

# Tulga Eرسال

## List of Publications by Year in descending order

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95  
papers

1,595  
citations

361045

20  
h-index

377514

34  
g-index

95  
all docs

95  
docs citations

95  
times ranked

1301  
citing authors

#	ARTICLE	IF	CITATIONS
1	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.	3.9	98
2	Model-Based Analysis and Classification of Driver Distraction Under Secondary Tasks. IEEE Transactions on Intelligent Transportation Systems, 2010, 11, 692-701.	4.7	93
3	Connected and automated road vehicles: state of the art and future challenges. Vehicle System Dynamics, 2020, 58, 672-704.	2.2	78
4	Wireless charger deployment for an electric bus network: A multi-objective life cycle optimization. Applied Energy, 2018, 225, 1090-1101.	5.1	67
5	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.	2.2	63
6	Coupling Between Component Sizing and Regulation Capability in Microgrids. IEEE Transactions on Smart Grid, 2013, 4, 1576-1585.	6.2	62
7	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.	2.2	58
8	A Review of Proper Modeling Techniques. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2008, 130, .	0.9	50
9	Through-the-Membrane Transient Phenomena in PEM Fuel Cells: A Modeling Study. Journal of the Electrochemical Society, 2019, 166, F3154-F3179.	1.3	47
10	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.	1.3	43
11	Development and model-based transparency analysis of an Internet-distributed hardware-in-the-loop simulation platform. Mechatronics, 2011, 21, 22-29.	2.0	40
12	Frequency-Domain Analysis of Robust Monotonic Convergence of Norm-Optimal Iterative Learning Control. IEEE Transactions on Control Systems Technology, 2018, 26, 637-651.	3.2	37
13	Impact of controlled plug-in EVs on microgrids: A military microgrid example. , 2011, , .		31
14	Moving obstacle avoidance for large, high-speed autonomous ground vehicles. , 2017, , .		30
15	Hardware-in-the-loop validation of a power management strategy for hybrid powertrains. Control Engineering Practice, 2014, 29, 277-286.	3.2	29
16	Who's the boss? Arbitrating control authority between a human driver and automation system. Transportation Research Part F: Traffic Psychology and Behaviour, 2020, 68, 144-160.	1.8	28
17	Effective Parameterization of PEM Fuel Cell Models—Part I: Sensitivity Analysis and Parameter Identifiability. Journal of the Electrochemical Society, 2020, 167, 044504.	1.3	28
18	Theoretical and experimental indicators of falls during pregnancy as assessed by postural perturbations. Gait and Posture, 2014, 39, 218-223.	0.6	26

#	ARTICLE	IF	CITATIONS
19	The Role of Model Fidelity in Model Predictive Control Based Hazard Avoidance in Unmanned Ground Vehicles Using LIDAR Sensors. , 2013, , .		25
20	A Predictor-Based Framework for Delay Compensation in Networked Closed-Loop Systems. IEEE/ASME Transactions on Mechatronics, 2018, 23, 2482-2493.	3.7	25
21	Statistical Transparency Analysis in Internet-Distributed Hardware-in-the-Loop Simulation. IEEE/ASME Transactions on Mechatronics, 2012, 17, 228-238.	3.7	24
22	A Mathematical Model toward Real-Time Monitoring of Automotive PEM Fuel Cells. Journal of the Electrochemical Society, 2020, 167, 024518.	1.3	23
23	A Multi-Stage Optimization Formulation for MPC-Based Obstacle Avoidance in Autonomous Vehicles Using a LIDAR Sensor. , 2014, , .		22
24	Online terrain estimation for autonomous vehicles on deformable terrains. Journal of Terramechanics, 2020, 91, 11-22.	1.4	21
25	Structural simplification of modular bond-graph models based on junction inactivity. Simulation Modelling Practice and Theory, 2009, 17, 175-196.	2.2	20
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, .	0.9	20
27	Collision Imminent Steering at High Speed Using Nonlinear Model Predictive Control. IEEE Transactions on Vehicular Technology, 2020, 69, 8278-8289.	3.9	19
28	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.	3.9	18
29	Collision Imminent Steering Using Nonlinear Model Predictive Control. , 2018, , .		18
30	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.	1.3	18
31	Degradation-conscious control for enhanced lifetime of automotive polymer electrolyte membrane fuel cells. Journal of Power Sources, 2020, 457, 227996.	4.0	18
32	An Experimental Evaluation of a Model-Free Predictor Framework in Teleoperated Vehicles**This work was supported by the Automotive Research Center (ARC) in accordance with Cooperative Agreement W56HZV-14-2-0001 U.S. Army Tank Automotive Research, Development and Engineering Center (TARDEC) Warren, MI. UNCLASSIFIED: Distribution Statement A. Approved for public release. #27479. IFAC-PapersOnLine, 2016, 49, 157-164.	0.5	17
33	Improving the robustness of an MPC-based obstacle avoidance algorithm to parametric uncertainty using worst-case scenarios. Vehicle System Dynamics, 2019, 57, 874-913.	2.2	17
34	Effect of coupling point selection on distortion in internet-distributed hardware-in-the-loop simulation. International Journal of Vehicle Design, 2013, 61, 67.	0.1	15
35	A Delay Compensation Framework for Predicting Heading in Teleoperated Ground Vehicles. IEEE/ASME Transactions on Mechatronics, 2019, 24, 2365-2376.	3.7	15
36	Workload Management in Teleoperation of Unmanned Ground Vehicles: Effects of a Delay Compensation Aid on Human Operatorsâ€™ Workload and Teleoperation Performance. International Journal of Human-Computer Interaction, 2019, 35, 1820-1830.	3.3	15

