Jim E Morel

List of Publications by Year
in descending order

43 papers	406 citations	933447 10 h-index	839539 18 g-index
43 all docs	43 docs citations	43 times ranked	242 citing authors

#	Article	IF	Citations
1	Krylov Iterative Methods and the Degraded Effectiveness of Diffusion Synthetic Acceleration for Multidimensional<i>S_N</i>Calculations in Problems with Material Discontinuities. Nuclear Science and Engineering, 2004, 147, 218-248.	1.1	84
2	Fully Consistent Diffusion Synthetic Acceleration of Linear Discontinuous<i>S_N</i>Transport Discretizations on Unstructured Tetrahedral Meshes. Nuclear Science and Engineering, 2002, 141, 236-251.	1.1	43
3	Properties of the implicitly time-differenced equations of thermal radiation transport. Journal of Computational Physics, 2013, 238, 82-96.	3.8	26
4	Spatial discretizations for self-adjoint forms of the radiative transfer equations. Journal of Computational Physics, 2006, 214, 12-40.	3.8	25
5	Linear multifrequency-grey acceleration recast for preconditioned Krylov iterations. Journal of Computational Physics, 2007, 227, 244-263.	3.8	19
6	Nonlinear variants of the TR/BDF2 method for thermal radiative diffusion. Journal of Computational Physics, 2011, 230, 1198-1214.	3.8	19
7	Dynamic Mode Decomposition for Subcritical Metal Systems. Nuclear Science and Engineering, 2019, 193, 1173-1185.	1.1	15
8	Angular Multigrid Preconditioner for Krylov-Based Solution Techniques Applied to the<i>S_n</i>Equations with Highly Forward-Peaked Scattering. Transport Theory and Statistical Physics, 2012, 41, 1-22.	0.4	13
9	Massively parallel transport sweeps on meshes with cyclic dependencies. Journal of Computational Physics, 2021, 425, 109892.	3.8	12
10	High-order solution methods for grey discrete ordinates thermal radiative transfer. Journal of Computational Physics, 2016, 327, 719-746.	3.8	11
11	A Transport Acceleration Scheme for Multigroup Discrete Ordinates with Upscattering. Nuclear Science and Engineering, 2010, 165, 292-304.	1.1	10
12	A Least-Squares Transport Equation Compatible withÂVoids. Journal of Computational and Theoretical Transport, 2014, 43, 374-401.	0.8	10
13	Second-order discretization in space and time for radiation-hydrodynamics. Journal of Computational Physics, 2017, 338, 511-526.	3.8	10
14	A Variable Eddington Factor method for the 1-D grey radiative transfer equations with discontinuous Galerkin and mixed finite-element spatial differencing. Journal of Computational Physics, 2019, 393, 258-277.	3.8	9
15	Manufactured Solutions in the Thick Diffusion Limit. Nuclear Science and Engineering, 2010, 166, 36-47.	1.1	8
16	A non-negative moment-preserving spatial discretization scheme for the linearized Boltzmann transport equation in 1-D and 2-D Cartesian geometries. Journal of Computational Physics, 2012, 231, 6801-6826.	3.8	8
17	Discontinuous finite element discretizations for the <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si88.gif" overflow="scroll"><mml:mrow><mml:msub><mml:mrow><mml:mi>S</mml:mi></mml:mrow><mml:mrow><mml:mi>N</mml:mi></m neutron transport equation in problems with spatially varying cross sections. Annals of Nuclear Energy, 2014, 73, 506-526.	1.8	8
18	An Accurate Globally Conservative Subdomain Discontinuous Least-Squares Scheme for Solving Neutron Transport Problems. Nuclear Science and Engineering, 2018, 189, 259-271.	1.1	8

