

Sebastian Schunert

List of Publications by Year in descending order

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25
papers

495
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759233

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all docs

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docs citations

36
times ranked

327
citing authors

#	ARTICLE	IF	CITATIONS
1	Physics-based multiscale coupling for full core nuclear reactor simulation. Annals of Nuclear Energy, 2015, 84, 45-54.	1.8	184
2	Pronghorn: A Multidimensional Coarse-Mesh Application for Advanced Reactor Thermal Hydraulics. Nuclear Technology, 2021, 207, 1015-1046.	1.2	30
3	Rattlesnake: A MOOSE-Based Multiphysics Multischeme Radiation Transport Application. Nuclear Technology, 2021, 207, 1047-1072.	1.2	30
4	Coupled Multiphysics Simulations of Heat Pipe Microreactors Using DireWolf. Nuclear Technology, 2021, 207, 1142-1162.	1.2	30
5	Hybrid PN-SN with Lagrange multiplier and upwinding for the multiscale transport capability in Rattlesnake. Progress in Nuclear Energy, 2017, 101, 381-393.	2.9	21
6	A Newton solution for the Superhomogenization method: The PJFNK-SPH. Annals of Nuclear Energy, 2018, 111, 579-594.	1.8	21
7	Hybrid super homogenization and discontinuity factor method for continuous finite element diffusion. Annals of Nuclear Energy, 2019, 128, 443-454.	1.8	18
8	A flexible nonlinear diffusion acceleration method for the S transport equations discretized with discontinuous finite elements. Journal of Computational Physics, 2017, 338, 107-136.	3.8	15
9	Control rod treatment for FEM based radiation transport methods. Annals of Nuclear Energy, 2019, 127, 293-302.	1.8	15
10	A new mathematical adjoint for the modified SAAF- $\frac{d}{dt} \int_V \phi \psi dV = \int_V \phi \psi \frac{d}{dt} \int_V \phi \psi dV + \int_V \phi \psi \frac{d}{dt} \int_V \phi \psi dV$ equations. Annals of Nuclear Energy, 2015, 75, 340-352.	1.8	14
11	Multiscale thermal-hydraulic modeling of the pebble bed fluoride-salt-cooled high-temperature reactor. Annals of Nuclear Energy, 2021, 154, 107968.	1.8	14
12	Interpretation of energy deposition data from historical operation of the transient test facility (TREAT). Nuclear Engineering and Design, 2017, 322, 504-521.	1.7	13
13	Comparison of Spatial Discretization Methods for Solving the SN Equations Using a Three-Dimensional Method of Manufactured Solutions Benchmark Suite with Escalating Order of Nonsmoothness. Nuclear Science and Engineering, 2015, 180, 1-29.	1.1	11
14	A fully coupled two-level Schwarz preconditioner based on smoothed aggregation for the transient multigroup neutron diffusion equations. Numerical Linear Algebra With Applications, 2018, 25, e2162.	1.6	9
15	Validation of the Griffin application for TREAT transient modeling and simulation. Nuclear Engineering and Design, 2021, 385, 111478.	1.7	9
16	A workflow leveraging MOOSE transient multiphysics simulations to evaluate the impact of thermophysical property uncertainties on molten-salt reactors. Annals of Nuclear Energy, 2021, 163, 108546.	1.8	7
17	A Coupled Multiscale Approach to TREAT LEU Feedback Modeling Using a Binary-Collision Monte-Carlo-Informed Heat Source. Nuclear Science and Engineering, 2019, 193, 368-387.	1.1	5
18	Evolution of microstructures in radiation fields using a coupled binary-collision Monte Carlo phase field approach. Computational Materials Science, 2021, 192, 110321.	3.0	5

#	ARTICLE	IF	CITATIONS
19	PBMR-400 BENCHMARK SOLUTION OF EXERCISE 1 AND 2 USING THE MOOSE BASED APPLICATIONS: MAMMOTH, PRONGHORN. EPJ Web of Conferences, 2021, 247, 06020.	0.3	5
20	Two-step neutronics calculations with Shift and Griffin for advanced reactor systems. Annals of Nuclear Energy, 2022, 173, 109131.	1.8	5
21	Using the Cartesian Discrete Ordinates Code DORT for Assembly-Level Calculations. Nuclear Science and Engineering, 2013, 173, 233-258.	1.1	1
22	IMPROVEMENTS TO THE MODELING OF THE TREAT REACTOR AND EXPERIMENTS. EPJ Web of Conferences, 2021, 247, 06025.	0.3	1
23	Multischeme equivalence procedure for neutron transport finite element methods. Annals of Nuclear Energy, 2022, 166, 108712.	1.8	1
24	Nuclear Thermal Propulsion. , 0, , .		1
25	Impact of grain size on performance degradation of TREAT LEU. Annals of Nuclear Energy, 2020, 139, 107294.	1.8	0