Ananya Sen Gupta

List of Publications by Year
in descending order

109 papers	2,270 citations	394421 19 h-index	254184 43 g-index
119 all docs	119 docs citations	119 times ranked	2112 citing authors

#	Article	IF	Citations
1	Local Path Planning for Off-Road Autonomous Driving With Avoidance of Static Obstacles. IEEE Transactions on Intelligent Transportation Systems, 2012, 13, 1599-1616.	8.0	254
2	Interacting Multiple Model Filter-Based Sensor Fusion of GPS With In-Vehicle Sensors for Real-Time Vehicle Positioning. IEEE Transactions on Intelligent Transportation Systems, 2012, 13, 329-343.	8.0	234
3	Hierarchical Trajectory Planning of an Autonomous Car Based on the Integration of a Sampling and an Optimization Method. IEEE Transactions on Intelligent Transportation Systems, 2018, 19, 613-626.	8.0	165
4	Enhanced Road Boundary and Obstacle Detection Using a Downward-Looking LIDAR Sensor. IEEE Transactions on Vehicular Technology, 2012, 61, 971-985.	6.3	152
5	Emerging Priorities for Microbiome Research. Frontiers in Microbiology, 2020, 11, 136.	3.5	113
6	Precise Localization of an Autonomous Car Based on Probabilistic Noise Models of Road Surface Marker Features Using Multiple Cameras. IEEE Transactions on Intelligent Transportation Systems, 2015, 16, 3377-3392.	8.0	83
7	Generation of a Precise Roadway Map for Autonomous Cars. IEEE Transactions on Intelligent Transportation Systems, 2014, 15, 925-937.	8.0	81
8	FlexRay Network Parameter Optimization Method for Automotive Applications. IEEE Transactions on Industrial Electronics, 2011, 58, 1449-1459.	7.9	73
9	Vehicle Speed Prediction Using a Markov Chain With Speed Constraints. IEEE Transactions on Intelligent Transportation Systems, 2019, 20, 3201-3211.	8.0	72
10	Ego-Vehicle Speed Prediction Using a Long Short-Term Memory Based Recurrent Neural Network. International Journal of Automotive Technology, 2019, 20, 713-722.	1.4	63
11	Fecal Fingerprints of Enteric Pathogen Contamination in Public Environments of Kisumu, Kenya, Associated with Human Sanitation Conditions and Domestic Animals. Environmental Science & Technology, 2018, 52, 10263-10274.	10.0	61
12	Tracking and Behavior Reasoning of Moving Vehicles Based on Roadway Geometry Constraints. IEEE Transactions on Intelligent Transportation Systems, 2017, 18, 460-476.	8.0	60
13	Simultaneous Localization and Map Change Update for the High Definition Map-Based Autonomous Driving Car. Sensors, 2018, 18, 3145.	3.8	55
14	GPS-bias correction for precise localization of autonomous vehicles. , 2013, , .		44
15	Curvilinear-Coordinate-Based Object and Situation Assessment for Highly Automated Vehicles. IEEE Transactions on Intelligent Transportation Systems, 2015, 16, 1559-1575.	8.0	43
16	Integration of multiple vehicle models with an IMM filter for vehicle localization. , 2010, , .		39
17	L-Shape Model Switching-Based Precise Motion Tracking of Moving Vehicles Using Laser Scanners. IEEE Transactions on Intelligent Transportation Systems, 2018, 19, 598-612.	8.0	39
18	A geometric mixed norm approach to shallow water acoustic channel estimation and tracking. Physical Communication, 2012, 5, 119-128.	2.1	34

