Kan Wang

List of Publications by Year
in descending order

150 papers	1,301 citations	471509 17 h-index	477307 29 g-index
150 all docs	150 docs citations	150 times ranked	446 citing authors

#	Article	IF	Citations
1	Optimal Batch Size Growth for Wielandt Method and Superhistory Method. Nuclear Science and Engineering, 2022, 196, 183-192.	1.1	8
2	Single neutron tracking method for calculating the probability of survival based on the RMC code. Annals of Nuclear Energy, 2022, 165, 108763.	1.8	1
3	Source extrapolation scheme for Monte Carlo fission source convergence based on RMC code. Annals of Nuclear Energy, 2022, 166, 108737.	1.8	4
4	ODR-VS method for a high packing fraction of dispersed TRISO particles. Annals of Nuclear Energy, 2022, 166, 108821.	1.8	3
5	Research on global neighbor list method in Monte Carlo code RMC. Annals of Nuclear Energy, 2022, 167, 108861.	1.8	1
6	Application of homogenization techniques for inflow transport approximation on light water reactor analysis. Nuclear Science and Techniques/Hewuli, 2022, 33, 1.	3.4	0
7	Verification of CENDL-3.2 and ENDF/B-VIII.0 Evaluated Nuclear Data Library on HTR-10 Benchmark. Frontiers in Energy Research, 2022, 9, .	2.3	0
8	Convergence diagnostics for Monte Carlo fission source distributions using the Wasserstein distance measure. Nuclear Engineering and Design, 2022, 389, 111675.	1.7	5
9	A new pin-resolved ultra-fine-group method based on global–local resonance treatment framework. Annals of Nuclear Energy, 2022, 170, 108954.	1.8	1
10	A transient multiphysics coupling method based on OpenFOAM for heat pipe cooled reactors. Science China Technological Sciences, 2022, 65, 102.	4.0	4
11	A new functional expansion tallies (FET) method based on cutting track-length estimation in RMC code. Nuclear Engineering and Design, 2022, 391, 111736.	1.7	2
12	Development of an improved direct kinetic simulation capability in RMC code. Annals of Nuclear Energy, 2022, 173, 109110.	1.8	2
13	Polynomial interpolation cross-section parameterization method with the RMC Monte Carlo code. Annals of Nuclear Energy, 2022, 174, 109161.	1.8	0
14	Single-step Monte Carlo criticality algorithm. Computer Physics Communications, 2022, 279, 108439.	7.5	14
15	Verification of on-the-fly homogenization method based on the analysis of HTTR. Annals of Nuclear Energy, 2021, 150, 107831.	1.8	0
16	RMC/ANSYS MULTI-PHYSICS COUPLING SOLUTIONS FOR HEAT PIPE COOLED REACTORS ANALYSES. EPJ Web of Conferences, 2021, 247, 06007.	0.3	1
17	ON-THE-FLY INTERPOLATION OF CONTINUOUS TEMPERATURE-DEPENDENT THERMAL NEUTRON SCATTERING DATA IN RMC CODE. EPJ Web of Conferences, 2021, 247, 09012.	0.3	1
18	GENERALIZED SENSITIVITY ANALYSIS CAPABILITY WITH THE DIFFERENTIAL OPERATOR METHOD IN RMC CODE. EPJ Web of Conferences, 2021, 247, 15020.	0.3	0

