Pavel Kudinov

List of Publications by Year
in descending order

54 papers	642 citations	623734 14 h-index	610901 24 g-index
54 all docs	54 docs citations	54 times ranked	250 citing authors

#	Article	IF	Citations
1	Agglomeration and size distribution of debris in DEFOR-A experiments with Bi2O3â€"WO3 corium simulant melt. Nuclear Engineering and Design, 2013, 263, 284-295.	1.7	55
2	The DEFOR-S Experimental Study of Debris Formation with Corium Simulant Materials. Nuclear Technology, 2010, 170, 219-230.	1.2	43
3	Status of steam explosion understanding and modelling. Annals of Nuclear Energy, 2014, 74, 125-133.	1.8	43
4	The TALL-3D facility design and commissioning tests for validation of coupled STH and CFD codes. Nuclear Engineering and Design, 2015, 290, 144-153.	1.7	39
5	Premixing and steam explosion phenomena in the tests with stratified melt-coolant configuration and binary oxidic melt simulant materials. Nuclear Engineering and Design, 2017, 314, 182-197.	1.7	29
6	Steam generator leakage in lead cooled fast reactors: Modeling of void transport to the core. Nuclear Engineering and Design, 2018, 328, 255-265.	1.7	28
7	Comparison of different coupling CFDâ€"STH approaches for pre-test analysis of a TALL-3D experiment. Nuclear Engineering and Design, 2015, 290, 135-143.	1.7	27
8	Coupled thermo-mechanical creep analysis for boiling water reactor pressure vessel lower head. Nuclear Engineering and Design, 2012, 249, 146-153.	1.7	26
9	Generalization of experimental data on amplitude and frequency of oscillations induced by steam injection into a subcooled pool. Nuclear Engineering and Design, 2015, 295, 155-161.	1.7	26
10	Modelling of pool stratification and mixing induced by steam injection through blowdown pipes. Annals of Nuclear Energy, 2018, 112, 624-639.	1.8	26
11	Pool stratification and mixing induced by steam injection through spargers: analysis of the PPOOLEX and PANDA experiments. Nuclear Engineering and Design, 2018, 337, 300-316.	1.7	25
12	On the influence of water subcooling and melt jet parameters on debris formation. Nuclear Engineering and Design, 2016, 309, 265-276.	1.7	23
13	Thermal stratification and mixing in a suppression pool induced by direct steam injection. Annals of Nuclear Energy, 2018, 111, 487-498.	1.8	19
14	Pool stratification and mixing induced by steam injection through spargers: CFD modelling of the PPOOLEX and PANDA experiments. Nuclear Engineering and Design, 2019, 347, 67-85.	1.7	19
15	Development and validation of conservative-mechanistic and best estimate approaches to quantifying mass fractions of agglomerated debris. Nuclear Engineering and Design, 2013, 262, 452-461.	1.7	14
16	TALL-3D open and blind benchmark on natural circulation instability. Nuclear Engineering and Design, 2020, 358, 110386.	1.7	14
17	Experimental investigation of particulate debris spreading in a pool. Nuclear Engineering and Design, 2016, 297, 208-219.	1.7	13
18	Seismic sloshing effects in lead-cooled fast reactors. Nuclear Engineering and Design, 2018, 332, 99-110.	1.7	13

