Frank Willems

List of Publications by Year
in descending order

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56 papers	1,225 citations	759190 12 h-index	677123 22 g-index
57 all docs	57 docs citations	57 times ranked	631 citing authors

#	Article	IF	Citations
1	Is Closed-Loop SCR Control Required to Meet Future Emission Targets?. , 0, , .		110
2	Optimization of Urea SCR deNOx Systems for HD Diesel Engines. , 2004, , .		70
3	Ammonia Sensor for Closed-Loop SCR Control. SAE International Journal of Passenger Cars - Electronic and Electrical Systems, 0, 1, 323-333.	0.3	68
4	Modeling and control of compressor flow instabilities. IEEE Control Systems, 1999, 19, 8-18.	0.8	66
5	Cylinder Pressure-Based Control in Heavy-Duty EGR Diesel Engines Using a Virtual Heat Release and Emission Sensor. , 0, , .		63
6	Experimental Demonstration of RCCI in Heavy-Duty Engines using Diesel and Natural Gas. , 0, , .		59
7	Modeling and Control of a Parallel Waste Heat Recovery System for Euro-VI Heavy-Duty Diesel Engines. Energies, 2014, 7, 6571-6592.	3.1	58
8	Experimental Demonstration of a New Model-Based SCR Control Strategy for Cleaner Heavy-Duty Diesel Engines. IEEE Transactions on Control Systems Technology, 2011, 19, 1305-1313.	5.2	53
9	Two-phase plate-fin heat exchanger modeling for waste heat recovery systems in diesel engines. Applied Energy, 2014, 133, 183-196.	10.1	49
10	Modeling of Surge in Free-Spool Centrifugal Compressors: Experimental Validation. Journal of Propulsion and Power, 2004, 20, 849-857.	2.2	48
11	Integrated Emission Management strategy for cost-optimal engine-aftertreatment operation. SAE International Journal of Engines, 0, 4, 1784-1797.	0.4	38
12	Appliance of High EGR Rates With a Short and Long Route EGR System on a Heavy Duty Diesel Engine. , 0, , .		35
13	Positive feedback stabilization of centrifugal compressor surge. Automatica, 2002, 38, 311-318.	5.0	32
14	Robust Multivariable Feedback Control of Natural Gas-Diesel RCCI Combustion. IFAC-PapersOnLine, 2016, 49, 217-222.	0.9	30
15	Supervisory control of a heavy-duty diesel engine with an electrified waste heat recovery system. Control Engineering Practice, 2016, 54, 190-201.	5.5	30
16	Optimal control for integrated emission management in diesel engines. Control Engineering Practice, 2017, 61, 206-216.	5.5	30
17	Integrated energy & emission management for hybrid electric truck with SCR aftertreatment. , 2010, , .		26
18	Towards Control-Oriented Modeling of Natural Gas-Diesel RCCI Combustion. , 0, , .		25

#	Article	IF	Citations
19	Towards Model-Based Control of RCCI-CDF Mode-SwitchingÂin Dual Fuel Engines. , 0, , .		23
20	Experimental Validation of Extended NO and Soot Model for Advanced HD Diesel Engine Combustion. SAE International Journal of Engines, 0, 2, 606-619.	0.4	22
21	Automated Model Fit Tool for SCR Control and OBD Development. , 0, , .		19
22	Cost and Fuel Efficient SCR-only Solution for Post-2010 HD Emission Standards. SAE International Journal of Fuels and Lubricants, 2009, 2, 399-406.	0.2	17
23	Integrated Energy and Emission Management for Diesel Engines with Waste Heat Recovery Using Dynamic Models. Oil and Gas Science and Technology, 2015, 70, 143-158.	1.4	16
24	Experimental Validation of a Dynamic Waste Heat Recovery System Model for Control Purposes. , 2013, , .		15
25	Disturbance Rejection in Diesel Engines for Low Emissions and High Fuel Efficiency. IEEE Transactions on Control Systems Technology, 2015, 23, 662-669.	5.2	15
26	Integrated Powertrain Control to meet future CO<inf>2</inf> and Euro-6 emissions targets for a diesel hybrid with SCR-deNO<inf>x</inf> system. , 2009, , .		14
27	Model predictive control of a waste heat recovery system for automotive diesel engines. , 2014, , .		14
28	Integrated Emission Management for Cost Optimal EGR-SCR Balancing in Diesels. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2013, 46, 711-716.	0.4	12
29	Experimental Study into a Hybrid PCCI/CI Concept for Next-Generation Heavy-Duty Diesel Engines. , 2012, , .		11
30	Robust cylinder pressure estimation in heavy-duty diesel engines. International Journal of Engine Research, 2018, 19, 179-188.	2.3	11
31	Systematic Design of Multivariable Fuel Injection Controllers for Advanced Diesel Combustion. IEEE Transactions on Control Systems Technology, 2019, 27, 1979-1990.	5.2	11
32	Selection of actuators and sensors for active surge control. , 0, , .		9
33	Selection of Actuators and Sensors for Surge Control. Journal of Propulsion and Power, 2002, 18, 84-92.	2.2	9
34	Robust Emission Management Strategy to Meet Real-World Emission Requirements for HD Diesel Engines. SAE International Journal of Engines, 0, 8, 1168-1180.	0.4	9
35	Integrated Powertrain Control to Meet Low CO2 Emissions for a Hybrid Distribution Truck With SCR-DeNOx System. , 2011, , .		8
36	Integrated Energy & Emission Management for Heavy-Duty Diesel Engines with Waste Heat Recovery System. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 270-277.	0.4	8

