Weizhong Dai

List of Publications by Year
in descending order

111 papers	1,822 citations	257450 24 h-index	377865 34 g-index
114 all docs	114 docs citations	114 times ranked	779 citing authors

#	Article	IF	Citations
1	Conservative and fourth-order compact difference schemes for the generalized Rosenauâ€“Kawaharaâ€“RLW equation. Engineering With Computers, 2022, 38, 1491-1514.	6.1	2
2	Coupled and decoupled highâ€order accurate dissipative finite difference schemes for the dissipative generalized symmetric regularized long wave equations. Numerical Methods for Partial Differential Equations, 2022, 38, 1112-1143.	3.6	1
3	A new absorbing layer for simulation of wave propagation based on a KdV model on unbounded domain. Applied Numerical Mathematics, 2022, 174, 46-70.	2.1	1
4	On the efficiency of 5(4) RK-embedded pairs with high order compact scheme and Robin boundary condition for options valuation. Japan Journal of Industrial and Applied Mathematics, 2022, 39, 753-775.	0.9	4
5	Neural network method for solving nonlocal two-temperature nanoscale heat conduction in gold films exposed to ultrashort-pulsed lasers. International Journal of Heat and Mass Transfer, 2022, 190, 122791.	4.8	6
6	Heat Transport on Ultrashort Time and Space Scales in Nanosized Systems: Diffusive or Wave-like?. Materials, 2022, 15, 4287.	2.9	10
7	Numerical analysis of a new conservative scheme for the 2D generalized Rosenau-RLW equation. Applicable Analysis, 2021, 100, 2564-2580.	1.3	4
8	Matrix representation of optimal scale for generalized multi-scale decision table. Journal of Ambient Intelligence and Humanized Computing, 2021, 12, 8549-8559.	4.9	3
9	A high-order accurate finite difference scheme for the KdV equation with time-periodic boundary forcing. Applied Numerical Mathematics, 2021, 160, 102-121.	2.1	11
10	A new rough set model based on multi-scale covering. International Journal of Machine Learning and Cybernetics, 2021, 12, 243-256.	3.6	15
11	Corrigendum to â€œA conservative linear difference scheme for the 2D regularized long-wave equationâ€• [Appl. Math. Comput. 342 (2019) 55â€“70]. Applied Mathematics and Computation, 2021, 395, 125909.	2.2	0
12	An adaptive and explicit fourth order Rungeâ€“Kuttaâ€“Fehlberg method coupled with compact finite differencing for pricing American put options. Japan Journal of Industrial and Applied Mathematics, 2021, 38, 921-946.	0.9	3
13	Neural network method for solving parabolic two-temperature microscale heat conduction in double-layered thin films exposed to ultrashort-pulsed lasers. International Journal of Heat and Mass Transfer, 2021, 178, 121616.	4.8	11
14	Parabolic two-step model and accurate numerical scheme for nanoscale heat conduction induced by ultrashort-pulsed laser heating. Journal of Computational and Applied Mathematics, 2020, 369, 112591.	2.0	7
15	Gradient preserved method for solving heat conduction equation with variable coefficients in double layers. Applied Mathematics and Computation, 2020, 386, 125516.	2.2	2
16	A new conservative finite difference scheme for the generalized Rosenauâ€“KdVâ€“RLW equation. Computational and Applied Mathematics, 2020, 39, 1.	2.2	2
17	Adjoint difference equation for the Nikiforovâ€“Uvarovâ€“Suslov difference equation of hypergeometric type on non-uniform lattices. Ramanujan Journal, 2020, 53, 285-318.	0.7	0
18	Fractional parabolic two-step model and its accurate numerical scheme for nanoscale heat conduction. Journal of Computational and Applied Mathematics, 2020, 375, 112812.	2.0	10

