Stephan Kelm

List of Publications by Year
in descending order

30 papers	491 citations	567281 15 h-index	677142 22 g-index
30 all docs	30 docs citations	30 times ranked	192 citing authors

#	Article	IF	Citations
1	On the development of multi-physics tools for nuclear reactor analysis based on OpenFOAM®: state of the art, lessons learned and perspectives. Nuclear Engineering and Design, 2022, 387, 111604.	1.7	18
2	Monte Carlo method with SNBCK nongray gas model for thermal radiation in containment flows. Nuclear Engineering and Design, 2022, 390, 111689.	1.7	5
3	AN INITIATIVE FOR THE DEVELOPMENT AND APPLICATION OF OPEN-SOURCE MULTI-PHYSICS SIMULATION IN SUPPORT OF R&D AND E&T IN NUCLEAR SCIENCE AND TECHNOLOGY. EPJ Web of Conferences, 2021, 247, 02040.	0.3	4
4	Implementation of a CFD model for wall condensation in the presence of non-condensable gas mixtures. Applied Thermal Engineering, 2021, 187, 116546.	6.0	23
5	The Tailored CFD Package 'containmentFOAM' for Analysis of Containment Atmosphere Mixing, H2/CO Mitigation and Aerosol Transport. Fluids, 2021, 6, 100.	1.7	20
6	Towards Uncertainty Quantification of LES and URANS for the Buoyancy-Driven Mixing Process between Two Miscible Fluids—Differentially Heated Cavity of Aspect Ratio 4. Fluids, 2021, 6, 161.	1.7	5
7	CFD simulations of stratified layer erosion in MiniPanda facility using the tailored CFD solver containmentFOAM. International Journal of Heat and Mass Transfer, 2021, 178, 121568.	4.8	5
8	CFD modelling of buoyancy driven flows in enclosures with relevance to nuclear reactor safety. Nuclear Engineering and Design, 2020, 365, 110682.	1.7	8
9	Analyses of Gas Stratification Erosion by a Vertical Jet in Presence of an Obstacle Using the GOTHIC Code. Journal of Nuclear Engineering and Radiation Science, 2020, 6, .	0.4	5
10	Severe accident related activities of the research center Jülich/Germany. International Journal of Advanced Nuclear Reactor Design and Technology, 2020, 2, 131-143.	1.3	1
11	Synthesis of a CFD benchmark exercise based on a test in the PANDA facility addressing the stratification erosion by a vertical jet in presence of a flow obstruction. Nuclear Engineering and Design, 2019, 354, 110177.	1.7	21
12	Development of a multi-dimensional wall-function approach for wall condensation. Nuclear Engineering and Design, 2019, 353, 110239.	1.7	14
13	A Review of the CFD Modeling Progress Triggered by ISP-47 on Containment Thermal Hydraulics. Nuclear Science and Engineering, 2019, 193, 63-80.	1.1	15
14	Prevention of hydrogen accumulation inside the vacuum vessel pressure suppression system of the ITER facility by means of passive auto-catalytic recombiners. International Journal of Hydrogen Energy, 2019, 44, 8971-8980.	7.1	10
15	The influence of thermal radiation on the free convection inside enclosures. Nuclear Engineering and Design, 2019, 341, 176-185.	1.7	28
16	Numerical study on the influence of different boundary conditions on the efficiency of hydrogen recombiners inside a car garage. International Journal of Hydrogen Energy, 2017, 42, 7608-7616.	7.1	9
17	The Generic Containment SB-LOCA accident simulation: Comparison of the parameter uncertainties and user-effect. Annals of Nuclear Energy, 2017, 106, 1-10.	1.8	4
18	Erosion of a confined stratified layer by a vertical jet – Detailed assessment of a CFD approach against the OECD/NEA PSI benchmark. Nuclear Engineering and Design, 2017, 312, 228-238.	1.7	25

#	Article	IF	Citations
19	Validation and Application of the REKO-DIREKT Code for the Simulation of Passive Autocatalytic Recombiner Operational Behavior. Nuclear Technology, 2016, 196, 355-366.	1.2	15
20	Outcomes from the EURATOMâ€"ROSATOM ERCOSAM SAMARA projects on containment thermal-hydraulics for severe accident management. Nuclear Engineering and Design, 2016, 308, 103-114.	1.7	25
21	Application of the MiniPanda test case â€˜erosion of a stratified layer by a vertical jetâ€™ for CFD validation. Nuclear Engineering and Design, 2016, 299, 124-135.	1.7	21
22	A comparative assessment of different experiments on buoyancy driven mixing processes by means of CFD. Annals of Nuclear Energy, 2016, 93, 50-57.	1.8	34
23	Improvement of wall condensation modeling with suction wall functions for containment application. Nuclear Engineering and Design, 2016, 299, 105-111.	1.7	10
24	Lesson learned from the SARNET wall condensation benchmarks. Annals of Nuclear Energy, 2014, 74, 153-164.	1.8	26
25	Validation strategy for CFD models describing safety-relevant scenarios including LH2/GH2 release and the use of passive auto-catalytic recombiners. International Journal of Hydrogen Energy, 2014, 39, 20371-20377.	7.1	8
26	Passive auto-catalytic recombiners operation in the presence of hydrogen and carbon monoxide: Experimental study and model development. Nuclear Engineering and Design, 2014, 266, 137-147.	1.7	36
27	Simulation of the efficiency of hydrogen recombiners as safety devices. International Journal of Hydrogen Energy, 2013, 38, 8117-8124.	7.1	25
28	3D Modeling of the Different Boiling Regimes During Spill and Spreading of Liquid Hydrogen. Energy Procedia, 2012, 29, 244-253.	1.8	14
29	COMBINED ANALYTICAL AND EXPERIMENTAL INVESTIGATIONS FOR LWR CONTAINMENT PHENOMENA. Nuclear Engineering and Technology, 2012, 44, 249-260.	2.3	2
30	Open issues in the applicability of recombiner experiments and modelling to reactor simulations. Progress in Nuclear Energy, 2010, 52, 136-147.	2.9	55