Dimitar P Filev

List of Publications by Year
in descending order

54 papers	1,682 citations	687220 13 h-index	580701 25 g-index
55 all docs	55 docs citations	55 times ranked	1230 citing authors

#	Article	IF	Citations
1	Toward Interpretable-AI Policies Using Evolutionary Nonlinear Decision Trees for Discrete-Action Systems. IEEE Transactions on Cybernetics, 2024, 54, 50-62.	6.2	3
2	Robust Action Governor for Discrete-Time Piecewise Affine Systems With Additive Disturbances. , 2022, 6, 950-955.		1
3	An Online Evolving Method For a Safe and Fast Automated Vehicle Control System. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2022, 52, 5723-5735.	5.9	3
4	Game-Theoretic Lane-Changing Decision Making and Payoff Learning for Autonomous Vehicles. IEEE Transactions on Vehicular Technology, 2022, 71, 3609-3620.	3.9	20
5	A Three-Level Game-Theoretic Decision-Making Framework for Autonomous Vehicles. IEEE Transactions on Intelligent Transportation Systems, 2022, 23, 20298-20308.	4.7	9
6	Driving Behavior Evaluation for Future Mobility: Application of Online Transition Probability Estimation. IEEE Transactions on Intelligent Transportation Systems, 2021, 22, 782-791.	4.7	1
7	Explaining Deep Learning Models Through Rule-Based Approximation and Visualization. IEEE Transactions on Fuzzy Systems, 2021, 29, 2399-2407.	6.5	16
8	Online Nonlinear Dynamic System Identification With Evolving Spatialâ€“Temporal Filters: Case Study on Turbocharged Engine Modeling. IEEE Transactions on Control Systems Technology, 2021, 29, 1364-1371.	3.2	6
9	Action Governor for Discrete-Time Linear Systems With Non-Convex Constraints. , 2021, 5, 121-126.		5
10	Systems Science and Engineering Research in the Context of Systems, Man, and Cybernetics: Recollection, Trends, and Future Directions. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2021, 51, 5-21.	5.9	14
11	Fuzzy Encoded Markov Chains: Overview, Observer Theory, and Applications. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2021, 51, 116-130.	5.9	2
12	Towards a systematic computational framework for modeling multi-agent decision-making at micro level for smart vehicles in a smart world. Robotics and Autonomous Systems, 2021, 144, 103859.	3.0	7
13	Autonomous Planning and Control for Intelligent Vehicles in Traffic. IEEE Transactions on Intelligent Transportation Systems, 2020, 21, 2339-2349.	4.7	40
14	A Game Theoretic Model Predictive Controller With Aggressiveness Estimation for Mandatory Lane Change. IEEE Transactions on Intelligent Vehicles, 2020, 5, 75-89.	9.4	36
15	Autonomous Highway Driving using Deep Reinforcement Learning. , 2019, , .		68
16	Towards a Modular Brain-Machine Interface for Intelligent Vehicle Systems Control â€“ A CARLA Demonstration. , 2019, , .		0
17	A Real-Time Fuzzy Learning Algorithm for Markov Chain and Its Application on Prediction of Vehicle Speed. , 2019, , .		2
18	An Interacting Multiple-Model-Based Algorithm for Driver Behavior Characterization Using Handling Risk. IEEE Transactions on Intelligent Transportation Systems, 2019, 20, 4308-4317.	4.7	7

