mathematics, 2021, 12, 96-122.	0.3	5
104	A New Monte Carlo Approach for Conservation Laws and Relaxation Systems. Lecture Notes in Computer Science, 2004, , 276-283.	1.0	5
105	Flux limiters in the coupling of radiation and hydrodynamic models. Journal of Computational and Applied Mathematics, 2004, 168, 425-435.	1.1	4
106	Discontinuous Galerkin method for two-dimensional bilayer shallow water equations. Journal of Engineering Mathematics, 2016, 96, 1-21.	0.6	4
107	A new numerical treatment of moving wet/dry fronts in dam-break flows. Journal of Applied Mathematics and Computing, 2019, 59, 489-516.	1.2	4
108	The boundary element method applied to the solution of the anomalous diffusion problem. Engineering Analysis With Boundary Elements, 2019, 109, 129-142.	2.0	4

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109	A stabilized semi-Lagrangian finite element method for natural convection in Darcy flows. Computational and Mathematical Methods, 2021, 3, e1140.	0.3	4
110	Two-dimensional numerical modelling of shallow water flows over multilayer movable beds. Applied Mathematical Modelling, 2020, 88, 474-497.	2.2	4
111	Development of time-space adaptive smoothed particle hydrodynamics method with Runge-Kutta Chebyshev scheme. Engineering Analysis With Boundary Elements, 2021, 126, 55-67.	2.0	4
112	A simple multi-layer finite volume solver for density-driven shallow water flows. Mathematics and Computers in Simulation, 2014, 99, 170-189.	2.4	3
113	Efficient computational models for shallow water flows over multilayer erodible beds. Engineering Computations, 2019, 37, 401-429.	0.7	3
114	Multi-hp adaptive discontinuous Galerkin methods for simplified P approximations of 3D radiative transfer in non-gray media. Applied Numerical Mathematics, 2020, 150, 252-273.	1.2	3
115	An enriched Galerkin-characteristics finite element method for convection-dominated and transport problems. Applied Numerical Mathematics, 2021, 167, 119-142.	1.2	3
116	A Nonintrusive Reduced-Order Model for Uncertainty Quantification in Numerical Solution of One-Dimensional Free-Surface Water Flows Over Stochastic Beds. International Journal of Computational Methods, 2022, 19, .	0.8	3
117	Non-oscillatory methods for relaxation approximation of Hamilton-Jacobi equations. Applied Mathematics and Computation, 2006, 183, 170-183.	1.4	2
118	Finite element P1 solution of unsteady thermal flow past a circular cylinder with radiation. International Journal of Computer Mathematics, 2008, 85, 641-656.	1.0	2
119	A two-dimensional finite volume solution of dam-break hydraulics over erodible sediment beds. Springer Proceedings in Mathematics, 2011, , 875-891.	0.5	2
120	A conjugate gradient algorithm for solving the Galerkin-characteristic approximation of interfacial flows. Applied Numerical Mathematics, 2012, 62, 1197-1214.	1.2	2
121	A new composite scheme for two-layer shallow water flows with shocks. Journal of Applied Mathematics and Computing, 2014, 44, 467-489.	1.2	2
122	Fast and accurate simulations of shallow water equations in large networks. Computers and Mathematics With Applications, 2019, 78, 2107-2126.	1.4	2
123	A Three-Dimensional Monotonicity-Preserving Modified Method of Characteristics on Unstructured Tetrahedral Meshes. International Journal of Computational Methods, 2021, 18, 2050027.	0.8	2
124	Enriched Galerkin-Characteristics Finite Element Method for Incompressible Navier-Stokes Equations. SIAM Journal of Scientific Computing, 2021, 43, A1336-A1361.	1.3	2
125	Non-intrusive polynomial chaos methods for uncertainty quantification in wave problems at high frequencies. Journal of Computational Science, 2021, 53, 101344.	1.5	2
126	A Finite Volume Method for Large-Eddy Simulation of Shallow Water Equations. Springer Proceedings in Mathematics and Statistics, 2014, , 741-748.	0.1	2

