

# Tulga Ersal

## 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.

87  
papers

935  
citations

17  
h-index

26  
g-index

95  
ext. papers

1,235  
ext. citations

3.6  
avg, IF

4.73  
L-index

#	Paper	IF	Citations
87	. <i>IEEE Transactions on Intelligent Transportation Systems</i> , <b>2010</b> , 11, 692-701	6.1	66
86	Combined Speed and Steering Control in High-Speed Autonomous Ground Vehicles for Obstacle Avoidance Using Model Predictive Control. <i>IEEE Transactions on Vehicular Technology</i> , <b>2017</b> , 66, 8746-8763	6.8	65
85	A Review of Proper Modeling Techniques. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME</i> , <b>2008</b> , 130,	1.6	44
84	. <i>IEEE Transactions on Smart Grid</i> , <b>2013</b> , 4, 1576-1585	10.7	42
83	A study on model fidelity for model predictive control-based obstacle avoidance in high-speed autonomous ground vehicles. <i>Vehicle System Dynamics</i> , <b>2016</b> , 54, 1629-1650	2.8	40
82	A nonlinear model predictive control formulation for obstacle avoidance in high-speed autonomous ground vehicles in unstructured environments. <i>Vehicle System Dynamics</i> , <b>2018</b> , 56, 853-882	2.8	36
81	Wireless charger deployment for an electric bus network: A multi-objective life cycle optimization. <i>Applied Energy</i> , <b>2018</b> , 225, 1090-1101	10.7	34
80	Development and model-based transparency analysis of an Internet-distributed hardware-in-the-loop simulation platform. <i>Mechatronics</i> , <b>2011</b> , 21, 22-29	3	32
79	Frequency-Domain Analysis of Robust Monotonic Convergence of Norm-Optimal Iterative Learning Control. <i>IEEE Transactions on Control Systems Technology</i> , <b>2018</b> , 26, 637-651	4.8	26
78	Through-the-Membrane Transient Phenomena in PEM Fuel Cells: A Modeling Study. <i>Journal of the Electrochemical Society</i> , <b>2019</b> , 166, F3154-F3179	3.9	25
77	Computationally Efficient Pseudo-2D Non-Isothermal Modeling of Polymer Electrolyte Membrane Fuel Cells with Two-Phase Phenomena. <i>Journal of the Electrochemical Society</i> , <b>2016</b> , 163, F1412-F1432	3.9	24
76	Connected and automated road vehicles: state of the art and future challenges. <i>Vehicle System Dynamics</i> , <b>2020</b> , 58, 672-704	2.8	22
75	Hardware-in-the-loop validation of a power management strategy for hybrid powertrains. <i>Control Engineering Practice</i> , <b>2014</b> , 29, 277-286	3.9	21
74	. <i>IEEE/ASME Transactions on Mechatronics</i> , <b>2012</b> , 17, 228-238	5.5	19
73	Impact of controlled plug-in EVs on microgrids: A military microgrid example <b>2011</b> ,		19
72	Theoretical and experimental indicators of falls during pregnancy as assessed by postural perturbations. <i>Gait and Posture</i> , <b>2014</b> , 39, 218-23	2.6	18
71	Moving obstacle avoidance for large, high-speed autonomous ground vehicles <b>2017</b> ,		17