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19	Robust Air-to-Fuel Ratio and Boost Pressure Controller Design for the EGR and VGT Systems Using Quantitative Feedback Theory. IEEE Transactions on Control Systems Technology, 2014, 22, 2218-2231.	5.2	29
20	Crowd-Sourced Mapping of New Feature Layer for High-Definition Map. Sensors, 2018, 18, 4172.	3.8	26
21	Semantic segmentation-based parking space detection with standalone around view monitoring system. Machine Vision and Applications, 2019, 30, 309-319.	2.7	24
22	Comparative Study of Markov Chain With Recurrent Neural Network for Short Term Velocity Prediction Implemented on an Embedded System. IEEE Access, 2021, 9, 24755-24767.	4.2	22
23	Road-model-based and graph-structure-based hierarchical path-planning approach for autonomous vehicles. Proceedings of the Institution of Mechanical Engineers, Part D: Journal of Automobile Engineering, 2014, 228, 909-928.	1.9	20
24	Collision risk assessment for possible collision vehicle in occluded area based on precise map. , 2017, , .		20
25	Closed-loop control of start of combustion using difference pressure management. Proceedings of the Institution of Mechanical Engineers, Part D: Journal of Automobile Engineering, 2006, 220, 1615-1628.	1.9	19
26	Interpreting comprehensive two-dimensional gas chromatography using peak topography maps with application to petroleum forensics. Chemistry Central Journal, 2016, 10, 75.	2.6	15
27	Successive Interference Cancellation Using Constellation Structure. IEEE Transactions on Signal Processing, 2007, 55, 5716-5730.	5.3	14
28	A probabilistic optimization approach for motion planning of autonomous vehicles. Proceedings of the Institution of Mechanical Engineers, Part D: Journal of Automobile Engineering, 2018, 232, 632-650.	1.9	14
29	Probabilistic Occupancy Filter for Parking Slot Marker Detection in an Autonomous Parking System Using AVM. IEEE Transactions on Intelligent Transportation Systems, 2019, 20, 2389-2394.	8.0	14
30	Distributed vehicle state estimation system using information fusion of GPS and in-vehicle sensors for vehicle localization. , 2011, , .		13
31	Fast GPS-DR Sensor Fusion Framework: Removing the Geodetic Coordinate Conversion Process. IEEE Transactions on Intelligent Transportation Systems, 2016, 17, 2008-2013.	8.0	13
32	Track Fusion and Behavioral Reasoning for Moving Vehicles Based on Curvilinear Coordinates of Roadway Geometries. IEEE Transactions on Intelligent Transportation Systems, 2018, 19, 3068-3075.	8.0	13
33	Robust Lane-Change Recognition Based on An Adaptive Hidden Markov Model Using Measurement Uncertainty. International Journal of Automotive Technology, 2019, 20, 255-263.	1.4	13
34	Sonar target representation using two-dimensional Gabor wavelet features. Journal of the Acoustical Society of America, 2020, 148, 2061-2072.	1.1	12
35	A study on the injection characteristics of a liquid-phase liquefied petroleum gas injector for air-fuel ratio control. Proceedings of the Institution of Mechanical Engineers, Part D: Journal of Automobile Engineering, 2005, 219, 1037-1046.	1.9	11
36	Control of the air system of a diesel engine using the intake oxygen concentration and the manifold absolute pressure with nitrogen oxide feedback. Proceedings of the Institution of Mechanical Engineers, Part D: Journal of Automobile Engineering, 2016, 230, 240-257.	1.9	11

