Jakob Andert

List of Publications by Year
in descending order

86 papers	926 citations	687220 13 h-index	752573 20 g-index
99 all docs	99 docs citations	99 times ranked	447 citing authors

#	Article	IF	Citations
1	Automated eco-driving in urban scenarios using deep reinforcement learning. Transportation Research Part C: Emerging Technologies, 2021, 126, 102967.	3.9	54
2	Engine in the Loop: Closed Loop Test Bench Control with Real-Time Simulation. SAE International Journal of Commercial Vehicles, 0, 10, 95-105.	0.4	49
3	Hardware-in-the-Loop-Based Virtual Calibration Approach to Meet Real Driving Emissions Requirements. , 0, , .		36
4	In-cycle control for stabilization of homogeneous charge compression ignition combustion using direct water injection. Applied Energy, 2019, 240, 1061-1074.	5.1	34
5	Virtual shaft: Synchronized motion control for real time testing of automotive powertrains. Control Engineering Practice, 2016, 56, 101-110.	3.2	32
6	Road-to-rig-to-desktop: Virtual development using real-time engine modelling and powertrain co-simulation. International Journal of Engine Research, 2019, 20, 686-695.	1.4	28
7	Experimental investigation of a variable compression ratio system applied to a gasoline passenger car engine. Energy Conversion and Management, 2019, 183, 753-763.	4.4	26
8	Development and experimental validation of a real-time capable field programmable gate array–based gas exchange model for negative valve overlap. International Journal of Engine Research, 2020, 21, 421-436.	1.4	24
9	Effects of water addition on the combustion of iso-octane investigated in laminar flames, low-temperature reactors, and an HCCI engine. Combustion and Flame, 2020, 212, 433-447.	2.8	23
10	Model-based control of gasoline-controlled auto-ignition. International Journal of Engine Research, 2018, 19, 189-201.	1.4	22
11	Decoupling of consecutive gasoline controlled auto-ignition combustion cycles by field programmable gate array based real-time cylinder pressure analysis. International Journal of Engine Research, 2018, 19, 153-167.	1.4	20
12	Crank-Angle Resolved Real-Time Engine Modelling: A Seamless Transfer from Concept Design to HiL Testing. SAE International Journal of Engines, 0, 11, .	0.4	19
13	Nonlinear model predictive control of a discrete-cycle gasoline-controlled auto ignition engine model: Simulative analysis. International Journal of Engine Research, 2019, 20, 1025-1036.	1.4	18
14	A simulation-based case study for powertrain efficiency improvement by automated driving functions. Proceedings of the Institution of Mechanical Engineers, Part D: Journal of Automobile Engineering, 2019, 233, 1320-1330.	1.1	17
15	Development and experimental validation of a field programmable gate array–based in-cycle direct water injection control strategy for homogeneous charge compression ignition combustion stability. International Journal of Engine Research, 2019, 20, 1101-1113.	1.4	16
16	Function Development With an Electric-Machine-in-the-Loop Setup: A Case Study. IEEE Transactions on Transportation Electrification, 2019, 5, 1419-1429.	5.3	16
17	Autoregressive modeling of cycle-to-cycle correlations in homogeneous charge compression ignition combustion. International Journal of Engine Research, 2018, 19, 790-802.	1.4	15
18	Virtual Transmission Evaluation Using an Engine-in-the-Loop Test Facility. , 0, , .		15

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19	An Analysis of the Tradeoff Between Fuel Consumption and Ride Comfort for the Pulse and Glide Driving Strategy. IEEE Transactions on Vehicular Technology, 2020, 69, 7223-7233.	3.9	15
20	A Study on In-Cycle Combustion Control for Gasoline Controlled Autoignition. , 0, , .		14
21	Virtual 48 V Mild Hybridization: Efficient Validation by Engine-in-the-Loop. SAE International Journal of Alternative Powertrains, 0, 7, .	0.8	14
22	A Driveability Study on Automated Longitudinal Vehicle Control. IEEE Transactions on Intelligent Transportation Systems, 2020, 21, 3273-3280.	4.7	14
23	Homogeneous charge compression ignition combustion stability improvement using a rapid ignition system. International Journal of Engine Research, 2020, 21, 1846-1856.	1.4	14
24	Support vector machine based emissions modeling using particle swarm optimization for homogeneous charge compression ignition engine. International Journal of Engine Research, 2023, 24, 536-551.	1.4	13
25	Smart rule-based diesel engine control strategies by means of predictive driving information. International Journal of Engine Research, 2019, 20, 1047-1058.	1.4	12
26	Energy saving potentials of modern powertrains utilizing predictive driving algorithms in different traffic scenarios. Proceedings of the Institution of Mechanical Engineers, Part D: Journal of Automobile Engineering, 2020, 234, 992-1005.	1.1	12
27	Closed-loop platoon simulation with cooperative intelligent transportation systems based on vehicle-to-X communication. Simulation Modelling Practice and Theory, 2021, 106, 102173.	2.2	12
28	Toward Smart Vehicle-to-Everything-Connected Powertrains: Driving Real Component Test Benches in a Fully Interactive Virtual Smart City. IEEE Vehicular Technology Magazine, 2021, 16, 75-82.	2.8	12
29	Real-Time Modeling of a 48V P0 Mild Hybrid Vehicle with Electric Compressor for Model Predictive Control. , 0, , .		12
30	KSPG Range Extender. MTZ Worldwide, 2012, 73, 12-18.	0.1	11
31	NVH Optimization of Range Extender Engines by Electric Torque Profile Shaping. IEEE Transactions on Control Systems Technology, 2017, 25, 1465-1472.	3.2	11
32	Dynamic measurement of HCCI combustion with self-learning of experimental space limitations. Applied Energy, 2020, 262, 114364.	5.1	11
33	Rapid Control Prototyping for Cylinder Pressure Indication. MTZ Worldwide, 2012, 73, 38-42.	0.1	10
34	Next-Generation Low-Voltage Power Nets Impacts of Advanced Stop/Start and Sailing Functionalities. SAE International Journal of Fuels and Lubricants, 0, 10, 556-573.	0.2	10
35	Detection of transient low-temperature combustion characteristics by ion current â€" The missing link for homogeneous charge compression ignition control?. Applied Energy, 2021, 283, 116299.	5.1	10
36	Scalable Mean Value Modeling for Real-Time Engine Simulations with Improved Consistency and Adaptability. , 0, , .		10