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19	Kinetic methods in Monte Carlo code RMC and its implementation to C5G7-TD benchmark. Annals of Nuclear Energy, 2021, 151, 107864.	1.8	9
20	Forced propagation method for Monte Carlo fission source convergence acceleration in the RMC. Nuclear Science and Techniques/Hewuli, 2021, 32, 1.	3.4	4
21	Improved generalized perturbation theory method for sensitivity analysis of generalized response function. Progress in Nuclear Energy, 2021, 134, 103643.	2.9	2
22	Improvement of sensitivity and uncertainty analysis capabilities of generalized response in Monte Carlo code RMC. Annals of Nuclear Energy, 2021, 154, 108099.	1.8	5
23	Hybrid windowed networks for on-the-fly Doppler broadening in RMC code. Nuclear Science and Techniques/Hewuli, 2021, 32, 1.	3.4	4
24	Optimizing the RMC Code Using the Decay Chain Method for Large-Scale Decay Calculations. Frontiers in Energy Research, 2021, 9, .	2.3	0
25	An improved tracking method for particle transport Monte Carlo simulations. Journal of Computational Physics, 2021, 437, 110330.	3.8	4
26	A hash mapping method using cell vectors in Monte Carlo code RMC. Annals of Nuclear Energy, 2021, 160, 108395.	1.8	3
27	Temperature perturbation method using on-the-fly treatment of the cross-sections in the resolved resonance region. Annals of Nuclear Energy, 2021, 159, 108329.	1.8	1
28	A new neutronics-thermal-mechanics multi-physics coupling method for heat pipe cooled reactor based on RMC and OpenFOAM. Progress in Nuclear Energy, 2021, 139, 103842.	2.9	18
29	Numerical investigation on the startup performance of high-temperature heat pipes for heat pipe cooled reactor application. Nuclear Science and Techniques/Hewuli, 2021, 32, 1.	3.4	12
30	Uniform variance method for accelerated Monte Carlo criticality calculation. Progress in Nuclear Energy, 2021, 139, 103858.	2.9	7
31	AN IMPROVED DISTINCT ELEMENT METHOD FOR HIGH PACKING FRACTION STOCHASTIC MEDIA MODELING. EPJ Web of Conferences, 2021, 247, 04026.	0.3	0
32	SP3-coupled global variance reduction method based on RMC code. Nuclear Science and Techniques/Hewuli, 2021, 32, 1.	3.4	9
33	Research on the on-the-fly homogenization method based on RMC code for criticality calculations. Annals of Nuclear Energy, 2020, 135, 106985.	1.8	4
34	Comparative analysis of coupling schemes of Monte Carlo burnup calculation in RMC. Annals of Nuclear Energy, 2020, 137, 107024.	1.8	1
35	Improved adaptive variance reduction algorithm based on RMC code for deep penetration problems. Annals of Nuclear Energy, 2020, 137, 107113.	1.8	14
36	Development of the integrated parallelism strategy for large scale depletion calculation in the Monte Carlo code RMC. Annals of Nuclear Energy, 2020, 135, 106941.	1.8	2

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37	Acceleration method of fission source convergence based on RMC code. Nuclear Engineering and Technology, 2020, 52, 1347-1354.	2.3	5
38	Parallelization and optimization of RMC for criticality computing based on the heterogeneous architecture of the Sunway TaihuLight supercomputer. Annals of Nuclear Energy, 2020, 147, 107761.	1.8	0
39	Preliminary verification of incompressible Navier-Stokes equations solved by The Newton method. International Journal of Advanced Nuclear Reactor Design and Technology, 2020, 2, 69-85.	1.3	4
40	Geometric sensitivity analysis of generalized response function with RMC code. Annals of Nuclear Energy, 2020, 149, 107824.	1.8	2
41	Superhistory-based differential operator method for generalized responses sensitivity calculations. Annals of Nuclear Energy, 2020, 140, 107291.	1.8	6
42	Criticality benchmarking of ENDF/B-â...§.0 and JEFF-3.3 neutron data libraries with RMC code. Nuclear Engineering and Technology, 2020, 52, 1917-1925.	2.3	8
43	Neutronics and thermal-hydraulics coupling analysis in accelerator-driven subcritical system. Progress in Nuclear Energy, 2020, 122, 103235.	2.9	12
44	RMC/CTF multiphysics solutions to VERA core physics benchmark problem #8. Annals of Nuclear Energy, 2020, 143, 107466.	1.8	4
45	On-the-fly temperature-dependent cross section treatment under extremes in RMC code. EPJ Web of Conferences, 2020, 239, 22009.	0.3	0
46	One-step Monte Carlo global homogenization based on RMC code. Nuclear Engineering and Technology, 2019, 51, 1209-1217.	2.3	13
47	Calculating the k-Eigenvalue Sensitivity to Typical Geometric Perturbations with the Adjoint-Weighted Method in the Continuous-Energy Reactor Monte Carlo Code RMC. Nuclear Science and Engineering, 2019, 193, 1186-1218.	1.1	5
48	RMC/CTF multiphysics solutions to VERA core physics benchmark problem 9. Annals of Nuclear Energy, 2019, 133, 837-852.	1.8	23
49	The numerical solution of space-dependent neutron kinetics equations in hexagonal-z geometry using backward differentiation formula with adaptive step size. Annals of Nuclear Energy, 2019, 128, 203-208.	1.8	4
50	An adaptive variance reduction algorithm based on RMC code for solving deep penetration problems. Annals of Nuclear Energy, 2019, 128, 171-180.	1.8	11
51	Coupling RMC and CFD for simulation of transients in TREAT reactor. Annals of Nuclear Energy, 2019, 132, 249-257.	1.8	6
52	Comparison of sensitivity calculation between mathematical and physical adjoint in the 2-D/1-D transport solver KYADJ. Annals of Nuclear Energy, 2019, 130, 357-364.	1.8	2
53	INVERSE UNCERTAINTY QUANTIFICATION OF CTF PHYSICAL MODEL PARAMETERS USING BAYESIAN INFERENCE. The Proceedings of the International Conference on Nuclear Engineering (ICONE), 2019, 2019.27, 1435.	0.0	0
54	EXPLORATION OF TRAINING MODE FOR PHD STUDENTS OF NUCLEAR ENGINEERING. The Proceedings of the International Conference on Nuclear Engineering (ICONE), 2019, 2019.27, 1376.	0.0	0

