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	Open issues in the applicability of recombiner experiments and modelling to reactor simulations. Progress in Nuclear Energy, 2010, 52, 136-147.	2.9	55
2	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
3	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
4	The influence of thermal radiation on the free convection inside enclosures. Nuclear Engineering and Design, 2019, 341, 176-185.	1.7	28
5	Lesson learned from the SARNET wall condensation benchmarks. Annals of Nuclear Energy, 2014, 74, 153-164.	1.8	26
6	Simulation of the efficiency of hydrogen recombiners as safety devices. International Journal of Hydrogen Energy, 2013, 38, 8117-8124.	7.1	25
7	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
8	Erosion of a confined stratified layer by a vertical jet â€" Detailed assessment of a CFD approach against the OECD/NEA PSI benchmark. Nuclear Engineering and Design, 2017, 312, 228-238.	1.7	25
9	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
10	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
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	The Tailored CFD Package â€˜containmentFOAMâ€™ for Analysis of Containment Atmosphere Mixing, H2/CO Mitigation and Aerosol Transport. Fluids, 2021, 6, 100.	1.7	20
13	On the development of multi-physics tools for nuclear reactor analysis based on OpenFOAMÂ®: state of the art, lessons learned and perspectives. Nuclear Engineering and Design, 2022, 387, 111604.	1.7	18
14	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
15	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
16	3D Modeling of the Different Boiling Regimes During Spill and Spreading of Liquid Hydrogen. Energy Procedia, 2012, 29, 244-253.	1.8	14
17	Development of a multi-dimensional wall-function approach for wall condensation. Nuclear Engineering and Design, 2019, 353, 110239.	1.7	14
18	Improvement of wall condensation modeling with suction wall functions for containment application. Nuclear Engineering and Design, 2016, 299, 105-111.	1.7	10

#	Article	IF	Citations
19	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
20	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
21	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
22	CFD modelling of buoyancy driven flows in enclosures with relevance to nuclear reactor safety. Nuclear Engineering and Design, 2020, 365, 110682.	1.7	8
23	Towards Uncertainty Quantification of LES and URANS for the Buoyancy-Driven Mixing Process between Two Miscible Fluidsâ€"Differentially Heated Cavity of Aspect Ratio 4. Fluids, 2021, 6, 161.	1.7	5
24	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
25	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
26	Monte Carlo method with SNBCK nongray gas model for thermal radiation in containment flows. Nuclear Engineering and Design, 2022, 390, 111689.	1.7	5
27	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
28	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
29	COMBINED ANALYTICAL AND EXPERIMENTAL INVESTIGATIONS FOR LWR CONTAINMENT PHENOMENA. Nuclear Engineering and Technology, 2012, 44, 249-260.	2.3	2
30	Severe accident related activities of the research center JÃ¼lich/Germany. International Journal of Advanced Nuclear Reactor Design and Technology, 2020, 2, 131-143.	1.3	1