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37	Evaluation of the Potential of Direct Water Injection in HCCI Combustion. , 0, , .		10
38	Reduction of Transient Engine-Out NOx-Emissions by Advanced Digital Combustion Rate Shaping. Automotive Innovation, 2020, 3, 181-190.	3.1	10
39	Experimental Proof-of-Concept of HiL Based Virtual Calibration for a Gasoline Engine with a Three-Way-Catalyst. , 0, , .		9
40	An FPGA-Based Real-Time Spatial Harmonics Model of a PMSM Considering Iron Losses and the Thermal Impact. IEEE Transactions on Transportation Electrification, 2022, 8, 1289-1301.	5.3	9
41	Accurate physics-based modeling of electric vehicle energy consumption in the SUMO traffic microsimulator. , 2021, , .		9
42	EleMA: A reference simulation model architecture and interface standard for modeling and testing of electric vehicles. ETransportation, 2020, 4, 100060.	6.8	8
43	Co-Simulation of Multi-Domain Engine and its Integrated Control for Transient Driving Cycles. IFAC-PapersOnLine, 2020, 53, 13982-13987.	0.5	8
44	Real-Time Emission Prediction with Detailed Chemistry under Transient Conditions for Hardware-in-the-Loop Simulations. Energies, 2022, 15, 261.	1.6	8
45	An Overview of VCR Technology and Its Effects on a Turbocharged DI Engine Fueled with Ethanol and Gasoline. , 2017, , .		7
46	Electric-Motor-in-the-Loop: Efficient Testing and Calibration of Hybrid Power Trains. IFAC-PapersOnLine, 2018, 51, 240-245.	0.5	7
47	Cycle resolved control for HCCI engine load range expansion by combining ion current and pressure sensor. Proceedings of the Combustion Institute, 2021, 38, 5685-5694.	2.4	7
48	Objectified Evaluation and Classification of Passenger Vehicles Longitudinal Drivability Capabilities in Automated Load Change Drive Maneuvers at Engine-in-the-Loop Test Benches. , 0, , .		7
49	Efficiency Increase through Model Predictive Thermal Control of Electric Vehicle Powertrains. Energies, 2022, 15, 1476.	1.6	7
50	KSPG Range Extendera New Pathfinder to Electromobility. AutoTechnology, 2012, 12, 26-33.	0.1	6
51	Reduced Order Modeling for Multi-scale Control of Low Temperature Combustion Engines. Notes on Numerical Fluid Mechanics and Multidisciplinary Design, 2019, , 167-181.	0.2	6
52	Ion current–based homogeneous charge compression ignition combustion control using direct water injection. International Journal of Engine Research, 2021, 22, 1825-1837.	1.4	6
53	Electric torque assist and supercharging of a downsized gasoline engine in a 48V mild hybrid powertrain. Proceedings of the Institution of Mechanical Engineers, Part D: Journal of Automobile Engineering, 2021, 235, 1245-1255.	1.1	6
54	Longitudinal Vehicle Motion Prediction in Urban Settings With Traffic Light Interaction. IEEE Transactions on Intelligent Vehicles, 2023, 8, 204-215.	9.4	6

