

# Ardalan Vahidi

## List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

56  
papers

3,014  
citations

22  
h-index

54  
g-index

65  
ext. papers

3,706  
ext. citations

3.9  
avg, IF

5.98  
L-index

#	Paper	IF	Citations
56	A review of the main parameters influencing long-term performance and durability of PEM fuel cells. <i>Journal of Power Sources</i> , <b>2008</b> , 180, 1-14	8.9	561
55	MPC-Based Energy Management of a Power-Split Hybrid Electric Vehicle. <i>IEEE Transactions on Control Systems Technology</i> , <b>2012</b> , 20, 593-603	4.8	423
54	Predictive Cruise Control: Utilizing Upcoming Traffic Signal Information for Improving Fuel Economy and Reducing Trip Time. <i>IEEE Transactions on Control Systems Technology</i> , <b>2011</b> , 19, 707-714	4.8	380
53	Energy saving potentials of connected and automated vehicles. <i>Transportation Research Part C: Emerging Technologies</i> , <b>2018</b> , 95, 822-843	8.4	164
52	Route Preview in Energy Management of Plug-in Hybrid Vehicles. <i>IEEE Transactions on Control Systems Technology</i> , <b>2012</b> , 20, 546-553	4.8	142
51	Optimal speed advisory for connected vehicles in arterial roads and the impact on mixed traffic. <i>Transportation Research Part C: Emerging Technologies</i> , <b>2016</b> , 69, 548-563	8.4	129
50	Role of Terrain Preview in Energy Management of Hybrid Electric Vehicles. <i>IEEE Transactions on Vehicular Technology</i> , <b>2010</b> , 59, 1139-1147	6.8	127
49	Fast Model Predictive Control-Based Fuel Efficient Control Strategy for a Group of Connected Vehicles in Urban Road Conditions. <i>IEEE Transactions on Control Systems Technology</i> , <b>2017</b> , 25, 760-767	4.8	80
48	. <i>IEEE Transactions on Intelligent Transportation Systems</i> , <b>2014</b> , 15, 2516-2523	6.1	77
47	Predictive Control of Voltage and Current in a Fuel Cell-Ultracapacitor Hybrid. <i>IEEE Transactions on Industrial Electronics</i> , <b>2010</b> , 57, 1954-1963	8.9	75
46	Ultracapacitor Assisted Powertrains: Modeling, Control, Sizing, and the Impact on Fuel Economy. <i>IEEE Transactions on Control Systems Technology</i> , <b>2011</b> , 19, 576-589	4.8	74
45	Supercapacitor Electrical and Thermal Modeling, Identification, and Validation for a Wide Range of Temperature and Power Applications. <i>IEEE Transactions on Industrial Electronics</i> , <b>2016</b> , 63, 1574-1585	8.9	71
44	Mixed-Integer Linear Programming for Optimal Scheduling of Autonomous Vehicle Intersection Crossing. <i>IEEE Transactions on Intelligent Vehicles</i> , <b>2018</b> , 3, 287-299	5	69
43	A Two-Stage Lyapunov-Based Estimator for Estimation of Vehicle Mass and Road Grade. <i>IEEE Transactions on Vehicular Technology</i> , <b>2009</b> , 58, 3177-3185	6.8	61
42	Constraint Handling in a Fuel Cell System: A Fast Reference Governor Approach. <i>IEEE Transactions on Control Systems Technology</i> , <b>2007</b> , 15, 86-98	4.8	56
41	Fundamentals of energy efficient driving for combustion engine and electric vehicles: An optimal control perspective. <i>Automatica</i> , <b>2019</b> , 103, 558-572	5.7	53
40	Optimal scheduling of autonomous vehicle arrivals at intelligent intersections via MILP <b>2017</b> ,		41