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55	Versatility and stabilization improvements of full core neutronics/thermal-hydraulics coupling between RMC and CTF. Nuclear Engineering and Design, 2018, 332, 88-98.	1.7	7
56	On-the-fly treatment of temperature dependent cross sections in the unresolved resonance region in RMC code. Annals of Nuclear Energy, 2018, 111, 234-241.	1.8	7
57	Random geometry capability in RMC code for explicit analysis of polytype particle/pebble and applications to HTR-10 benchmark. Annals of Nuclear Energy, 2018, 111, 41-49.	1.8	13
58	Verification of Shielding Calculation Capability of RMC With H.B.Robinson-2 Pressure Vessel Benchmark. , 2018, , .		0
59	A Deep Learning approach for Modulation Recognition. , 2018, , .		7
60	Internal Coupling Between Neutronics and Thermal-Hydraulics With RMC/CTF and Validation Using VERA Benchmarks. , 2018, , .		1
61	One Step Method for Multigroup Adjoint Neutron Flux Through Continuous Energy Monte Carlo Calculation. , 2018, , .		0
62	Eigenvalue sensitivity and uncertainty analysis based on a 2-D/1-D whole-core transport code KYADJ. Annals of Nuclear Energy, 2018, 122, 185-192.	1.8	9
63	The Optimal Source Bias Method based on RMC code. Annals of Nuclear Energy, 2018, 121, 525-530.	1.8	6
64	Whole-core forward-adjoint neutron transport solutions with coupled 2-D MOC and 1-D SN and kinetics parameter calculation. Progress in Nuclear Energy, 2018, 108, 310-318.	2.9	10
65	A direct calculation method for subcritical multiplication factor in Reactor Monte Carlo code RMC. Annals of Nuclear Energy, 2018, 118, 81-91.	1.8	7
66	Analysis and solution of current spike occurred in dynamic compensation of self-powered neutron detectors. Annals of Nuclear Energy, 2017, 101, 83-88.	1.8	1
67	BEAVRS full core burnup calculation in hot full power condition by RMC code. Annals of Nuclear Energy, 2017, 101, 434-446.	1.8	35
68	Analysis of BEAVRS two-cycle benchmark using RMC based on full core detailed model. Progress in Nuclear Energy, 2017, 98, 301-312.	2.9	40
69	Calculation of adjoint-weighted kinetic parameters with the reactor Monte Carlo code RMC. Progress in Nuclear Energy, 2017, 101, 424-434.	2.9	9
70	Control rod position reconstruction based on K-Nearest Neighbor Method. Annals of Nuclear Energy, 2017, 102, 231-235.	1.8	12
71	A new nonlinear iterative method for SPN theory. Annals of Nuclear Energy, 2017, 110, 920-927.	1.8	12
72	Newly Developed Coupling Scheme in RMC With Internal Thermal Feedback and OTF Doppler-Broadening Method. , 2017, , .		1