70	Structural simplification of modular bond-graph models based on junction inactivity. <i>Simulation Modelling Practice and Theory</i> , <b>2009</b> , 17, 175-196	3.9	17
69	An Iterative Learning Control Approach to Improving Fidelity in Internet-Distributed Hardware-in-the-Loop Simulation. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME</i> , <b>2014</b> , 136,	1.6	16
68	A Multi-Stage Optimization Formulation for MPC-Based Obstacle Avoidance in Autonomous Vehicles Using a LIDAR Sensor <b>2014</b> ,		16
67	Reducing Soot Emissions in a Diesel Series Hybrid Electric Vehicle Using a Power Rate Constraint Map. <i>IEEE Transactions on Vehicular Technology</i> , <b>2015</b> , 64, 2-12	6.8	15
66	Model-Based Analysis of PFSA Membrane Mechanical Response to Relative Humidity and Load Cycling in PEM Fuel Cells. <i>Journal of the Electrochemical Society</i> , <b>2018</b> , 165, F3359-F3372	3.9	15
65	Who's the boss? Arbitrating control authority between a human driver and automation system. <i>Transportation Research Part F: Traffic Psychology and Behaviour</i> , <b>2020</b> , 68, 144-160	4.5	13
64	The Role of Model Fidelity in Model Predictive Control Based Hazard Avoidance in Unmanned Ground Vehicles Using LIDAR Sensors <b>2013</b> ,		13
63	Sustainability, Resiliency, and Grid Stability of the Coupled Electricity and Transportation Infrastructures: Case for an Integrated Analysis. <i>Journal of Infrastructure Systems</i> , <b>2015</b> , 21, 04015001	2.9	12
62	A Predictor-Based Framework for Delay Compensation in Networked Closed-Loop Systems. <i>IEEE/ASME Transactions on Mechatronics</i> , <b>2018</b> , 23, 2482-2493	5.5	12
61	Effect of coupling point selection on distortion in internet-distributed hardware-in-the-loop simulation. <i>International Journal of Vehicle Design</i> , <b>2013</b> , 61, 67	2.4	12
60	Effective Parameterization of PEM Fuel Cell Models Part I: Sensitivity Analysis and Parameter Identifiability. <i>Journal of the Electrochemical Society</i> , <b>2020</b> , 167, 044504	3.9	12
59	An Experimental Evaluation of a Model-Free Predictor Framework in Teleoperated Vehicles. <i>IFAC-PapersOnLine</i> , <b>2016</b> , 49, 157-164	0.7	11
58	Collision Imminent Steering Using Nonlinear Model Predictive Control <b>2018</b> ,		11
57	Improving the robustness of an MPC-based obstacle avoidance algorithm to parametric uncertainty using worst-case scenarios. <i>Vehicle System Dynamics</i> , <b>2019</b> , 57, 874-913	2.8	10
56	Degradation-conscious control for enhanced lifetime of automotive polymer electrolyte membrane fuel cells. <i>Journal of Power Sources</i> , <b>2020</b> , 457, 227996	8.9	9
55	Collision Imminent Steering at High Speed Using Nonlinear Model Predictive Control. <i>IEEE Transactions on Vehicular Technology</i> , <b>2020</b> , 69, 8278-8289	6.8	9
54	Analysis of a Model-Free Predictor for Delay Compensation in Networked Systems. <i>Advances in Delays and Dynamics</i> , <b>2017</b> , 201-215	0.3	9
53	A Mathematical Model toward Real-Time Monitoring of Automotive PEM Fuel Cells. <i>Journal of the Electrochemical Society</i> , <b>2020</b> , 167, 024518	3.9	8