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19	Effectiveness of the debris bed self-leveling under severe accident conditions. Annals of Nuclear Energy, 2016, 95, 75-85.	1.8	12
20	Effective momentum induced by steam condensation in the oscillatory bubble regime. Nuclear Engineering and Design, 2019, 350, 259-274.	1.7	12
21	Approach and Development of Effective Models for Simulation of Thermal Stratification and Mixing Induced by Steam Injection into a Large Pool of Water. Science and Technology of Nuclear Installations, 2014, 2014, 1-11.	0.8	10
22	Validation of Effective Models for Simulation of Thermal Stratification and Mixing Induced by Steam Injection into a Large Pool of Water. Science and Technology of Nuclear Installations, 2014, 2014, 1-18.	0.8	10
23	Pre-test analysis for identification of natural circulation instabilities in TALL-3D facility. Nuclear Engineering and Design, 2017, 314, 110-120.	1.7	9
24	Thermal stratification and mixing in a Nordic BWR pressure suppression pool. Annals of Nuclear Energy, 2019, 132, 442-450.	1.8	8
25	Modelling of a Nordic BWR containment and suppression pool behavior during a LOCA with GOTHIC 8.1. Annals of Nuclear Energy, 2020, 136, 107027.	1.8	8
26	The Effective Convectivity Model for Simulation of Molten Metal Layer Heat Transfer in a Boiling Water Reactor Lower Head. Science and Technology of Nuclear Installations, 2013, 2013, 1-14.	0.8	6
27	Analysis of core degradation and relocation phenomena and scenarios in a Nordic-type BWR. Nuclear Engineering and Design, 2016, 310, 125-141.	1.7	6
28	Analysis of the effect of MELCOR modelling parameters on in-vessel accident progression in Nordic BWR. Nuclear Engineering and Design, 2019, 350, 243-258.	1.7	6
29	A Model for Prediction of Maximum Post-Dryout Temperature in Decay-Heated Debris Bed. , 2014, , .		5
30	Development of a surrogate model for analysis of ex-vessel steam explosion in Nordic type BWRs. Nuclear Engineering and Design, 2016, 310, 311-327.	1.7	5
31	Sensitivity analysis of debris properties in lower plenum of a Nordic BWR. Nuclear Engineering and Design, 2018, 332, 374-382.	1.7	5
32	Failure domain analysis and uncertainty quantification using surrogate models for steam explosion in a Nordic type BWR. Nuclear Engineering and Design, 2019, 343, 63-75.	1.7	5
33	Input Calibration and Validation of RELAP5 Against CIRCUS-IV Single Channel Tests on Natural Circulation Two-Phase Flow Instability. Science and Technology of Nuclear Installations, 2015, 2015, 1-14.	0.8	4
34	Scenario Grouping and Classification Methodology for Postprocessing of Data Generated by Integrated Deterministic-Probabilistic Safety Analysis. Science and Technology of Nuclear Installations, 2015, 2015, 1-13.	0.8	4
35	Sensitivity and uncertainty analysis of the vessel lower head failure mode and melt release conditions in Nordic BWR using MELCOR code. Annals of Nuclear Energy, 2020, 135, 106976.	1.8	4
36	Implementation of framework for assessment of severe accident management effectiveness in Nordic BWR. Reliability Engineering and System Safety, 2020, 203, 107049.	8.9	4

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37	Pre-test analysis for definition of steam injection tests through multi-hole sparger in PANDA facility. Nuclear Engineering and Design, 2022, 386, 111573.	1.7	4
38	Dynamic Hybrid Reliability Studies of a Decay Heat Removal System. International Journal of Reliability, Quality and Safety Engineering, 2015, 22, 1550020.	0.6	3
39	Characteristics of debris in the lower head of a BWR in different severe accident scenarios. Nuclear Engineering and Design, 2016, 305, 359-370.	1.7	3
40	Controllable Generation of a Submillimeter Single Bubble in Molten Metal Using a Low-Pressure Macrosized Cavity. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2017, 48, 1064-1072.	2.1	3
41	Safest Roadmap for Corium Experimental Research in Europe. ASCE-ASME Journal of Risk and Uncertainty in Engineering Systems, Part B: Mechanical Engineering, 2018, 4, .	1.1	3
42	On the evaluation of dryout conditions for a heat-releasing porous bed in a water pool. International Journal of Heat and Mass Transfer, 2019, 134, 895-905.	4.8	3
43	On the need for conjugate heat transfer modeling in transient CFD simulations. Nuclear Engineering and Design, 2020, 367, 110796.	1.7	3
44	Risk-Informed Approach to Debris Bed Coolability Issue. , 2012, , .		2
45	Parametric Study of Sloshing Effects in the Primary System of an Isolated Lead-Cooled Fast Reactor. Nuclear Technology, 2015, 190, 1-10.	1.2	2
46	Prediction of Flow Regimes and Thermal Hydraulic Parameters in Two-Phase Natural Circulation by RELAP5 and TRACE Codes. Science and Technology of Nuclear Installations, 2015, 2015, 1-12.	0.8	2
47	Automation of RELAP5 input calibration and code validation using genetic algorithm. Nuclear Engineering and Design, 2016, 300, 210-221.	1.7	2
48	Prediction of in-vessel debris bed properties in BWR severe accident scenarios using MELCOR and neural networks. Annals of Nuclear Energy, 2018, 120, 461-476.	1.8	2
49	Development of Effective Momentum Model for Steam Injection Through Multi-Hole Spargers: Unit Cell Model. , 2021, , .		2
50	Effect of CRGT Cooling on Modes of Global Vessel Failure of a BWR Lower Head. , 2012, , .		1
51	Analysis of the Effect of Severe Accident Scenario on Debris Properties in Lower Plenum of Nordic BWR Using Different Versions of MELCOR Code. Science and Technology of Nuclear Installations, 2019, 2019, 1-18.	0.8	1
52	Development of a CFD-based model to simulate loss of flow transients in a small lead-cooled reactor. Nuclear Engineering and Design, 2022, 392, 111773.	1.7	1
53	SAFEST Roadmap for Corium Experimental Research in Europe. , 2016, , .		0
54	Analysis of the Effect of Vessel Failure and Melt Release on Risk of Containment Failure Due to Ex-Vessel Steam Explosion in Nordic Boiling Water Reactor Using ROAAM+ Framework. Journal of Nuclear Engineering and Radiation Science, 2020, 6, .	0.4	0