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73	Coupled neutronics/thermal-hydraulics analysis of a full PWR core using RMC and CTF. Annals of Nuclear Energy, 2017, 109, 327-336.	1.8	34
74	Prediction of Flow and Temperature Distributions in a High Flux Research Reactor Using the Porous Media Approach. Science and Technology of Nuclear Installations, 2017, 2017, 1-13.	0.8	3
75	Generalized Sensitivity Analysis With Continuous-Energy Monte Carlo Code RMC. , 2016, , .		3
76	Comparison of reactivity estimation performance between two extended Kalman filtering schemes. Annals of Nuclear Energy, 2016, 96, 76-82.	1.8	8
77	A Three-Dimensional Flux Expansion Nodal Method for Hexagonal Geometry Application. , 2016, , .		0
78	The numerical solution of space-dependent neutron kinetics equations in hexagonal-z geometry using Diagonally Implicit Runge Kutta method. Annals of Nuclear Energy, 2016, 94, 150-154.	1.8	2
79	The least-squares method based on coupling coefficients for reactor power distribution reconstruction. Annals of Nuclear Energy, 2016, 94, 272-278.	1.8	1
80	Development of sensitivity analysis capabilities of generalized responses to nuclear data in Monte Carlo code RMC. Annals of Nuclear Energy, 2016, 97, 142-152.	1.8	24
81	Development of on-the-fly temperature-dependent cross-sections treatment in RMC code. Annals of Nuclear Energy, 2016, 94, 144-149.	1.8	32
82	Domain Decomposition Strategy for Pin-wise Full-Core Monte Carlo Depletion Calculation withÂthe Reactor Monte Carlo Code. Nuclear Engineering and Technology, 2016, 48, 635-641.	2.3	8
83	Development of new variance reduction methods based on weight window technique in RMC code. Progress in Nuclear Energy, 2016, 90, 197-203.	2.9	10
84	Computing eigenvalue sensitivity coefficients to nuclear data based on the CLUTCH method with RMC code. Annals of Nuclear Energy, 2016, 88, 237-251.	1.8	14
85	A numerical solution to the nonlinear point kinetics equations using Magnus expansion. Annals of Nuclear Energy, 2016, 89, 84-89.	1.8	11
86	Equivalence treatment in homogenization via Monte Carlo method. Annals of Nuclear Energy, 2016, 92, 72-80.	1.8	1
87	Reaction rate tally and depletion calculation with on-the-fly temperature treatment. Annals of Nuclear Energy, 2016, 92, 277-283.	1.8	9
88	Computing eigenvalue sensitivity coefficients to nuclear data by adjoint superhistory method and adjoint Wielandt method implemented in RMC code. Annals of Nuclear Energy, 2016, 87, 228-241.	1.8	25
89	Depletion benchmarks calculation of random media using explicit modeling approach of RMC. Annals of Nuclear Energy, 2016, 87, 167-175.	1.8	8
90	Astrophysical S factor of the $\prescript{}{12}{\text{C}}(\alpha, \gamma$...	2.9	18