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19	Numerical Schemes for Solving the Time-Fractional Dual-Phase-Lagging Heat Conduction Model in a Double-Layered Nanoscale Thin Film. Journal of Scientific Computing, 2019, 81, 1767-1800.	2.3	18
20	Generalized multi-scale decision tables with multi-scale decision attributes. International Journal of Approximate Reasoning, 2019, 115, 194-208.	3.3	37
21	Accurate gradient preserved method for solving heat conduction equations in double layers. Applied Mathematics and Computation, 2019, 354, 58-85.	2.2	4
22	A conservative fourth-order stable finite difference scheme for the generalized Rosenauâ€“KdV equation in both 1D and 2D. Journal of Computational and Applied Mathematics, 2019, 355, 310-331.	2.0	18
23	A conservative linear difference scheme for the 2D regularized long-wave equation. Applied Mathematics and Computation, 2019, 342, 55-70.	2.2	8
24	Heatline Analysis on Heat Transfer and Convective Flow of Nanofluids in an Inclined Enclosure. Heat Transfer Engineering, 2018, 39, 843-860.	1.9	3
25	A three-level linear implicit conservative scheme for the Rosenauâ€“KdVâ€“RLW equation. Journal of Computational and Applied Mathematics, 2018, 330, 295-306.	2.0	36
26	Numerical Method for Solving the Time-Fractional Dual-Phase-Lagging Heat Conduction Equation with the Temperature-Jump Boundary Condition. Journal of Scientific Computing, 2018, 75, 1307-1336.	2.3	17
27	A new implicit energy conservative difference scheme with fourth-order accuracy for the generalized Rosenauâ€“Kawahara-RLW equation. Computational and Applied Mathematics, 2018, 37, 6560-6581.	1.3	10
28	A secondâ€order finite difference scheme for solving the dualâ€phaseâ€lagging equation in a doubleâ€layered nanoscale thin film. Numerical Methods for Partial Differential Equations, 2017, 33, 142-173.	3.6	14
29	Thermal analysis in a triple-layered skin structure with embedded vasculature, tumor, and gold nanoshells. International Journal of Heat and Mass Transfer, 2017, 111, 677-695.	4.8	21
30	Sagnac interferometry with coherent vortex superposition states in exciton-polariton condensates. Physical Review A, 2016, 93, .	2.5	30
31	New approximations for solving the Caputo-type fractional partial differential equations. Applied Mathematical Modelling, 2016, 40, 2625-2636.	4.2	35
32	Numerical hyperthermia simulation for A 3-D triple-layered skin structure with embedded vascular countercurrent network and nanoparticles. International Journal of Heat and Technology, 2016, 34, S179-S184.	0.6	1
33	A high order accurate numerical method for solving twoâ€dimensional dualâ€phaseâ€lagging equation with temperature jump boundary condition in nanoheat conduction. Numerical Methods for Partial Differential Equations, 2015, 31, 1742-1768.	3.6	11
34	Operator compact method of accuracy two in time and four in space for the solution of time dependent Burgers-Huxley equation. Numerical Algorithms, 2015, 70, 591-605.	1.9	22
35	A new compact finite difference scheme for solving the complex Ginzburgâ€“Landau equation. Applied Mathematics and Computation, 2015, 260, 269-287.	2.2	13
36	A G-FDTD scheme for solving multi-dimensional open dissipative Grossâ€“Pitaevskii equations. Journal of Computational Physics, 2015, 282, 303-316.	3.8	14

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37	Novel 3D GPU based numerical parallel diffusion algorithms in cylindrical coordinates for health care simulation. Mathematics and Computers in Simulation, 2015, 109, 1-19.	4.4	19
38	A new high accuracy method for two-dimensional biharmonic equation with nonlinear third derivative terms: application to Navierâ€“Stokes equations of motion. International Journal of Computer Mathematics, 2015, 92, 1574-1590.	1.8	9
39	A mathematical model and numerical method for thermoelectric DNA sequencing. Heat and Mass Transfer, 2014, 50, 693-709.	2.1	0
40	A new higherâ€order accurate numerical method for solving heat conduction in a doubleâ€layered film with the neumann boundary condition. Numerical Methods for Partial Differential Equations, 2014, 30, 1291-1314.	3.6	8
41	Accurate numerical method for solving dual-phase-lagging equation with temperature jump boundary condition in nano heat conduction. International Journal of Heat and Mass Transfer, 2013, 64, 966-975.	4.8	26
42	New higher-order compact finite difference schemes for 1D heat conduction equations. Applied Mathematical Modelling, 2013, 37, 7940-7952.	4.2	15
43	A Numerical Method for Studying Thermal Deformation in 3-D Double-Layered Thin Films with Imperfect Interfacial Thermal Contact Exposed to Ultrashort-Pulsed Lasers. Numerical Heat Transfer; Part A: Applications, 2013, 63, 643-665.	2.1	1
44	A generalized finite-difference time-domain scheme for solving nonlinear SchrÃ¶dinger equations. Computer Physics Communications, 2013, 184, 1834-1841.	7.5	20
45	A Generalized FDTD Method with Absorbing Boundary Condition for Solving a Time-Dependent Linear Schrodinger Equation. American Journal of Computational Mathematics, 2012, 02, 163-172.	0.5	10
46	An Accurate and Stable Numerical Method for Solving a Micro Heat Transfer Model in a One-Dimensional N-Carrier System in Spherical Coordinates. Journal of Heat Transfer, 2012, 134, .	2.1	1
47	A generalized finite-difference time-domain quantum method for the <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si15.gif" display="inline" overflow="scroll"><mml:mi>N</mml:mi></mml:math>-body interacting Hamiltonian. Computer Physics Communications, 2012, 183, 2434-2440.	7.5	11
48	A new 3D mass diffusionâ€“reaction model in the neuromuscular junction. Journal of Computational Neuroscience, 2011, 30, 729-745.	1.0	8
49	An improved compact finite difference scheme for solving an Nâ€carrier system with Neumann boundary conditions. Numerical Methods for Partial Differential Equations, 2011, 27, 436-446.	3.6	18
50	Employing graphics processing unit technology, alternating direction implicit method and domain decomposition to speed up the numerical diffusion solver for the biomedical engineering research. International Journal for Numerical Methods in Biomedical Engineering, 2011, 27, 1829-1849.	2.1	16
51	A compact local oneâ€dimensional scheme for solving a 3D <i>N</i>â€carrier system with Neumann boundary conditions. Numerical Methods for Partial Differential Equations, 2010, 26, 1079-1098.	3.6	9
52	Accurate finite difference schemes for solving a 3D micro heat transfer model in an N-carrier system with the Neumann boundary condition in spherical coordinates. Journal of Computational and Applied Mathematics, 2010, 235, 850-869.	2.0	7
53	A new accurate finite difference scheme for Neumann (insulated) boundary condition of heat conduction. International Journal of Thermal Sciences, 2010, 49, 571-579.	4.9	17
54	Vascular Countercurrent Network for 3-D Triple-Layered Skin Structure with Radiation Heating. Numerical Heat Transfer; Part A: Applications, 2010, 57, 369-391.	2.1	17