52	Online terrain estimation for autonomous vehicles on deformable terrains. <i>Journal of Terramechanics</i> , <b>2020</b> , 91, 11-22	2.2	8
51	Workload Management in Teleoperation of Unmanned Ground Vehicles: Effects of a Delay Compensation Aid on Human Operators Workload and Teleoperation Performance. <i>International Journal of Human-Computer Interaction</i> , <b>2019</b> , 35, 1820-1830	3.6	7
50	Realization-Preserving Structure and Order Reduction of Nonlinear Energetic System Models Using Energy Trajectory Correlations. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME</i> , <b>2009</b> , 131,	1.6	7
49	Model reduction in vehicle dynamics using importance analysis. <i>Vehicle System Dynamics</i> , <b>2009</b> , 47, 851-865	2.5	7
48	Battery State of Health Monitoring by Estimation of Side Reaction Current Density Via Retrospective-Cost Subsystem Identification. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME</i> , <b>2017</b> , 139,	1.6	6
47	<b>2014</b> ,		6
46	An Observer Based Framework to Improve Fidelity in Internet-Distributed Hardware-in-the-Loop Simulations <b>2013</b> ,		6
45	Orienting body coordinate frames using Karhunen-Loève expansion for more effective structural simplification. <i>Simulation Modelling Practice and Theory</i> , <b>2009</b> , 17, 197-210	3.9	6
44	An energy and emission conscious adaptive cruise controller for a connected automated diesel truck. <i>Vehicle System Dynamics</i> , <b>2020</b> , 58, 805-825	2.8	5
43	Effective Parameterization of PEM Fuel Cell Models Part II: Robust Parameter Subset Selection, Robust Optimal Experimental Design, and Multi-Step Parameter Identification Algorithm. <i>Journal of the Electrochemical Society</i> , <b>2020</b> , 167, 044505	3.9	5
42	Pulse-and-Glide Operation for Parallel Hybrid Electric Vehicles with Step-Gear Transmission in Automated Car-Following Scenario with Ride Comfort Consideration <b>2019</b> ,		5
41	Evaluation of a Predictor-Based Framework in High-Speed Teleoperated Military UGVs. <i>IEEE Transactions on Human-Machine Systems</i> , <b>2020</b> , 50, 561-572	4.1	5
40	Power Loss Minimization in Islanded Microgrids: A Communication-Free Decentralized Power Control Approach Using Extremum Seeking. <i>IEEE Access</i> , <b>2019</b> , 7, 20879-20893	3.5	5
39	Modeling Human Steering Behavior During Path Following in Teleoperation of Unmanned Ground Vehicles. <i>Human Factors</i> , <b>2018</b> , 60, 669-684	3.8	4
38	A Delay Compensation Framework for Predicting Heading in Teleoperated Ground Vehicles. <i>IEEE/ASME Transactions on Mechatronics</i> , <b>2019</b> , 24, 2365-2376	5.5	4
37	A mathematical model for incorporating biofeedback into human postural control. <i>Journal of NeuroEngineering and Rehabilitation</i> , <b>2013</b> , 10, 14	5.3	4
36	A Real-Time Pseudo-2D Bi-Domain Model of PEM Fuel Cells for Automotive Applications <b>2017</b> ,		4
35	On the effect of DC source voltage on inverter-based frequency and voltage regulation in a military microgrid <b>2012</b> ,		4

34	Development of an Internet-Distributed Hardware-in-the-Loop Simulation Platform for an Automotive Application <b>2009</b> ,		4
33	A Modular Modeling Approach for the Design of Reconfigurable Machine Tools <b>2004</b> , 393		4
32	A frequency domain approach for designing filters for Norm-Optimal Iterative Learning Control and its fundamental tradeoff between robustness, convergence speed and steady state error <b>2016</b> ,		4
31	Engine-in-the-Loop Validation of a Frequency Domain Power Distribution Strategy for Series Hybrid Powertrains. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , <b>2012</b> , 45, 432-439		3
30	Adaptive Nonlinear Model Predictive Control for Collision Imminent Steering with Uncertain Coefficient of Friction <b>2020</b> ,		3
29	Combined Trajectory Planning and Tracking for Autonomous Vehicles on Deformable Terrains <b>2020</b> ,		3
28	Effects of cycle duration and test hardware in relative humidity cycling of a polymer electrolyte membrane. <i>Journal of Power Sources</i> , <b>2020</b> , 476, 228576	8.9	3
27	A workload adaptive haptic shared control scheme for semi-autonomous driving. <i>Accident Analysis and Prevention</i> , <b>2021</b> , 152, 105968	6.1	3
26	Minimum Slip Collision Imminent Steering in Curved Roads Using Nonlinear Model Predictive Control <b>2019</b> ,		3
25	LQ-MPC Design for Degradation-Conscious Control of PEM Fuel Cells <b>2019</b> ,		3
24	A Frequency-Dependent Filter Design Approach for Norm-Optimal Iterative Learning Control and Its Fundamental Trade-Off Between Robustness, Convergence Speed, and Steady-State Error. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME</i> , <b>2018</b> , 140,	1.6	2
23	A model-free predictor framework for tele-operated vehicles <b>2015</b> ,		2
22	Effect of coupling point selection on distortion in Internet-distributed hardware-in-the-loop simulation <b>2011</b> ,		2
21	An Iterative Learning Control Approach to Improving Fidelity in Internet-Distributed Hardware-in-the-Loop Simulation <b>2012</b> ,		2
20	Noninvasive Battery-Health Diagnostics Using Retrospective-Cost Identification of Inaccessible Subsystems <b>2012</b> ,		2
19	A Review of Proper Modeling Techniques <b>2007</b> , 1533		2
18	Collision Imminent Steering at High Speeds on Curved Roads Using One-Level Nonlinear Model Predictive Control. <i>IEEE Access</i> , <b>2021</b> , 9, 39292-39302	3.5	2
17	Increasing Computational Speed of Nonlinear Model Predictive Control Using Analytic Gradients of the Explicit Integration Scheme with Application to Collision Imminent Steering <b>2018</b> ,		2