39	Heuristic Versus Optimal Charging of Supercapacitors, Lithium-Ion, and Lead-Acid Batteries: An Efficiency Point of View. <i>IEEE Transactions on Control Systems Technology</i> , <b>2018</b> , 26, 167-180	4.8	35
38	A fuel economic model predictive control strategy for a group of connected vehicles in urban roads <b>2015</b> ,		32
37	Nonlinear Model Predictive Control for power-split Hybrid Electric Vehicles <b>2010</b> ,		27
36	Efficient and Collision-Free Anticipative Cruise Control in Randomly Mixed Strings. <i>IEEE Transactions on Intelligent Vehicles</i> , <b>2018</b> , 3, 439-452	5	27
35	Probabilistic Anticipation and Control in Autonomous Car Following. <i>IEEE Transactions on Control Systems Technology</i> , <b>2019</b> , 27, 30-38	4.8	22
34	Reconstructing maximum likelihood trajectory of probe vehicles between sparse updates. <i>Transportation Research Part C: Emerging Technologies</i> , <b>2016</b> , 65, 16-30	8.4	21
33	Predictive Cruise Control With Probabilistic Constraints for Eco Driving <b>2011</b> ,		21
32	. <i>IEEE Transactions on Intelligent Transportation Systems</i> , <b>2016</b> , 17, 870-881	6.1	19
31	Vehicle-in-the-loop (VIL) verification of a smart city intersection control scheme for autonomous vehicles <b>2017</b> ,		19
30	Optimal pacing in a cycling time-trial considering cyclist's fatigue dynamics <b>2013</b> ,		17
29	Ultracapacitor assisted powertrains: Modeling, control, sizing, and the impact on fuel economy <b>2008</b> ,		16
28	A Decentralized Model Predictive Control Approach to Power Management of a Fuel Cell-Ultracapacitor Hybrid. <i>Proceedings of the American Control Conference</i> , <b>2007</b> ,	1.2	16
27	Energy-Efficient Driving of Road Vehicles. <i>Lecture Notes in Intelligent Transportation and Infrastructure</i> , <b>2020</b> ,	0.3	15
26	Optimal charging of ultracapacitors during regenerative braking <b>2012</b> ,		14
25	Predictive Time-Delay Control of Vehicle Suspensions. <i>JVC/Journal of Vibration and Control</i> , <b>2001</b> , 7, 1195-1211		14
24	Quantifying the impact of limited information and control robustness on connected automated platoons <b>2017</b> ,		11
23	Multi-Intersection Traffic Management for Autonomous Vehicles via Distributed Mixed Integer Linear Programming <b>2018</b> ,		11
22	A Vehicle-in-the-Loop (VIL) verification of an all-autonomous intersection control scheme. <i>Transportation Research Part C: Emerging Technologies</i> , <b>2019</b> , 107, 193-210	8.4	9

21	Microsimulation of energy and flow effects from optimal automated driving in mixed traffic. <i>Transportation Research Part C: Emerging Technologies</i> , <b>2020</b> , 120, 102806	8.4	9
20	Designing a General Neurocontroller for Water Towers. <i>Journal of Engineering Mechanics - ASCE</i> , <b>2000</b> , 126, 582-587	2.4	8
19	Predictively Coordinated Vehicle Acceleration and Lane Selection Using Mixed Integer Programming <b>2018</b> ,		8
18	Heavy vehicle fuel economy improvement using ultracapacitor power assist and preview-based MPC energy management <b>2011</b> ,		7
17	Modeling the Recovery of WMn the Moderate to Heavy Exercise Intensity Domain. <i>Medicine and Science in Sports and Exercise</i> , <b>2020</b> , 52, 2646-2654	1.2	5
16	Automated Vehicles in Hazardous Merging Traffic: A Chance-Constrained Approach. <i>IFAC-PapersOnLine</i> , <b>2019</b> , 52, 218-223	0.7	5
15	Adaptive model predictive control for co-ordination of compression and friction brakes in heavy duty vehicles. <i>International Journal of Adaptive Control and Signal Processing</i> , <b>2006</b> , 20, 581-598	2.8	5
14	Multi-Agent Control of Lane-Switching Automated Vehicles for Energy Efficiency <b>2020</b> ,		5
13	Ultracapacitor power assist with preview-based energy management for reducing fuel consumption of heavy vehicles. <i>International Journal of Powertrains</i> , <b>2016</b> , 5, 375	0.5	3
12	Feedbackless Relaying for Enhancing Reliability of Connected Vehicles. <i>IEEE Transactions on Vehicular Technology</i> , <b>2020</b> , 69, 4621-4634	6.8	3
11	Modeling the Expenditure and Recovery of Anaerobic Work Capacity in Cycling. <i>Proceedings (mdpi)</i> , <b>2018</b> , 2, 219	0.3	3
10	Information and Collaboration Levels in Vehicular Strings: A Comparative Study. <i>IFAC-PapersOnLine</i> , <b>2020</b> , 53, 13822-13829	0.7	3
9	Receding Horizon Motion Planning for Automated Lane Change and Merge Using Monte Carlo Tree Search and Level-K Game Theory <b>2020</b> ,		3
8	MPC-Based Connected Cruise Control with Multiple Human Predecessors <b>2021</b> ,		3
7	Energy and flow effects of optimal automated driving in mixed traffic: Vehicle-in-the-loop experimental results. <i>Transportation Research Part C: Emerging Technologies</i> , <b>2021</b> , 130, 103168	8.4	3
6	Model predictive control of a hybrid electric powertrain with combined battery and ultracapacitor energy storage system. <i>International Journal of Powertrains</i> , <b>2012</b> , 1, 351	0.5	2
5	Energy Saving Potentials of CAVs. <i>Lecture Notes in Intelligent Transportation and Infrastructure</i> , <b>2020</b> , 1-31	0.3	2
4	To Merge Early or Late: Analysis of Traffic Flow and Energy Impact in a Reduced Lane Scenario <b>2018</b> ,		2

- 3 Impact of Model Simplification on Optimal Control of Combustion Engine and Electric Vehicles Considering Control Input Constraints **2018**, 2
- 2 Detailed Case Studies. *Lecture Notes in Intelligent Transportation and Infrastructure*, **2020**, 241-273 0.3
- 1 Eco-Driving Practical Implementation. *Lecture Notes in Intelligent Transportation and Infrastructure*, **2020**, 215-239 0.3