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91	Heat Transfer Calculation on Plate-Type Fuel Assembly of High Flux Research Reactor. Science and Technology of Nuclear Installations, 2015, 2015, 1-13.	0.8	14
92	Fault detection and isolation for self powered neutron detectors based on Principal Component Analysis. Annals of Nuclear Energy, 2015, 85, 213-219.	1.8	9
93	Development of three methods for control rod position monitoring based on fixed in-core neutron detectors. Annals of Nuclear Energy, 2015, 79, 78-86.	1.8	13
94	Neutronics comparative analysis of plate-type research reactor using deterministic and stochastic methods. Annals of Nuclear Energy, 2015, 79, 133-142.	1.8	9
95	New strategies of sensitivity analysis capabilities in continuous-energy Monte Carlo code RMC. Annals of Nuclear Energy, 2015, 81, 50-61.	1.8	28
96	Burnup-dependent core neutronics analysis of plate-type research reactor using deterministic and stochastic methods. Annals of Nuclear Energy, 2015, 85, 830-836.	1.8	6
97	Development of random geometry capability in RMC code for stochastic media analysis. Annals of Nuclear Energy, 2015, 85, 903-908.	1.8	25
98	RMC â€" A Monte Carlo code for reactor core analysis. Annals of Nuclear Energy, 2015, 82, 121-129.	1.8	215
99	Perturbation based Monte Carlo criticality search in density, enrichment and concentration. Annals of Nuclear Energy, 2015, 76, 350-356.	1.8	10
100	Dynamic compensation of Vanadium self powered neutron detectors based on Luenberger form filter. Progress in Nuclear Energy, 2015, 78, 190-195.	2.9	5
101	ICONE23-1215 APPLICATION OF WIELANDT METHOD IN CONTINUOUS-ENERGY NUCLEAR DATA SENSITIVITY ANALYSIS WITH RMC CODE. The Proceedings of the International Conference on Nuclear Engineering (ICONE), 2015, 2015.23, _ICONE23-1-_ICONE23-1.	0.0	1
102	ICONE23-1418 DEVELOPMENT AND VALIDATION OF THE FAST DOPPLER BROADENING MODULE COUPLED WITHIN RMC CODE. The Proceedings of the International Conference on Nuclear Engineering (ICONE), 2015, 2015.23, _ICONE23-1-_ICONE23-1.	0.0	0
103	Post-floorplanning power optimization for MSV-driven application specific NoC design. , 2014, , .		1
104	Passengersâ€™ Evacuation in Ships Based on Neighborhood Particle Swarm Optimization. Mathematical Problems in Engineering, 2014, 2014, 1-10.	1.1	9
105	A Simplified Supercritical Fast Reactor with Thorium Fuel. Science and Technology of Nuclear Installations, 2014, 2014, 1-9.	0.8	0
106	A new power mapping method based on ordinary kriging and determination of optimal detector location strategy. Annals of Nuclear Energy, 2014, 68, 118-123.	1.8	43
107	Mixed-Crossing-Avoided Escape Routing of Mixed-Pattern Signals on Staggered-Pin-Array PCBs. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2014, 33, 571-584.	2.7	8
108	Robust filtering for dynamic compensation of self-powered neutron detectors. Nuclear Engineering and Design, 2014, 280, 122-129.	1.7	8

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109	Core axial power shape reconstruction based on radial basis function neural network. Annals of Nuclear Energy, 2014, 73, 339-344.	1.8	9
110	A Monte Carlo code to get response spectrum of ions for Neutron Depth Profiling. Journal of Radioanalytical and Nuclear Chemistry, 2014, 301, 213-220.	1.5	4
111	2D full-core Monte Carlo pin-by-pin burnup calculations with the RMC code. Annals of Nuclear Energy, 2014, 64, 201-205.	1.8	17
112	RMC - A Monte Carlo Code for Reactor Core Analysis. , 2014, , .		11
113	3D Neutron Transport PWR Full-core Calculation with RMC code. , 2014, , .		0
114	Validation of a New PURC Module for Calculating Probability Table in Unresolved Resonance Region in RXSP Code. , 2014, , .		0
115	233U Evaluation Comparison Study. , 2014, , .		0
116	The Super Equivalence Method in Monte Carlo Based Homogenization. , 2014, , .		0
117	Power optimization for application-specific 3D network-on-chip with multiple supply voltages. , 2013, , .		3
118	Development of the point-depletion code DEPTH. Nuclear Engineering and Design, 2013, 258, 235-240.	1.7	30
119	Undersampling diagnostics by fission matrix in Monte Carlo criticality calculations. Annals of Nuclear Energy, 2013, 62, 321-325.	1.8	4
120	Accelerating a three-dimensional MOC calculation using GPU with CUDA and two-level GCMFD method. Annals of Nuclear Energy, 2013, 62, 445-451.	1.8	15
121	Development of burnup methods and capabilities in Monte Carlo code RMC. Annals of Nuclear Energy, 2013, 51, 289-294.	1.8	44
122	The Modelling and Coupling Methodology of ANSYS CFX Using Porous Media for PB-AHTR. , 2013, , .		0
123	Escape routing of mixed-pattern signals based on staggered-pin-array PCBs. , 2013, , .		5
124	Matrix Method of Characteristics Based on Modular Ray Tracing. , 2013, , .		2
125	Using Generalized Laguerre Polynomials to Compute the Matrix Exponential in Burnup Equations. Nuclear Science and Engineering, 2013, 175, 259-265.	1.1	8
126	The Development and Validation of Nuclear Cross Section Processing Code for Reactor-RXSP. , 2013, , .		2