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55	A New Accurate Finite-Difference Scheme for the Thermal Analysis of One-Dimensional Microspheres Exposed to Ultrashort-Pulsed Lasers. Numerical Heat Transfer, Part B: Fundamentals, 2010, 57, 241-259.	0.9	12
56	A fourth-order compact finite difference scheme for solving anN-carrier system with Neumann boundary conditions. Numerical Methods for Partial Differential Equations, 2009, 26, NA-NA.	3.6	4
57	Thermal lagging in multi-carrier systems. International Journal of Heat and Mass Transfer, 2009, 52, 1206-1213.	4.8	48
58	A hyperbolic microscopic model and its numerical scheme for thermal analysis in an N-carrier system. International Journal of Heat and Mass Transfer, 2009, 52, 2379-2389.	4.8	11
59	A hyperbolic two-step model based finite difference scheme for studying thermal deformation in a double-layered thin film exposed to ultrashort-pulsed lasers. International Journal of Thermal Sciences, 2009, 48, 34-49.	4.9	19
60	A stable finite difference scheme for thermal analysis in an N-carrier system. International Journal of Thermal Sciences, 2009, 48, 1530-1541.	4.9	14
61	A finite difference scheme for solving a nonlinear hyperbolic two-step model in a double-layered thin film exposed to ultrashort-pulsed lasers with nonlinear interfacial conditions. Nonlinear Analysis: Hybrid Systems, 2008, 2, 121-143.	3.5	17
62	A mathematical model for skin burn injury induced by radiation heating. International Journal of Heat and Mass Transfer, 2008, 51, 5497-5510.	4.8	82
63	Fourth-order compact schemes for solving multidimensional heat problems with Neumann boundary conditions. Numerical Methods for Partial Differential Equations, 2008, 24, 165-178.	3.6	25
64	A finite difference method for studying thermal deformation in a double-layered thin film with imperfect interfacial contact exposed to ultrashort pulsed lasers. International Journal of Thermal Sciences, 2008, 47, 7-24.	4.9	36
65	A finite difference method for studying thermal deformation in a 3D thin film exposed to ultrashort pulsed lasers. International Journal of Heat and Mass Transfer, 2008, 51, 1979-1995.	4.8	18
66	A Hyperbolic Two-Step Model-Based Finite-Difference Method for Studying Thermal Deformation in a 3-D Thin Film Exposed to Ultrashort Pulsed Lasers. Numerical Heat Transfer; Part A: Applications, 2008, 53, 1294-1320.	2.1	5
67	A Hyperbolic Two-Step Model Finite-Difference Method for Studying Thermal Deformation in a 3-D Microsphere Exposed to Ultrashort-Pulsed Lasers. Numerical Heat Transfer, Part B: Fundamentals, 2008, 54, 408-433.	0.9	4
68	A Finite-Difference Method for Studying Thermal Deformation in a 3-D Microsphere Exposed to Ultrashort Pulsed Lasers. Numerical Heat Transfer; Part A: Applications, 2007, 53, 457-484.	2.1	9
69	Fourth-order compact schemes of a heat conduction problem with Neumann boundary conditions. Numerical Methods for Partial Differential Equations, 2007, 23, 949-959.	3.6	40
70	Optimal temperature distribution in a 3D triple-layered skin structure embedded with artery and vein vasculature and induced by electromagnetic radiation. International Journal of Heat and Mass Transfer, 2007, 50, 1843-1854.	4.8	42
71	Optimal Temperature Distribution in a Three-Dimensional Triple-Layered Skin Structure Embedded with Artery and Vein Vasculature. Numerical Heat Transfer; Part A: Applications, 2006, 50, 809-834.	2.1	21
72	Optimal temperature distribution in a three dimensional triple-layered skin structure with embedded vasculature. Journal of Applied Physics, 2006, 99, 104702.	2.5	22