#	Article	IF	Citations
19	Online Nonlinear System Identification with Evolving Spatial-Temporal Filters. , 2018, , .		3
20	Addressing Mandatory Lane Change Problem with Game Theoretic Model Predictive Control and Fuzzy Markov Chain. , 2018, , .		12
21	Highway Traffic Modeling and Decision Making for Autonomous Vehicle Using Reinforcement Learning. , 2018, , .		32
22	A two-stage-training support vector machine approach to predicting unintentional vehicle lane departure. Journal of Intelligent Transportation Systems: Technology, Planning, and Operations, 2017, 21, 41-51.	2.6	12
23	Vehicle speed prediction using a cooperative method of fuzzy Markov model and auto-regressive model. , 2017, , .		32
24	A mutual information based online evolving clustering approach and its applications. Evolving Systems, 2017, 8, 179-191.	2.4	3
25	Optimal State Estimation for Systems Driven by Jumpâ€“Diffusion Process With Application to Road Anomaly Detection. IEEE Transactions on Control Systems Technology, 2017, 25, 1634-1643.	3.2	13
26	A New Clustering Algorithm for Processing GPS-Based Road Anomaly Reports With a Mahalanobis Distance. IEEE Transactions on Intelligent Transportation Systems, 2017, 18, 1980-1988.	4.7	34
27	Transition probability estimation and its application in evaluation of automated driving. , 2017, , .		1
28	Driver behavior characterization using multiple dynamic models. , 2016, , .		2
29	Trajectory optimization with memetic algorithms: Time-to-torque minimization of turbocharged engines. , 2016, , .		2
30	Simultaneous road profile estimation and anomaly detection with an input observer and a jump diffusion process estimator. , 2016, , .		11
31	Hâˆž Filtering for Cloud-Aided Semi-active Suspension with Delayed Road Informationâˆ—âˆ—This work was supported by Ford Motor Company-The University of Michigan Alliance.. IFAC-PapersOnLine, 2015, 48, 275-280.	0.5	14
32	Real-time Determination of Driver's Driving Behavior during Car Following. SAE International Journal of Passenger Cars - Electronic and Electrical Systems, 2015, 8, 371-378.	0.3	12
33	Cloud aided semi-active suspension control. , 2014, , .		29
34	Cloud aided safety-based route planning. , 2014, , .		19
35	Generalized Markov Models for Real-Time Modeling of Continuous Systems. IEEE Transactions on Fuzzy Systems, 2014, 22, 983-998.	6.5	54
36	The look-up table controllers and a particular class of Mamdani fuzzy controllers are equivalent - Implications to real-world applications. , 2013, , .		3

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37	Evolving Markov chain models of driving conditions using onboard learning. , 2013, , .		5
38	Contextual on-board learning and prediction of vehicle destinations. , 2011, , .		11
39	Real-time driver characterization during car following using stochastic evolving models. , 2011, , .		30
40	Hybrid Intelligent System for Driver Workload Estimation for tailored vehicle-driver communication and interaction. , 2010, , .		6
41	Markov chain modeling approaches for on board applications. , 2010, , .		24
42	Applied intelligent systems: blending fuzzy logic with conventional control. International Journal of General Systems, 2010, 39, 395-414.	1.2	15
43	An Industrial Strength Novelty Detection Framework for Autonomous Equipment Monitoring and Diagnostics. IEEE Transactions on Industrial Informatics, 2010, 6, 767-779.	7.2	60
44	A generalized Markov Chain modeling approach for on board applications. , 2010, , .		12
45	From vehicle stability control to intelligent personal minder: Real-time vehicle handling limit warning and driver style characterization. , 2009, , .		28
46	Real-time driving behavior identification based on driver-in-the-loop vehicle dynamics and control. , 2009, , .		33
47	Adaptive real-time advisory system for fuel economy improvement in a hybrid electric vehicle. , 2009, , .		21
48	Guest Editorial Evolving Fuzzy Systemsâ€“Preface to the Special Section. IEEE Transactions on Fuzzy Systems, 2008, 16, 1390-1392.	6.5	25
49	An Approach to Online Identification of Takagi-Sugeno Fuzzy Models. IEEE Transactions on Systems, Man, and Cybernetics, 2004, 34, 484-498.	5.5	844
50	Algorithms for Real-time Clustering and Generation of Rules from Data. , 0, , 354-369.		8
51	Cruise Controller with Fuel Optimization Based on Adaptive Nonlinear Predictive Control. SAE International Journal of Passenger Cars - Electronic and Electrical Systems, 0, 9, 262-274.	0.3	14
52	On the Tradeoffs between Static and Dynamic Adaptive Optimization for an Automotive Application. SAE International Journal of Commercial Vehicles, 0, 10, 346-352.	0.4	5
53	Adaptive Nonlinear Model Predictive Cruise Controller: Trailer Tow Use Case. , 0, , .		6
54	On the Robustness of Adaptive Nonlinear Model Predictive Cruise Control. , 0, , .		4