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19	[illegible] performance of various formulations of the <mml:math altimg="si1.gif" overflow="scroll" xmlns:xocs="http://www.elsevier.com/xml/xocs/dtd" xmlns:xs="http://www.w3.org/2001/XMLSchema" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="http://www.elsevier.com/xml/ja/dtd" xmlns:ja="http://www.elsevier.com/xml/ja/dtd" xmlns:mml="http://www.w3.org/1998/Math/MathML" xmlns:tb="http://www.elsevier.com/xml/common/table/dtd" xmlns:sb="http://www.elsevier.com/xml/common/struct-bib/dtd" xmlns:ce="htt Journal of Computatio	3.8	6
20	Variable Eddington Factor Method for the S<i>_N</i> Equations with Lumped Discontinuous Galerkin Spatial Discretization Coupled to a Drift-Diffusion Acceleration Equation with Mixed Finite-Element Discretization. Journal of Computational and Theoretical Transport, 2017, 46, 480-496.	0.8	6
21	Application of linear multifrequency-grey acceleration to preconditioned Krylov iterations for thermal radiation transport. Journal of Computational Physics, 2018, 372, 931-955.	3.8	6
22	Lumping Techniques for DFEM <i>S_N</i> Transport in Slab Geometry. Nuclear Science and Engineering, 2015, 179, 148-163.	1.1	6
23	Nonnegative Methods for Bilinear Discontinuous Differencing of theSNEquations on Quadrilaterals. Nuclear Science and Engineering, 2017, 185, 53-69.	1.1	5
24	A Lumped Linear-Discontinuous Spatial Discretization Scheme for Triangular-Mesh <i>S_n</i> Calculations in <i>r</i>-<i>z</i> Geometry. Nuclear Science and Engineering, 2007, 155, 168-178.	1.1	4
25	Spatial Finite-Element Lumping Techniques for the Quadrilateral Mesh <i>S_n</i> Equations in <i>X</i>-<i>Y</i> Geometry. Nuclear Science and Engineering, 2007, 156, 325-342.	1.1	4
26	S2SA preconditioning for the Sn equations with strictly nonnegative spatial discretization. Journal of Computational Physics, 2014, 273, 706-719.	3.8	4
27	Stability analysis of implicit time discretizations for the Compton-scattering Fokkerâ€“Planck equation. Journal of Computational Physics, 2009, 228, 5933-5960.	3.8	3
28	Stability of explicit radiation-material coupling in radiative transfer calculations. Journal of Quantitative Spectroscopy and Radiative Transfer, 2011, 112, 1518-1524.	2.3	3
29	A High-Order Low-Order Algorithm with Exponentially Convergent Monte Carlo for Thermal Radiative Transfer. Nuclear Science and Engineering, 2017, 185, 159-173.	1.1	3
30	A Weighted Least-Squares Transport Equation Compatible with Source Iteration and Voids. Nuclear Science and Engineering, 2019, 193, 388-403.	1.1	3
31	Parallel Approximate Ideal Restriction Multigrid for Solving the <i>S</i><i>_N</i> Transport Equations. Nuclear Science and Engineering, 2020, 194, 989-1008.	1.1	3
32	Convergence behavior of second-order transport equations in near-void problems. Journal of Quantitative Spectroscopy and Radiative Transfer, 2020, 244, 106843.	2.3	3
33	Properties of theSN-Equivalent Integral Transport Operator in Slab Geometry and the Iterative Acceleration of Neutral Particle Transport Methods. Nuclear Science and Engineering, 2009, 162, 234-252.	1.1	2
34	Comparison of Two Galerkin Quadrature Methods. Nuclear Science and Engineering, 2017, 185, 325-334.	1.1	2
35	The Finite-Element with Discontiguous-Support Method. Nuclear Science and Engineering, 2022, 196, 53-74.	1.1	2
36	Nonlinear Diffusion Acceleration of the Least-Squares Transport Equation in Geometries with Voids. Nuclear Science and Engineering, 2019, 193, 453-480.	1.1	1

#	Article	IF	Citations
37	A variable Eddington factor method with different spatial discretizations for the radiative transfer equation and the hydrodynamics/radiation-moment equations. Journal of Computational Physics, 2021, 439, 110393.	3.8	1
38	Transport error estimation using residual Monte Carlo. Journal of Computational Physics, 2022, 464, 111306.	3.8	1
39	Asymptotic Diffusion-Limit Accuracy of Sn Angular Differencing Schemes. Nuclear Science and Engineering, 2010, 165, 149-169.	1.1	0
40	On the Degradation of Cell-Centered Diffusive Preconditioners for AcceleratingSNTransport Calculations in the Periodic Horizontal Interface Configuration. Nuclear Science and Engineering, 2010, 166, 218-238.	1.1	0
41	A new indirect measure of diffusion model error. Journal of Quantitative Spectroscopy and Radiative Transfer, 2015, 163, 24-33.	2.3	0
42	Formulations and analysis of Compton scattering for deterministic thermal radiation transport. Journal of Computational Physics, 2020, 400, 108990.	3.8	0
43	Model Error Estimation for the Simplified PN Radiation Transport Equations. Nuclear Science and Engineering, 2020, 194, 903-926.	1.1	0