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73	A Hybrid FE-FD Scheme for Solving Parabolic Two-Step Micro Heat Transport Equations in an Irregularly Shaped Three-Dimensional Double-Layered Thin Film. Numerical Heat Transfer, Part B: Fundamentals, 2006, 49, 437-465.	0.9	13
74	A Numerical Method for Obtaining an Optimal Temperature Distribution in a 3-D Triple-Layered Cylindrical Skin Structure Embedded with a Blood Vessel. Numerical Heat Transfer; Part A: Applications, 2006, 49, 765-784.	2.1	14
75	A stable finite difference scheme for solving a hyperbolic twoâ€step model in a 3D micro sphere exposed to ultrashortâ€pulsed lasers. International Journal of Numerical Methods for Heat and Fluid Flow, 2006, 16, 693-717.	2.8	19
76	A finite difference method for studying thermal deformation in a double-layered thin film exposed to ultrashort pulsed lasers. International Journal of Thermal Sciences, 2006, 45, 1179-1196.	4.9	42
77	A finite difference method for studying thermal deformation in a thin film exposed to ultrashort-pulsed lasers. International Journal of Heat and Mass Transfer, 2006, 49, 2712-2723.	4.8	31
78	Comparison of the solutions of a phase-lagging heat transport equation and damped wave equation with a heat source. International Journal of Heat and Mass Transfer, 2006, 49, 2793-2801.	4.8	19
79	A finite difference scheme for solving parabolic two-step micro-heat transport equations in a double-layered micro-sphere heated by ultrashort-pulsed lasers. Numerical Methods for Partial Differential Equations, 2006, 22, 1396-1417.	3.6	11
80	A Combined Analytic and Numerical Method for Predicting Solid Layer Growth in a Static Melt Crystallizer. Numerical Heat Transfer; Part A: Applications, 2006, 49, 831-850.	2.1	3
81	A stable three-level finite difference scheme for solving the parabolic two-step model in a 3D micro-sphere heated by ultrashort-pulsed lasers. Journal of Computational and Applied Mathematics, 2005, 181, 125-147.	2.0	20
82	On the stability of the FDTD method for solving a time-dependent SchrÃ¶dinger equation. Numerical Methods for Partial Differential Equations, 2005, 21, 1140-1154.	3.6	25
83	Use of the z-transform to investigate nanopulse penetration of biological matter. Bioelectromagnetics, 2005, 26, 389-397.	1.6	27
84	A Numerical Method for Optimizing Laser Power in the Irradiation of a 3-D Triple-Layered Cylindrical Skin Structure. Numerical Heat Transfer; Part A: Applications, 2005, 48, 21-41.	2.1	24
85	NONSTANDARD FINITE DIFFERENCE SCHEMES FOR SOLVING NONLINEAR MICRO HEAT TRANSPORT EQUATIONS IN DOUBLE-LAYERED METAL THIN FILMS EXPOSED TO ULTRASHORT PULSED LASERS. , 2005, , 191-248.		1
86	A STABLE THREE-LEVEL FINITE-DIFFERENCE SCHEME FOR SOLVING A THREE-DIMENSIONAL DUAL-PHASE-LAGGING HEAT TRANSPORT EQUATION IN SPHERICAL COORDINATES. Numerical Heat Transfer, Part B: Fundamentals, 2004, 46, 121-139.	0.9	12
87	A Nonstandard Finite Difference Scheme for Solving One Dimensional Nonlinear Heat Transfer. Journal of Difference Equations and Applications, 2004, 10, 1025-1032.	1.1	7
88	A stable and convergent three-level finite difference scheme for solving a dual-phase-lagging heat transport equation in spherical coordinates. International Journal of Heat and Mass Transfer, 2004, 47, 1817-1825.	4.8	27
89	An unconditionally stable three level finite difference scheme for solving parabolic two-step micro heat transport equations in a three-dimensional double-layered thin film. International Journal for Numerical Methods in Engineering, 2004, 59, 493-509.	2.8	19
90	A convergent three-level finite difference scheme for solving a dual-phase-lagging heat transport equation in spherical coordinates. Numerical Methods for Partial Differential Equations, 2004, 20, 60-71.	3.6	12