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37	Evaluation of a Predictor-Based Framework in High-Speed Teleoperated Military UGVs. IEEE Transactions on Human-Machine Systems, 2020, 50, 561-572.	2.5	15
38	Sustainability, Resiliency, and Grid Stability of the Coupled Electricity and Transportation Infrastructures: Case for an Integrated Analysis. Journal of Infrastructure Systems, 2015, 21, .	1.0	13
39	An energy and emission conscious adaptive cruise controller for a connected automated diesel truck. Vehicle System Dynamics, 2020, 58, 805-825.	2.2	13
40	A workload adaptive haptic shared control scheme for semi-autonomous driving. Accident Analysis and Prevention, 2021, 152, 105968.	3.0	12
41	Evaluating mobility vs. latency in unmanned ground vehicles. Journal of Terramechanics, 2018, 80, 11-19.	1.4	11
42	Terrain Adaptive Trajectory Planning and Tracking on Deformable Terrains. IEEE Transactions on Vehicular Technology, 2021, 70, 11255-11268.	3.9	11
43	Collision Imminent Steering at High Speeds on Curved Roads Using One-Level Nonlinear Model Predictive Control. IEEE Access, 2021, 9, 39292-39302.	2.6	11
44	Analysis of a Model-Free Predictor for Delay Compensation in Networked Systems. Advances in Delays and Dynamics, 2017, , 201-215.	0.4	11
45	A Norm Optimal Iterative Learning Control framework towards Internet-Distributed Hardware-In-The-Loop simulation. , 2014, , .		10
46	Effective Parameterization of PEM Fuel Cell Modelsâ€™Part II: Robust Parameter Subset Selection, Robust Optimal Experimental Design, and Multi-Step Parameter Identification Algorithm. Journal of the Electrochemical Society, 2020, 167, 044505.	1.3	10
47	Pulse-and-Glide Operation for Parallel Hybrid Electric Vehicles with Step-Gear Transmission in Automated Car-Following Scenario with Ride Comfort Consideration. , 2019, , .		10
48	Adaptive Nonlinear Model Predictive Control for Collision Imminent Steering with Uncertain Coefficient of Friction. , 2020, , .		10
49	A mathematical model for incorporating biofeedback into human postural control. Journal of NeuroEngineering and Rehabilitation, 2013, 10, 14.	2.4	9
50	Power Loss Minimization in Islanded Microgrids: A Communication-Free Decentralized Power Control Approach Using Extremum Seeking. IEEE Access, 2019, 7, 20879-20893.	2.6	9
51	Model reduction in vehicle dynamics using importance analysis. Vehicle System Dynamics, 2009, 47, 851-865.	2.2	8
52	Development of an Internet-Distributed Hardware-in-the-Loop Simulation Platform for an Automotive Application. , 2009, , .		8
53	An Observer Based Framework to Improve Fidelity in Internet-Distributed Hardware-in-the-Loop Simulations. , 2013, , .		8
54	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, .	0.9	8