16	Evaluating mobility vs. latency in unmanned ground vehicles. <i>Journal of Terramechanics</i> , <b>2018</b> , 80, 11-19	2.2	2
15	Data-Driven Forgetting and Discount Factors for Vehicle Speed Forecasting in Ecological Adaptive Cruise Control. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME</i> , <b>2022</b> , 144,	1.6	2
14	Performance Analysis of a Model-Free Predictor for Delay Compensation in Networked Systems. <i>IFAC-PapersOnLine</i> , <b>2015</b> , 48, 434-439	0.7	1
13	A subsystem identification technique towards battery state of health monitoring under state of charge estimation errors <b>2015</b> ,		1
12	Variation-Based Transparency Analysis of an Internet-Distributed Hardware-in-the-Loop Simulation Platform for Vehicle Powertrain Systems <b>2009</b> ,		1
11	Contingent Nonlinear Model Predictive Control for Collision Imminent Steering in Uncertain Environments. <i>IFAC-PapersOnLine</i> , <b>2020</b> , 53, 14330-14335	0.7	1
10	Model-free speed management for a heterogeneous platoon of connected ground vehicles. <i>Journal of Intelligent Transportation Systems: Technology, Planning, and Operations</i> , <b>2020</b> , 1-15	3.2	1
9	On Parameterizing PEM Fuel Cell Models <b>2019</b> ,		1
8	Effects of a Delay Compensation Aid on Teleoperation of Unmanned Ground Vehicles <b>2018</b> ,		1
7	Energy-Based Bond Graph Model Reduction <b>2011</b> , 53-103		1
6	Modeling Human Steering Behavior in Teleoperation of Unmanned Ground Vehicles With Varying Speed. <i>Human Factors</i> , <b>2020</b> , 18720820948982	3.8	0
5	Terrain Adaptive Trajectory Planning and Tracking on Deformable Terrains. <i>IEEE Transactions on Vehicular Technology</i> , <b>2021</b> , 1-1	6.8	0
4	Design for Real-Time Nonlinear Model Predictive Control With Application to Collision Imminent Steering. <i>IEEE Transactions on Control Systems Technology</i> , <b>2022</b> , 1-16	4.8	0
3	A Three-Phase Framework for Global Path Planning for Nonholonomic Autonomous Vehicles on 3D Terrains. <i>IFAC-PapersOnLine</i> , <b>2021</b> , 54, 160-165	0.7	
2	Nonlinear Model Predictive Planning and Control for High-Speed Autonomous Vehicles on 3D Terrains. <i>IFAC-PapersOnLine</i> , <b>2021</b> , 54, 412-417	0.7	
1	A Delay Compensation Framework for Connected Testbeds. <i>IEEE Transactions on Systems, Man, and Cybernetics: Systems</i> , <b>2021</b> , 1-14	7.3	