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91	A FOURTH-ORDER COMPACT FINITE-DIFFERENCE SCHEME FOR SOLVING A 1-D PENNES' BIOHEAT TRANSFER EQUATION IN A TRIPLE-LAYERED SKIN STRUCTURE. Numerical Heat Transfer, Part B: Fundamentals, 2004, 46, 447-461.	0.9	22
92	A THREE-LEVEL FINITE-DIFFERENCE SCHEME FOR SOLVING MICRO HEAT TRANSPORT EQUATIONS WITH TEMPERATURE-DEPENDENT THERMAL PROPERTIES. Numerical Heat Transfer, Part B: Fundamentals, 2003, 43, 509-523.	0.9	8
93	A COMBINED ANALYTIC AND NUMERICAL METHOD FOR PREDICTING THE SOLID-LAYER GROWTH FROM MELT CRYSTALLIZATION. Numerical Heat Transfer; Part A: Applications, 2003, 44, 577-590.	2.1	7
94	A domain decomposition method for solving the Pennes' bioheat transfer in a 3D triple-layered skin structure. , 2003, , 1650-1654.		3
95	Compact ADI method for solving parabolic differential equations. Numerical Methods for Partial Differential Equations, 2002, 18, 129-142.	3.6	50
96	An unconditionally stable finite difference scheme for solving a 3D heat transport equation in a sub-microscale thin film. Journal of Computational and Applied Mathematics, 2002, 145, 247-260.	2.0	29
97	An approximate analytic method for solving 1D dual-phase-lagging heat transport equations. International Journal of Heat and Mass Transfer, 2002, 45, 1585-1593.	4.8	30
98	A compact finite-difference scheme for solving a one-dimensional heat transport equation at the microscale. Journal of Computational and Applied Mathematics, 2001, 132, 431-441.	2.0	49
99	A finite difference scheme for solving a three-dimensional heat transport equation in a thin film with microscale thickness. International Journal for Numerical Methods in Engineering, 2001, 50, 1665-1680.	2.8	27
100	A preconditioned Richardson method for solving threeâ€dimensional thin film problems with first order derivatives and variable coefficients. International Journal of Numerical Methods for Heat and Fluid Flow, 2000, 10, 477-487.	2.8	3
101	A compact finite difference scheme for solving a three-dimensional heat transport equation in a thin film. Numerical Methods for Partial Differential Equations, 2000, 16, 441-458.	3.6	65
102	A hybrid finite element-alternating direction implicit method for solving parabolic differential equations on multilayers with irregular geometry. Journal of Computational and Applied Mathematics, 2000, 117, 1-16.	2.0	5
103	Title is missing!. Journal of Computational Analysis and Applications, 2000, 2, 293-308.	0.2	6
104	A compact finite difference scheme for solving a three-dimensional heat transport equation in a thin film. , 2000, 16, 441.		1
105	A finite difference scheme for solving the heat transport equation at the microscale. Numerical Methods for Partial Differential Equations, 1999, 15, 697-708.	3.6	71
106	A domain decomposition method for solving thin film elliptic interface problems with variable coefficients. International Journal for Numerical Methods in Engineering, 1999, 46, 747-756.	2.8	9
107	A New ADI Scheme for Solving Three-Dimensional Parabolic Differential Equations. Journal of Scientific Computing, 1997, 12, 361-369.	2.3	6
108	Title is missing!. Journal of Scientific Computing, 1997, 12, 353-360.	2.3	14

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109	An Unconditionally Stable Three-Level Explicit Difference Scheme for the SchrÃ¶dinger Equation with a Variable Coefficient. SIAM Journal on Numerical Analysis, 1992, 29, 174-181.	2.3	39
110	A new highâ€order accurate conservative finite difference scheme for the coupled nonlinear SchrÃ¶dinger equations. Mathematical Methods in the Applied Sciences, 0, , .	2.3	2
111	Arbitrarily highâ€order accurate and energyâ€stable schemes for solving the conservative Allenâ€"Cahn equation. Numerical Methods for Partial Differential Equations, 0, , .	3.6	1