Tulga Ersal

List of Publications by Year in Descending Order

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	Data-Driven Forgetting and Discount Factors for Vehicle Speed Forecasting in Ecological Adaptive Cruise Control. *Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME*, **2022**, 144,	1.6	2
86	Design for Real-Time Nonlinear Model Predictive Control With Application to Collision Imminent Steering. *IEEE Transactions on Control Systems Technology*, **2022**, 1-16	4.8	0
85	A Three-Phase Framework for Global Path Planning for Nonholonomic Autonomous Vehicles on 3D Terrains. *IFAC-PapersOnLine*, **2021**, 54, 160-165	0.7	
84	Nonlinear Model Predictive Planning and Control for High-Speed Autonomous Vehicles on 3D Terrains. *IFAC-PapersOnLine*, **2021**, 54, 412-417	0.7	
83	A workload adaptive haptic shared control scheme for semi-autonomous driving. *Accident Analysis and Prevention*, **2021**, 152, 105968	6.1	3
82	Terrain Adaptive Trajectory Planning and Tracking on Deformable Terrains. *IEEE Transactions on Vehicular Technology*, **2021**, 1-1	6.8	0
81	A Delay Compensation Framework for Connected Testbeds. *IEEE Transactions on Systems, Man, and Cybernetics: Systems*, **2021**, 1-14	7.3	
80	Collision Imminent Steering at High Speeds on Curved Roads Using One-Level Nonlinear Model Predictive Control. *IEEE Access*, **2021**, 9, 39292-39302	3.5	2
79	Degradation-conscious control for enhanced lifetime of automotive polymer electrolyte membrane fuel cells. *Journal of Power Sources*, **2020**, 457, 227996	8.9	9
78	Collision Imminent Steering at High Speed Using Nonlinear Model Predictive Control. *IEEE Transactions on Vehicular Technology*, **2020**, 69, 8278-8289	6.8	9
77	A Mathematical Model toward Real-Time Monitoring of Automotive PEM Fuel Cells. *Journal of the Electrochemical Society*, **2020**, 167, 024518	3.9	8
76	An energy and emission conscious adaptive cruise controller for a connected automated diesel truck. *Vehicle System Dynamics*, **2020**, 58, 805-825	2.8	5
75	Connected and automated road vehicles: state of the art and future challenges. *Vehicle System Dynamics*, **2020**, 58, 672-704	2.8	22
74	Effective Parameterization of PEM Fuel Cell Models Part II: Robust Parameter Subset Selection, Robust Optimal Experimental Design, and Multi-Step Parameter Identification Algorithm. *Journal of the Electrochemical Society*, **2020**, 167, 044505	3.9	5
73	Who the boss? Arbitrating control authority between a human driver and automation system. *Transportation Research Part F: Traffic Psychology and Behaviour*, **2020**, 68, 144-160	4.5	13
72	Online terrain estimation for autonomous vehicles on deformable terrains. *Journal of Terramechanics*, **2020**, 91, 11-22	2.2	8
71	Contingent Nonlinear Model Predictive Control for Collision Imminent Steering in Uncertain Environments. *IFAC-PapersOnLine*, **2020**, 53, 14330-14335	0.7	1