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55	Efficient Power Electronic Inverter Control Developed in an Automotive Hardware-in-the-Loop Setup. , 0, , .		6
56	Simulator Coupled with Distributed Co-Simulation Protocol for Automated Driving Tests. Automotive Innovation, 2021, 4, 373-389.	3.1	6
57	Virtual shaft: Robust coupling by bidirectional and distributed prediction of coupling values. Proceedings of the Institution of Mechanical Engineers, Part D: Journal of Automobile Engineering, 2020, 234, 2419-2428.	1.1	5
58	Embedded Real-Time Nonlinear Model Predictive Control for the Thermal Torque Derating of an Electric Vehicle. IFAC-PapersOnLine, 2021, 54, 359-364.	0.5	5
59	The Distributed Co-Simulation Protocol for the Integration of Real-Time Systems and Simulation Environments. , 2018, , .		5
60	Vehicle speed trajectory optimization under limits in time and spatial domains. Proceedings, 2017, , 319-331.	0.2	4
61	Development and Application of Ion Current/Cylinder Pressure Cooperative Combustion Diagnosis and Control System. Energies, 2020, 13, 5656.	1.6	4
62	Feature‐driven systems engineering procedure for standardized product‐line development. Systems Engineering, 2021, 24, 456-479.	1.6	4
63	X-in-the-Loop-basierte Kalibrierung: HiL Simulation eines virtuellen Dieselantriebsstrangs. Proceedings, 2018, , 53-79.	0.2	4
64	A numerical study of the polarization effect of liquid water in the gas diffusion layer of a proton exchange membrane fuel cell. Journal of Power Sources, 2022, 529, 231221.	4.0	4
65	Potential of Real-Time Cylinder Pressure Analysis by Using Field Programmable Gate Arrays. International Journal of Automotive Technology, 2018, 19, 643-650.	0.7	3
66	Durchgängig von der Straße auf den Prüfstand bis zur Simulation – eine qualitative Analyse am Beispiel RDE. Proceedings, 2018, , 125-144.	0.2	3
67	Nonlinear Model Predictive Control of Mild Hybrid Powertrains With Electric Supercharging. IEEE Transactions on Vehicular Technology, 2021, 70, 8490-8504.	3.9	2
68	Accurate Mean Value Process Models for Model-Based Engine Control Concepts by Means of Hybrid Modeling. , 0, , .		2
69	Engine-in-the-Loop – Auswirkung der Echtzeitperformance auf die Abbildungsgüte von Fahrzyklen. Proceedings, 2020, , 153-171.	0.2	2
70	Hardware-in-the-Loop Testing of Electric Traction Drives with an Efficiency Optimized DC-DC Converter Control. , 0, , .		2
71	A Virtual Prototyping Approach for Development of PMSM on Real-Time Platforms: A Case Study on Temperature Sensitivity. Automotive Innovation, 2022, 5, 285-298.	3.1	2
72	In-cycle Control Offers High Potential for New Combustion Concepts. MTZ Worldwide, 2015, 76, 36-41.	0.1	1

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73	Symposium for Combustion Control 2016. International Journal of Engine Research, 2018, 19, 151-152.	1.4	1
74	Range Extender Module Transmission Topology Study. International Journal of Automotive Technology, 2018, 19, 869-878.	0.7	1
75	Symposium for combustion control 2017 and 2018 special issue. International Journal of Engine Research, 2019, 20, 1003-1004.	1.4	1
76	Influence of sensor and communication setup on electric cam phaser control quality. Proceedings of the Institution of Mechanical Engineers, Part D: Journal of Automobile Engineering, 2019, 233, 687-696.	1.1	1
77	Virtual test drives with multiple vehicles under test for the evaluation of collaborative assisted and automated driving functions. Proceedings, 2021, , 11-20.	0.2	1
78	Experimental Investigations on the Influence of Valve Timing and Multi-Pulse Injection on GCAI Combustion. , 0, , .		1
79	Analysis of ion current signal during negative valve overlap of HCCI combustion with high compression ratio. International Journal of Engine Research, 2021, 22, 3300-3312.	1.4	1
80	Energy-efficient powertrain control of an automated and connected power-split HEV in an urban environment. IFAC-PapersOnLine, 2021, 54, 350-355.	0.5	1
81	Parallel Sequential Boosting for a Future High-Performance Diesel Engine. , 0, , .		1
82	Dynamic measurement with in-cycle process excitation of HCCI combustion: The key to handle complexity of data-driven control?. International Journal of Engine Research, 2023, 24, 1155-1174.	1.4	1
83	Verkehrssimulation im Hardware-in-the-Loop-Steuergerätetest. Proceedings, 2019, , 253-269.	0.2	0
84	Correction to "Function Development With an Electric-Machine-in-the-Loop Setup: A Case Study"[Dec 19 1419-1429]. IEEE Transactions on Transportation Electrification, 2020, 6, 356-356.	5.3	0
85	A Study on Scaling Laws for Thermal Parameters of Permanent Magnet Synchronous Machines. , 2021, , .		0
86	Engine-in-the-Loop in practical application: A sensitivity study toward the influence of test bench parameters. Proceedings of the Institution of Mechanical Engineers, Part D: Journal of Automobile Engineering, 0, , 095440702210859.	1.1	0