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127	Derivation of a kinetic model from a stochastic particle system. <i>Kinetic and Related Models</i> , 2008, 1, 557-572.	0.5	2
128	GPU Accelerated Finite Volume Methods for Three-Dimensional Shallow Water Flows. <i>Springer Proceedings in Mathematics and Statistics</i> , 2017, , 137-144.	0.1	2
129	High-order isogeometric modified method of characteristics for two-dimensional coupled Burgers' equations. <i>International Journal for Numerical Methods in Fluids</i> , 2022, 94, 608-631.	0.9	2
130	A semi-Lagrangian Bernstein-Bézier finite element method for two-dimensional coupled Burgers' equations at high Reynolds numbers. <i>Mathematics and Computers in Simulation</i> , 2022, 199, 160-181.	2.4	2
131	Simplified PN finite element approximations for coupled natural convection and radiation heat transfer. <i>Numerical Heat Transfer; Part A: Applications</i> , 2023, 83, 478-502.	1.2	2
132	Large-Eddy Simulation of Thermal Flows based on Discrete-Velocity Models. <i>SIAM Journal of Scientific Computing</i> , 2008, 30, 1756-1777.	1.3	1
133	A Frequency-Domain Approach for the P_1 Approximation of Time-Dependent Radiative Transfer. <i>Journal of Scientific Computing</i> , 2015, 62, 623-651.	1.1	1
134	Fast inverse solver for identifying the diffusion coefficient in time-dependent problems using noisy data. <i>Archive of Applied Mechanics</i> , 2021, 91, 1623-1639.	1.2	1
135	Recent Advances in Semi-Lagrangian Modelling of Flow through the Strait of Gibraltar. <i>Lecture Notes in Computer Science</i> , 2004, , 89-96.	1.0	1
136	A comparison between the meshless and the finite volume methods for shallow water flows. <i>Springer Proceedings in Mathematics</i> , 2011, , 13-20.	0.5	1
137	A High-Order Nodal Discontinuous Galerkin Method for 1D Morphodynamic Modelling. <i>International Journal of Computer Applications</i> , 2012, 41, 19-27.	0.2	1
138	Numerical Assessment of Criteria for Mesh Adaptation in the Finite Volume Solution of Shallow Water Equations. <i>Advances in Applied Mathematics and Mechanics</i> , 2020, 12, 503-526.	0.7	1
139	A Cell-Centered Semi-Lagrangian Finite Volume Method for Solving Two-Dimensional Coupled Burgers' Equations. <i>Computational and Mathematical Methods</i> , 2022, 2022, 1-18.	0.3	1
140	An adaptive enriched semi-Lagrangian finite element method for coupled flow-transport problems. <i>Computers and Fluids</i> , 2022, 240, 105474.	1.3	1
141	A multigrid discrete-ordinates solution for isotropic transport equation. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2004, 4, 494-495.	0.2	0
142	Extension of weakly compressible approximations to incompressible thermal flows. <i>Communications in Numerical Methods in Engineering</i> , 2006, 24, 33-48.	1.3	0
143	Incompressible Navier-Stokes equation solvers based on lattice Boltzmann relaxation systems. <i>Proceedings in Applied Mathematics and Mechanics</i> , 2007, 7, 2100001-2100002.	0.2	0
144	Large eddy simulation of turbulent heat transport in the Strait of Gibraltar. <i>Mathematics and Computers in Simulation</i> , 2009, 79, 3444-3454.	2.4	0

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145	Development and verification of a finite volume model for hydraulics over multi-layered erodible beds. , 2016, , .		0
146	A hybrid finite volume/finite element method for shallow water waves by static deformation on seabeds. Engineering Computations, 2020, ahead-of-print, .	0.7	0
147	Special volume on mathematical modeling with applications. Numerical Algorithms, 2020, 84, 1239-1240.	1.1	0
148	Multilevel Adaptive Lagrange-Galerkin Methods for Unsteady Incompressible Viscous Flows. Lecture Notes in Computer Science, 2021, , 230-243.	1.0	0
149	An Enhanced Finite Element Algorithm for Thermal Darcy Flows with Variable Viscosity. Lecture Notes in Computer Science, 2021, , 215-229.	1.0	0
150	Animating Water Waves Using Semi-Lagrangian Techniques. Mathematics in Industry, 2006, , 494-498.	0.1	0
151	Adaptive cell-centered finite volume method for non-homogeneous diffusion problems: Application to transport in porous media. Springer Proceedings in Mathematics, 2011, , 79-87.	0.5	0
152	New Criteria for Mesh Adaptation in Finite Volume Simulation of Planar Ionization Wavefront Propagation. Springer Proceedings in Mathematics and Statistics, 2017, , 547-555.	0.1	0
153	Uncertainty Quantification of Bathymetric Effects in a Two-Layer Shallow Water Model: Case of the Gibraltar Strait. Springer Water, 2020, , 779-791.	0.2	0
154	Simulation of Three-Dimensional Free-Surface Flows Using Two-Dimensional Multilayer Shallow Water Equations. Communications in Computational Physics, 2020, 27, 1413-1442.	0.7	0
155	Isogeometric semi-Lagrangian analysis for transport problems. Applied Mathematics Letters, 2022, 130, 107994.	1.5	0