70	Adaptive Nonlinear Model Predictive Control for Collision Imminent Steering with Uncertain Coefficient of Friction **2020**,		3
69	Combined Trajectory Planning and Tracking for Autonomous Vehicles on Deformable Terrains **2020** ,		3
68	Effects of cycle duration and test hardware in relative humidity cycling of a polymer electrolyte membrane. *Journal of Power Sources*, **2020**, 476, 228576	8.9	3
67	Model-free speed management for a heterogeneous platoon of connected ground vehicles. *Journal of Intelligent Transportation Systems: Technology, Planning, and Operations*, **2020**, 1-15	3.2	1
66	Evaluation of a Predictor-Based Framework in High-Speed Teleoperated Military UGVs. *IEEE Transactions on Human-Machine Systems*, **2020**, 50, 561-572	4.1	5
65	Modeling Human Steering Behavior in Teleoperation of Unmanned Ground Vehicles With Varying Speed. *Human Factors*, **2020**, 18720820948982	3.8	0
64	Effective Parameterization of PEM Fuel Cell Models□Part I: Sensitivity Analysis and Parameter Identifiability. *Journal of the Electrochemical Society*, **2020**, 167, 044504	3.9	12
63	Through-the-Membrane Transient Phenomena in PEM Fuel Cells: A Modeling Study. *Journal of the Electrochemical Society*, **2019**, 166, F3154-F3179	3.9	25
62	Workload Management in Teleoperation of Unmanned Ground Vehicles: Effects of a Delay Compensation Aid on Human Operators□Workload and Teleoperation Performance. *International Journal of Human-Computer Interaction*, **2019**, 35, 1820-1830	3.6	7
61	Improving the robustness of an MPC-based obstacle avoidance algorithm to parametric uncertainty using worst-case scenarios. *Vehicle System Dynamics*, **2019**, 57, 874-913	2.8	10
60	A Delay Compensation Framework for Predicting Heading in Teleoperated Ground Vehicles. *IEEE/ASME Transactions on Mechatronics*, **2019**, 24, 2365-2376	5.5	4
59	Pulse-and-Glide Operation for Parallel Hybrid Electric Vehicles with Step-Gear Transmission in Automated Car-Following Scenario with Ride Comfort Consideration **2019**,		5
58	Power Loss Minimization in Islanded Microgrids: A Communication-Free Decentralized Power Control Approach Using Extremum Seeking. *IEEE Access*, **2019**, 7, 20879-20893	3.5	5
57	Minimum Slip Collision Imminent Steering in Curved Roads Using Nonlinear Model Predictive Control **2019**,		3
56	LQ-MPC Design for Degradation-Conscious Control of PEM Fuel Cells **2019**,		3
55	On Parameterizing PEM Fuel Cell Models **2019**,		1
54	Modeling Human Steering Behavior During Path Following in Teleoperation of Unmanned Ground Vehicles. *Human Factors*, **2018**, 60, 669-684	3.8	4
53	Frequency-Domain Analysis of Robust Monotonic Convergence of Norm-Optimal Iterative Learning Control. *IEEE Transactions on Control Systems Technology*, **2018**, 26, 637-651	4.8	26

52	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. *Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME*, **2018**, 140,	1.6	2
51	Model-Based Analysis of PFSA Membrane Mechanical Response to Relative Humidity and Load Cycling in PEM Fuel Cells. *Journal of the Electrochemical Society*, **2018**, 165, F3359-F3372	3.9	15
50	A Predictor-Based Framework for Delay Compensation in Networked Closed-Loop Systems. *IEEE/ASME Transactions on Mechatronics*, **2018**, 23, 2482-2493	5.5	12
49	A nonlinear model predictive control formulation for obstacle avoidance in high-speed autonomous ground vehicles in unstructured environments. *Vehicle System Dynamics*, **2018**, 56, 853-882	2.8	36
48	Effects of a Delay Compensation Aid on Teleoperation of Unmanned Ground Vehicles **2018**,		1
47	Increasing Computational Speed of Nonlinear Model Predictive Control Using Analytic Gradients of the Explicit Integration Scheme with Application to Collision Imminent Steering **2018**,		2
46	Collision Imminent Steering Using Nonlinear Model Predictive Control **2018**,		11
45	Evaluating mobility vs. latency in unmanned ground vehicles. *Journal of Terramechanics*, **2018**, 80, 11-19	2.2	2
44	Wireless charger deployment for an electric bus network: A multi-objective life cycle optimization. *Applied Energy*, **2018**, 225, 1090-1101	10.7	34
43	Battery State of Health Monitoring by Estimation of Side Reaction Current Density Via Retrospective-Cost Subsystem Identification. *Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME*, **2017**, 139,	1.6	6
42	Combined Speed and Steering Control in High-Speed Autonomous Ground Vehicles for Obstacle Avoidance Using Model Predictive Control. *IEEE Transactions on Vehicular Technology*, **2017**, 66, 8746-8763	6.8	65
41	Moving obstacle avoidance for large, high-speed autonomous ground vehicles **2017**,		17
40	A Real-Time Pseudo-2D Bi-Domain Model of PEM Fuel Cells for Automotive Applications **2017**,		4
39	Analysis of a Model-Free Predictor for Delay Compensation in Networked Systems. *Advances in Delays and Dynamics*, **2017**, 201-215	0.3	9
38	A study on model fidelity for model predictive control-based obstacle avoidance in high-speed autonomous ground vehicles. *Vehicle System Dynamics*, **2016**, 54, 1629-1650	2.8	40
37	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 **2016**,		4
36	An Experimental Evaluation of a Model-Free Predictor Framework in Teleoperated Vehicles. *IFAC-PapersOnLine*, **2016**, 49, 157-164	0.7	11
35	Computationally Efficient Pseudo-2D Non-Isothermal Modeling of Polymer Electrolyte Membrane Fuel Cells with Two-Phase Phenomena. *Journal of the Electrochemical Society*, **2016**, 163, F1412-F1432	3.9	24