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127	Nuclear Data Statistical Treatment. , 2013, , .		2
128	Neutron Generation Based Method for Monte Carlo Three-Dimensional Reactor Time-Dependent Simulation. , 2012, , .		1
129	Voltage island-driven power optimization for application specific network-on-chip design. , 2012, , .		5
130	Asymptotic Wielandt Method and Superhistory Method for Source Convergence in Monte Carlo Criticality Calculation. Nuclear Science and Engineering, 2012, 172, 127-137.	1.1	25
131	Leakage-aware performance-driven TSV-planning based on network flow algorithm in 3D ICs. , 2012, , .		1
132	Thermal-to-fusion neutron convertor and Monte Carlo coupled simulation of deuteron/triton transport and secondary products generation. Nuclear Instruments & Methods in Physics Research B, 2012, 287, 19-25.	1.4	4
133	Coupling of RMC and CFX for analysis of Pebble Bed-Advanced High Temperature Reactor core. Nuclear Engineering and Design, 2012, 250, 385-391.	1.7	27
134	Acceleration and Parallelization of Arbitrary Trajectory Based Three-Dimensional Method of Characteristics. , 2012, , .		0
135	An advanced approach to calculation of neutron resonance self-shielding. Nuclear Engineering and Design, 2011, 241, 3051-3057.	1.7	3
136	An Interval Bound Algorithm of optimizing reactor core loading pattern by using reactivity interval schema. Annals of Nuclear Energy, 2011, 38, 2787-2796.	1.8	5
137	Optimization treatment of point-wise nuclear data in Monte Carlo criticality and burnup calculations. Annals of Nuclear Energy, 2011, 38, 1489-1495.	1.8	7
138	Rethinking thermal via planning with timing-power-temperature dependence for 3D ICs. , 2011, , .		6
139	ICONE19-43353 DEVELOPMENT AND VALIDATION OF BURNUP FUNCTION IN REACTOR MONTE CARLO RMC. The Proceedings of the International Conference on Nuclear Engineering (ICONE), 2011, 2011.19, _ICONE1943-_ICONE1943.	0.0	2
140	Leakage-Aware TSV-Planning with Power-Temperature-Delay Dependence in 3D ICs. IEICE Transactions on Fundamentals of Electronics, Communications and Computer Sciences, 2011, E94-A, 2490-2498.	0.3	0
141	Thermal Neutron Cross Sections of Cold-Moderators. , 2010, , .		0
142	Study on integrated TRU multi-recycling in sodium cooled fast reactor CDFR. Nuclear Engineering and Design, 2010, 240, 3638-3644.	1.7	3
143	A Method of Optimized Utilization of Point-Wise Data Format in Monte Carlo Code. , 2010, , .		2
144	Thermal effects of leakage power in 3D ICs. , 2010, , .		5

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145	A New Method on Flux Mapping by Function Expansion. , 2010, , .		2
146	RMC1.0: Development of Monte Carlo Code for Reactor Analysis. , 2010, , .		2
147	Development of MCBurn and its application in the analysis of SCWR physical characteristics. Frontiers of Energy and Power Engineering in China, 2009, 3, 348-352.	0.4	0
148	Research on Monte Carlo Perturbation Calculation Methods Applied in Reactor Physics. , 2009, , .		2
149	Research on the Control System of Thorium-Based Long-Life Core. , 2008, , .		0
150	Optimization of spatial structure designs of control rod using Monte Carlo code RMC. Frontiers in Energy, 0, , 1.	2.3	0