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37	Optimal Control of Engine Warmup in Hybrid Vehicles. Oil and Gas Science and Technology, 2016, 71, 14.	1.4	7
38	Robust, Cost-Optimal and Compliant Engine and Aftertreatment Operation using Air-path Control and Tailpipe Emission Feedback. SAE International Journal of Engines, 0, 9, 1662-1673.	0.4	7
39	Data-Driven Air-Fuel Path Control Design for Robust RCCI Engine Operation. Energies, 2022, 15, 2018.	3.1	7
40	Surge in a Low-Speed Radial Compressor. , 1998, , .		6
41	Towards integrated powertrain control: exploiting synergy between a diesel hybrid and aftertreatment system in a distribution truck. , 2008, , .		6
42	Experimental Demonstration of a Model-Based Control Design and Calibration Method for Cost Optimal Euro-VI Engine-Aftertreatment Operation. , 0, , .		6
43	Automated Model Fit Method for Diesel Engine Control Development. SAE International Journal of Engines, 2014, 7, 297-312.	0.4	6
44	Control of a Waste Heat Recovery system with decoupled expander for improved diesel engine efficiency. , 2015, , .		6
45	Experimental validation of a virtual engine-out NOx sensor for diesel emission control. International Journal of Engine Research, 2019, 20, 1037-1046.	2.3	6
46	One-Sided Control of Surge in a Centrifugal Compressor System. , 2000, , .		5
47	Virtual Cylinder Pressure Sensor for Transient Operation in Heavy-Duty Engines. SAE International Journal of Engines, 0, 8, 1029-1040.	0.4	5
48	<inline-formula> <tex-math notation="LaTeX">$mathcal{H}_{ext{2}}$ </tex-math> </inline-formula>-Norm-Based Multi-Pulse Diesel Fuel Injection Control With Minimal Cyclic Combustion Variation. , 2018, 2, 309-314.		5
49	A control oriented multivariable identification procedure for turbocharged diesel engines. International Journal of Powertrains, 2016, 5, 95.	0.3	4
50	Optimal Control of Diesel Engines with Waste Heat Recovery System. Lecture Notes in Control and Information Sciences, 2014, , 237-253.	1.0	4
51	A generalized framework for perturbation-based derivative estimation in multivariable extremum-seeking. IFAC-PapersOnLine, 2017, 50, 3148-3153.	0.9	3
52	Engine Demonstration of Microwave Assisted Particulate Trap Regeneration. , 2005, , .		2
53	Emission constrained multiple-pulse fuel injection optimisation and control for fuel-efficient diesel engines. , 2015, , .		2
54	Experimental Study into Plasma-Assisted PM Removal for Diesel Engines. , 2003, , .		1

#	Article	IF	Citations
55	Multi-pulse fuel injection controller design using a quadratic model. , 2016, , .		1
56	Comparison of EGR-VTG Control Schemes for an EPA2010 Heavy-Duty Diesel Engine. , 2011, , .		0