Klaus Six

List of Publications by Year
in descending order

41	716	516710 16	580821 25
papers	citations	h-index	g-index

41	41	41	412
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Third body layerâ€"experimental results and a model describing its influence on the traction coefficient. Wear, 2014, 314, 148-154.	3.1	47
2	Simple particle shapes for DEM simulations of railway ballast: influence of shape descriptors on packing behaviour. Granular Matter, 2020, 22, 43.	2.2	46
3	Modeling surface rolling contact fatigue crack initiation taking severe plastic shear deformation into account. Wear, 2016, 352-353, 136-145.	3.1	43
4	Friction in wheelâ€"rail contact: A model comprising interfacial fluids, surface roughness and temperature. Wear, 2011, 271, 2-12.	3.1	42
5	Development of white etching layers on rails: simulations and experiments. Wear, 2016, 366-367, 116-122.	3.1	41
6	Wheel-rail creep force model for predicting water induced low adhesion phenomena. Tribology International, 2017, 109, 409-415.	5.9	36
7	Challenges and progress in the understanding and modelling of the wheelâ€"rail creep forces. Vehicle System Dynamics, 2021, 59, 1026-1068.	3.7	35
8	Physical processes in wheelâ€"rail contact and its implications on vehicleâ€"track interaction. Vehicle System Dynamics, 2015, 53, 635-650.	3.7	34
9	Comparison of two different types of railway ballast in compression and direct shear tests: experimental results and DEM model validation. Granular Matter, 2018, 20, 70.	2.2	32
10	Parametrisation of a DEM model for railway ballast under different load cases. Granular Matter, 2017, 19, 64.	2.2	29
11	Micro-mechanical investigation of railway ballast behavior under cyclic loading in a box test using DEM: effects of elastic layers and ballast types. Granular Matter, 2019, 21, 106.	2.2	29
12	On the effect of stress dependent interparticle friction in direct shear tests. Powder Technology, 2016, 294, 211-220.	4.2	27
13	Assessing the impact of small amounts of water and iron oxides on adhesion in the wheel/rail interface using High Pressure Torsion testing. Tribology International, 2019, 135, 55-64.	5.9	26
14	Full-scale testing of low adhesion effects with small amounts of water in the wheel/rail interface. Tribology International, 2020, 141, 105907.	5.9	25
15	Friction phenomena and their impact on the shear behaviour of granular material. Computational Particle Mechanics, 2017, 4, 23-34.	3.0	19
16	The development of a high pressure torsion test methodology for simulating wheel/rail contacts. Tribology International, 2021, 156, 106842.	5.9	19
17	A new approach for modelling mild and severe wear in wheel-rail contacts. Wear, 2021, 476, 203761.	3.1	17
18	Shape analysis of railway ballast stones: curvature-based calculation of particle angularity. Scientific Reports, 2020, 10, 6045.	3.3	16

#	Article	IF	Citations
19	Modeling wear and rolling contact fatigue: Parametric study and experimental results. Wear, 2016, 366-367, 71-77.	3.1	15
20	An approximate model to predict near-surface ratcheting of rails under high traction coefficients. Wear, 2014, 314, 28-35.	3.1	13
21	Plasticity in wheelâ€"rail contact and its implications on vehicleâ€"track interaction. Proceedings of the Institution of Mechanical Engineers, Part F: Journal of Rail and Rapid Transit, 2017, 231, 558-569.	2.0	13
22	Rail RCF damage quantification and comparison for different damage models. Railway Engineering Science, 2022, 30, 23-40.	4.4	11
23	Modelling of Frictional Conditions in the Wheelâ€"Rail Interface Due to Application of Top-of-Rail Products. Lubricants, 2021, 9, 100.	2.9	11
24	The influence of the wheelsetsâ€™ relative kinematics of railway vehicles on wheel/rail wear in curved track. Vehicle System Dynamics, 2008, 46, 403-414.	3.7	10
25	Vehicle tests showing how the weather in autumn influences the wheelâ€"rail traction characteristics. Proceedings of the Institution of Mechanical Engineers, Part F: Journal of Rail and Rapid Transit, 2020, 234, 426-435.	2.0	9
26	Advanced maintenance strategies for improved squat mitigation. Wear, 2019, 436-437, 203034.	3.1	8
27	Assessment of running gear performance in relation to rolling contact fatigue of wheels and rails based on stochastic simulations. Proceedings of the Institution of Mechanical Engineers, Part F: Journal of Rail and Rapid Transit, 2020, 234, 405-416.	2.0	8
28	Friction and wear in railway ballast stone interfaces. Tribology International, 2020, 151, 106498.	5.9	8
29	A whole system model framework to predict damage in turnouts. Vehicle System Dynamics, 2023, 61, 871-891.	3.7	7
30	An efficient physical-based method for predicting the long-term evolution of vertical railway track geometries. Proceedings of the Institution of Mechanical Engineers, Part F: Journal of Rail and Rapid Transit, 0, , 095440972110248.	2.0	6
31	Iron Oxide and Water Paste Rheology and Its Effect on Low Adhesion in the Wheel/Rail Interface. Tribology Letters, 2022, 70, 1.	2.6	6
32	Automated Measurement of Near-Surface Plastic Shear Strain. International Journal of Railway Technology, 2014, 3, 1-16.	0.3	5
33	Classification and Consideration of Plasticity Phenomena in Wheel-Rail Contact Modelling. International Journal of Railway Technology, 2016, 5, 55-77.	0.3	5
34	DEM modelling of railway ballast using the Conical Damage Model: a comprehensive parametrisation strategy. Granular Matter, 2022, 24, 40.	2.2	5
35	Simulation and experiment based investigations of squat formation mechanisms. Wear, 2019, 440-441, 203093.	3.1	4
36	Rolling contact fatigue behaviour of rails: Wedge model predictions in T-Gamma world. Proceedings of the Institution of Mechanical Engineers, Part F: Journal of Rail and Rapid Transit, 2020, 234, 1335-1345.	2.0	3

#	Article	IF	Citations
37	Improved modelling of trains braking under low adhesion conditions. Tribology - Materials, Surfaces and Interfaces, 2020, 14, 131-141.	1.4	2
38	Reproducing rolling contact fatigue relevant loading conditions of railway operation on a test rig. Tribology - Materials, Surfaces and Interfaces, 2021, 15, 127-137.	1.4	1
39	Wheel/Rail Creep Force Model for Wayside Application of Top-of-Rail Products Incorporating Carry-On and Consumption Effects. Lecture Notes in Mechanical Engineering, 2020, , 669-677.	0.4	1
40	Prediction of Maximum Torsional Wheel-Set Axle Vibrations Considering Non-linear Adhesion Characteristics. Lecture Notes in Mechanical Engineering, 2020, , 970-976.	0.4	1
41	A new hybrid approach to predict worn wheel profile shapes. Vehicle System Dynamics, 0, , 1-17.	3.7	1