34	Reducing Soot Emissions in a Diesel Series Hybrid Electric Vehicle Using a Power Rate Constraint Map. *IEEE Transactions on Vehicular Technology*, **2015**, 64, 2-12	6.8	15
33	Sustainability, Resiliency, and Grid Stability of the Coupled Electricity and Transportation Infrastructures: Case for an Integrated Analysis. *Journal of Infrastructure Systems*, **2015**, 21, 04015001	2.9	12
32	A model-free predictor framework for tele-operated vehicles **2015**,		2
31	Performance Analysis of a Model-Free Predictor for Delay Compensation in Networked Systems. *IFAC-PapersOnLine*, **2015**, 48, 434-439	0.7	1
30	A subsystem identification technique towards battery state of health monitoring under state of charge estimation errors **2015**,		1
29	Theoretical and experimental indicators of falls during pregnancy as assessed by postural perturbations. *Gait and Posture*, **2014**, 39, 218-23	2.6	18
28	Hardware-in-the-loop validation of a power management strategy for hybrid powertrains. *Control Engineering Practice*, **2014**, 29, 277-286	3.9	21
27	**2014**,		6
26	An Iterative Learning Control Approach to Improving Fidelity in Internet-Distributed Hardware-in-the-Loop Simulation. *Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME*, **2014**, 136,	1.6	16
25	A Multi-Stage Optimization Formulation for MPC-Based Obstacle Avoidance in Autonomous Vehicles Using a LIDAR Sensor **2014**,		16
24	A mathematical model for incorporating biofeedback into human postural control. *Journal of NeuroEngineering and Rehabilitation*, **2013**, 10, 14	5.3	4
23	. *IEEE Transactions on Smart Grid*, **2013**, 4, 1576-1585	10.7	42
22	The Role of Model Fidelity in Model Predictive Control Based Hazard Avoidance in Unmanned Ground Vehicles Using LIDAR Sensors **2013**,		13
21	Effect of coupling point selection on distortion in internet-distributed hardware-in-the-loop simulation. *International Journal of Vehicle Design*, **2013**, 61, 67	2.4	12
20	An Observer Based Framework to Improve Fidelity in Internet-Distributed Hardware-in-the-Loop Simulations **2013**,		6
19	. *IEEE/ASME Transactions on Mechatronics*, **2012**, 17, 228-238	5.5	19
18	On the effect of DC source voltage on inverter-based frequency and voltage regulation in a military microgrid **2012**,		4
17	Engine-in-the-Loop Validation of a Frequency Domain Power Distribution Strategy for Series Hybrid Powertrains. *IFAC Postprint Volumes IPPV / International Federation of Automatic Control*, **2012**, 45, 432-439		3

16	An Iterative Learning Control Approach to Improving Fidelity in Internet-Distributed Hardware-in-the-Loop Simulation **2012**,		2
15	Noninvasive Battery-Health Diagnostics Using Retrospective-Cost Identification of Inaccessible Subsystems **2012**,		2
14	Impact of controlled plug-in EVs on microgrids: A military microgrid example **2011**,		19
13	Development and model-based transparency analysis of an Internet-distributed hardware-in-the-loop simulation platform. *Mechatronics*, **2011**, 21, 22-29	3	32
12	Effect of coupling point selection on distortion in Internet-distributed hardware-in-the-loop simulation **2011**,		2
11	Energy-Based Bond Graph Model Reduction **2011**, 53-103		1
10	. *IEEE Transactions on Intelligent Transportation Systems*, **2010**, 11, 692-701	6.1	66
9	Realization-Preserving Structure and Order Reduction of Nonlinear Energetic System Models Using Energy Trajectory Correlations. *Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME*, **2009**, 131,	1.6	7
8	Orienting body coordinate frames using Karhunen□Love expansion for more effective structural simplification. *Simulation Modelling Practice and Theory*, **2009**, 17, 197-210	3.9	6
7	Structural simplification of modular bond-graph models based on junction inactivity. *Simulation Modelling Practice and Theory*, **2009**, 17, 175-196	3.9	17
6	Model reduction in vehicle dynamics using importance analysis. *Vehicle System Dynamics*, **2009**, 47, 851-868	1.68	7
5	Development of an Internet-Distributed Hardware-in-the-Loop Simulation Platform for an Automotive Application **2009**,		4
4	Variation-Based Transparency Analysis of an Internet-Distributed Hardware-in-the-Loop Simulation Platform for Vehicle Powertrain Systems **2009**,		1
3	A Review of Proper Modeling Techniques. *Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME*, **2008**, 130,	1.6	44
2	A Review of Proper Modeling Techniques **2007**, 1533		2
1	A Modular Modeling Approach for the Design of Reconfigurable Machine Tools **2004**, 393		4