

Jakob Andert

List of Publications by Year in descending order

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99
all docs

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docs citations

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times ranked

447
citing authors

#	ARTICLE	IF	CITATIONS
1	Longitudinal Vehicle Motion Prediction in Urban Settings With Traffic Light Interaction. IEEE Transactions on Intelligent Vehicles, 2023, 8, 204-215.	9.4	6
2	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
3	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
4	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
5	Efficiency Increase through Model Predictive Thermal Control of Electric Vehicle Powertrains. Energies, 2022, 15, 1476.	1.6	7
6	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
7	Real-Time Emission Prediction with Detailed Chemistry under Transient Conditions for Hardware-in-the-Loop Simulations. Energies, 2022, 15, 261.	1.6	8
8	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
9	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
10	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
11	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
12	Detection of transient low-temperature combustion characteristics by ion current – The missing link for homogeneous charge compression ignition control?. Applied Energy, 2021, 283, 116299.	5.1	10
13	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
14	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
15	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
16	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
17	Automated eco-driving in urban scenarios using deep reinforcement learning. Transportation Research Part C: Emerging Technologies, 2021, 126, 102967.	3.9	54
18	Feature-driven systems engineering procedure for standardized product-line development. Systems Engineering, 2021, 24, 456-479.	1.6	4

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19	Nonlinear Model Predictive Control of Mild Hybrid Powertrains With Electric Supercharging. IEEE Transactions on Vehicular Technology, 2021, 70, 8490-8504.	3.9	2
20	Accurate physics-based modeling of electric vehicle energy consumption in the SUMO traffic microsimulator. , 2021, , .		9
21	Simulator Coupled with Distributed Co-Simulation Protocol for Automated Driving Tests. Automotive Innovation, 2021, 4, 373-389.	3.1	6
22	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
23	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
24	A Study on Scaling Laws for Thermal Parameters of Permanent Magnet Synchronous Machines. , 2021, , .		0
25	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
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	A Driveability Study on Automated Longitudinal Vehicle Control. IEEE Transactions on Intelligent Transportation Systems, 2020, 21, 3273-3280.	4.7	14
28	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
29	Development and Application of Ion Current/Cylinder Pressure Cooperative Combustion Diagnosis and Control System. Energies, 2020, 13, 5656.	1.6	4
30	Homogeneous charge compression ignition combustion stability improvement using a rapid ignition system. International Journal of Engine Research, 2020, 21, 1846-1856.	1.4	14
31	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
32	EleMA: A reference simulation model architecture and interface standard for modeling and testing of electric vehicles. ETransportation, 2020, 4, 100060.	6.8	8
33	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
34	Dynamic measurement of HCCI combustion with self-learning of experimental space limitations. Applied Energy, 2020, 262, 114364.	5.1	11
35	Co-Simulation of Multi-Domain Engine and its Integrated Control for Transient Driving Cycles. IFAC-PapersOnLine, 2020, 53, 13982-13987.	0.5	8
36	Reduction of Transient Engine-Out NOx-Emissions by Advanced Digital Combustion Rate Shaping. Automotive Innovation, 2020, 3, 181-190.	3.1	10

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37	Engine-in-the-Loop – Auswirkung der Echtzeitperformance auf die Abbildungsgüte von Fahrzyklen. Proceedings, 2020, , 153-171.	0.2	2
38	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
39	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
40	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
41	Symposium for combustion control 2017 and 2018 special issue. International Journal of Engine Research, 2019, 20, 1003-1004.	1.4	1
42	In-cycle control for stabilization of homogeneous charge compression ignition combustion using direct water injection. Applied Energy, 2019, 240, 1061-1074.	5.1	34
43	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
44	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
45	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
46	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
47	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
48	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
49	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
50	Verkehrssimulation im Hardware-in-the-Loop-SteuergerÄtetest. Proceedings, 2019, , 253-269.	0.2	0
51	Symposium for Combustion Control 2016. International Journal of Engine Research, 2018, 19, 151-152.	1.4	1
52	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
53	Model-based control of gasoline-controlled auto-ignition. International Journal of Engine Research, 2018, 19, 189-201.	1.4	22
54	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