#	ARTICLE	IF	CITATIONS
55	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, .	0.9	7
56	Orienting body coordinate frames using Karhunen-Loève expansion for more effective structural simplification. Simulation Modelling Practice and Theory, 2009, 17, 197-210.	2.2	7
57	A Real-Time Pseudo-2D Bi-Domain Model of PEM Fuel Cells for Automotive Applications. , 2017, , .		7
58	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, .	0.9	7
59	Real-Time Trajectory Planning for Automated Vehicle Safety and Performance in Dynamic Environments. ASME Journal of Autonomous Vehicles and Systems, 2021, 1, .	0.6	7
60	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.	0.4	6
61	Noninvasive Battery-Health Diagnostics Using Retrospective-Cost Identification of Inaccessible Subsystems. , 2012, , .		6
62	A Delay Compensation Framework for Connected Testbeds. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2022, 52, 4163-4176.	5.9	6
63	A Modular Modeling Approach for the Design of Reconfigurable Machine Tools. , 2004, , 393.		5
64	On the effect of DC source voltage on inverter-based frequency and voltage regulation in a military microgrid. , 2012, , .		5
65	A model-free predictor framework for tele-operated vehicles. , 2015, , .		5
66	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, , .		5
67	Modeling Human Steering Behavior During Path Following in Teleoperation of Unmanned Ground Vehicles. Human Factors, 2018, 60, 669-684.	2.1	5
68	Combined Trajectory Planning and Tracking for Autonomous Vehicles on Deformable Terrains. , 2020, , .		5
69	Effect of coupling point selection on distortion in Internet-distributed hardware-in-the-loop simulation. , 2011, , .		4
70	Performance Analysis of a Model-Free Predictor for Delay Compensation in Networked Systems—This work was supported by the Automotive Research Center (ARC) in accordance with Cooperative Agreement W56HZVâ€“142â€“0001 U.S. Army Tank Automotive Research, Development and Engineering Center (TARDEC) Warren, MI. UNCLASSIFIED: Distribution Statement A. Approved for public release. #26203. IFAC-PapersOnLine, 2015, 48, 434-439.	0.5	4
71	Minimum Slip Collision Imminent Steering in Curved Roads Using Nonlinear Model Predictive Control. , 2019, , .		4
72	LQ-MPC Design for Degradation-Conscious Control of PEM Fuel Cells. , 2019, , .		4

#	ARTICLE	IF	CITATIONS
73	Effects of cycle duration and test hardware in relative humidity cycling of a polymer electrolyte membrane. <i>Journal of Power Sources</i> , 2020, 476, 228576.	4.0	4
74	Contingent Nonlinear Model Predictive Control for Collision Imminent Steering in Uncertain Environments. <i>IFAC-PapersOnLine</i> , 2020, 53, 14330-14335.	0.5	4
75	Nonlinear Model Predictive Planning and Control for High-Speed Autonomous Vehicles on 3D Terrains. <i>IFAC-PapersOnLine</i> , 2021, 54, 412-417.	0.5	4
76	A Review of Proper Modeling Techniques. , 2007, , 1533.		3
77	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> , 2018, 140, .	0.9	3
78	Increasing Computational Speed of Nonlinear Model Predictive Control Using Analytic Gradients of the Explicit Integration Scheme with Application to Collision Imminent Steering. , 2018, , .		3
79	On Parameterizing PEM Fuel Cell Models. , 2019, , .		3
80	Optimality of Norm-Optimal Iterative Learning Control Among Linear Time Invariant Iterative Learning Control Laws in Terms of Balancing Robustness and Performance. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME</i> , 2019, 141, .	0.9	3
81	Model-free speed management for a heterogeneous platoon of connected ground vehicles. <i>Journal of Intelligent Transportation Systems: Technology, Planning, and Operations</i> , 2022, 26, 183-197.	2.6	3
82	Design and Evaluation of a Workload-Adaptive Haptic Shared Control Framework for Semi-Autonomous Driving. , 2020, , .		3
83	Modeling Human Steering Behavior in Teleoperation of Unmanned Ground Vehicles With Varying Speed. <i>Human Factors</i> , 2022, 64, 589-600.	2.1	3
84	Variation-Based Transparency Analysis of an Internet-Distributed Hardware-in-the-Loop Simulation Platform for Vehicle Powertrain Systems. , 2009, , .		2
85	An Iterative Learning Control Approach to Improving Fidelity in Internet-Distributed Hardware-in-the-Loop Simulation. , 2012, , .		2
86	Effects of a Delay Compensation Aid on Teleoperation of Unmanned Ground Vehicles. , 2018, , .		2
87	A Three-Phase Framework for Global Path Planning for Nonholonomic Autonomous Vehicles on 3D Terrains. <i>IFAC-PapersOnLine</i> , 2021, 54, 160-165.	0.5	2
88	Design for Real-Time Nonlinear Model Predictive Control With Application to Collision Imminent Steering. <i>IEEE Transactions on Control Systems Technology</i> , 2022, 30, 2450-2465.	3.2	2
89	A subsystem identification technique towards battery state of health monitoring under state of charge estimation errors. , 2015, , .		1
90	Synchronization of Pulse-and-Glide Operation in Vehicle Platooning using Cooperative Adaptive Cruise Control. , 2020, , .		1

#	ARTICLE	IF	CITATIONS
91	A Robust Energy and Emissions Conscious Cruise Controller for Connected Vehicles with Privacy Considerations. , 2020, , .		1
92	Energy-Based Bond Graph Model Reduction. , 2011, , 53-103.		1
93	Hardware-in-the-loop exploration of energy versus emissions trade-off in eco-following scenarios for connected automated vehicles. International Journal of Engine Research, 2023, 24, 1643-1654.	1.4	1
94	A Driver Model for Predicting Human Steering Performance in Teleoperated Path Following of Unmanned Ground Vehicles. , 2017, , .		0
95	Robust Parameter Subset Selection and Optimal Experimental Design for Effective Parameterization of PEM Fuel Cell Models. , 2020, , .		0