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55	Electric-Motor-in-the-Loop: Efficient Testing and Calibration of Hybrid Power Trains. IFAC-PapersOnLine, 2018, 51, 240-245.	0.5	7
56	Range Extender Module Transmission Topology Study. International Journal of Automotive Technology, 2018, 19, 869-878.	0.7	1
57	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
58	X-in-the-Loop-basierte Kalibrierung: HiL Simulation eines virtuellen Dieselantriebsstrangs. Proceedings, 2018, , 53-79.	0.2	4
59	DurchgÄngig von der StraÄŸe auf den PrÄ¼fstand bis zur Simulation â€“ eine qualitative Analyse am Beispiel RDE. Proceedings, 2018, , 125-144.	0.2	3
60	The Distributed Co-Simulation Protocol for the Integration of Real-Time Systems and Simulation Environments. , 2018, , .		5
61	NVH Optimization of Range Extender Engines by Electric Torque Profile Shaping. IEEE Transactions on Control Systems Technology, 2017, 25, 1465-1472.	3.2	11
62	Vehicle speed trajectory optimization under limits in time and spatial domains. Proceedings, 2017, , 319-331.	0.2	4
63	An Overview of VCR Technology and Its Effects on a Turbocharged DI Engine Fueled with Ethanol and Gasoline. , 2017, , .		7
64	Virtual shaft: Synchronized motion control for real time testing of automotive powertrains. Control Engineering Practice, 2016, 56, 101-110.	3.2	32
65	In-cycle Control Offers High Potential for New Combustion Concepts. MTZ Worldwide, 2015, 76, 36-41.	0.1	1
66	KSPG Range Extender a New Pathfinder to Electromobility. AutoTechnology, 2012, 12, 26-33.	0.1	6
67	Rapid Control Prototyping for Cylinder Pressure Indication. MTZ Worldwide, 2012, 73, 38-42.	0.1	10
68	KSPG Range Extender. MTZ Worldwide, 2012, 73, 12-18.	0.1	11
69	A Study on In-Cycle Combustion Control for Gasoline Controlled Autoignition. , 0, , .		14
70	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
71	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
72	Virtual Transmission Evaluation Using anÄEngine-in-the-Loop Test Facility. , 0, , .		15

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73	Virtual 48 V Mild Hybridization: Efficient Validation by Engine-in-the-Loop. SAE International Journal of Alternative Powertrains, 0, 7, .	0.8	14
74	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
75	Hardware-in-the-Loop-Based Virtual Calibration Approach to Meet Real Driving Emissions Requirements. , 0, , .		36
76	Scalable Mean Value Modeling for Real-Time Engine Simulations with Improved Consistency and Adaptability. , 0, , .		10
77	Real-Time Modeling of a 48V P0 Mild Hybrid Vehicle with Electric Compressor for Model Predictive Control. , 0, , .		12
78	Efficient Power Electronic Inverter Control Developed in an Automotive Hardware-in-the-Loop Setup. , 0, , .		6
79	Experimental Proof-of-Concept of HiL Based Virtual Calibration for a Gasoline Engine with a Three-Way-Catalyst. , 0, , .		9
80	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
81	Experimental Investigations on the Influence of Valve Timing and Multi-Pulse Injection on GCAI Combustion. , 0, , .		1
82	Accurate Mean Value Process Models for Model-Based Engine Control Concepts by Means of Hybrid Modeling. , 0, , .		2
83	Evaluation of the Potential of Direct Water Injection in HCCI Combustion. , 0, , .		10
84	Hardware-in-the-Loop Testing of Electric Traction Drives with an Efficiency Optimized DC-DC Converter Control. , 0, , .		2
85	Parallel Sequential Boosting for a Future High-Performance Diesel Engine. , 0, , .		1
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