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37	Construction process of a three-dimensional roadway geometry map for autonomous driving. Proceedings of the Institution of Mechanical Engineers, Part D: Journal of Automobile Engineering, 2017, 231, 1414-1434.	1.9	11
38	Cloud Update of Tiled Evidential Occupancy Grid Maps for the Multi-Vehicle Mapping. Sensors, 2018, 18, 4119.	3.8	11
39	Fault Diagnosis of Exhaust Gas Recirculation and Variable Geometry Turbocharger Systems in a Passenger Car Diesel Engine Based on a Sliding Mode Observer for Air System States Estimation. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2014, 136, .	1.6	10
40	Coordinated control strategy for the common-rail pressure using a metering unit and a pressure control valve in diesel engines. Proceedings of the Institution of Mechanical Engineers, Part D: Journal of Automobile Engineering, 2015, 229, 898-911.	1.9	10
41	Shallow water acoustic channel estimation using two-dimensional frequency characterization. Journal of the Acoustical Society of America, 2016, 140, 3995-4009.	1.1	10
42	Evidence Filter of Semantic Segmented Image From Around View Monitor in Automated Parking System. IEEE Access, 2019, 7, 92791-92804.	4.2	10
43	Semantic Point Cloud Mapping of LiDAR Based on Probabilistic Uncertainty Modeling for Autonomous Driving. Sensors, 2020, 20, 5900.	3.8	10
44	Vehicle Deceleration Prediction Based on Deep Neural Network at Braking Conditions. International Journal of Automotive Technology, 2020, 21, 91-102.	1.4	10
45	Vehicle Deceleration Prediction Model to Reflect Individual Driver Characteristics by Online Parameter Learning for Autonomous Regenerative Braking of Electric Vehicles. Sensors, 2019, 19, 4171.	3.8	9
46	Development of localisation and mapping software for autonomous cars. IET Intelligent Transport Systems, 2019, 13, 406-416.	3.0	9
47	Driver Characteristics Oriented Autonomous Longitudinal Driving System in Car-Following Situation. Sensors, 2020, 20, 6376.	3.8	9
48	Design Methodology for Industrial Internet-of-Things Wireless Systems. IEEE Sensors Journal, 2021, 21, 5529-5542.	4.7	9
49	Time-frequency localization issues in the context of sparse process modeling. Proceedings of Meetings on Acoustics, 2013, , .	0.3	8
50	Automated Identification and Shape Analysis of Chorus Elements in the Van Allen Radiation Belts. Journal of Geophysical Research: Space Physics, 2017, 122, 12,353.	2.4	8
51	Robust Localization in Map Changing Environments Based on Hierarchical Approach of Sliding Window Optimization and Filtering. IEEE Transactions on Intelligent Transportation Systems, 2022, 23, 3783-3789.	8.0	8
52	Cylinder Pressure-Based Spark Advance Control for SI Engines.. JSME International Journal Series B, 2001, 44, 305-312.	0.3	7
53	Characterization and classification of sonar targets using ellipsoid features. , 2015, , .		7
54	Power Management Strategy for the 48 V Mild Hybrid Electric Vehicle Based on the Charge-Sustaining Control. International Journal of Automotive Technology, 2019, 20, 37-49.	1.4	7

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55	Ego-Vehicle Speed Prediction Using Fuzzy Markov Chain With Speed Constraints. , 2019, , .		7
56	Automatic Transmission Shift Strategy Based on Greedy Algorithm Using Predicted Velocity. International Journal of Automotive Technology, 2020, 21, 159-168.	1.4	7
57	Design and development of an ECU anti its air-fuel ratio control scheme for an LPG engine with a bypass injector. , 0, , .		6
58	Robust Parking Path Planning with Error-Adaptive Sampling under Perception Uncertainty. Sensors, 2020, 20, 3560.	3.8	6
59	Common rail pressure controller for diesel engines using an empirical model. , 2012, , .		5
60	Characterization of sonar target data using Gabor wavelet features. , 2015, , .		5
61	Probabilistic lane detection and lane tracking for autonomous vehicles using a cascade particle filter. Proceedings of the Institution of Mechanical Engineers, Part D: Journal of Automobile Engineering, 2015, 229, 1656-1671.	1.9	5
62	A Real-Time Combustion Control With Reconstructed In-Cylinder Pressure by Principal Component Analysis for a CRDI Diesel Engine. Journal of Engineering for Gas Turbines and Power, 2017, 139, .	1.1	5
63	Interpreting Different Features of Shallow Water Acoustic Channels Using Braid Manifolds. , 2018, , .		5
64	Rapid Motion Segmentation of LiDAR Point Cloud Based on a Combination of Probabilistic and Evidential Approaches for Intelligent Vehicles. Sensors, 2019, 19, 4116.	3.8	5
65	Fast Online Coordinate Correction of a Multi-Sensor for Object Identification in Autonomous Vehicles. Sensors, 2019, 19, 2006.	3.8	5
66	Autonomous learning and interpretation of channel multipath scattering using braid manifolds in underwater acoustic communications. Journal of the Acoustical Society of America, 2021, 150, 906-919.	1.1	5
67	Development of a Sensorless Estimation Algorithm of the Injection Timing and Rate for an HSDI Common-Rail Injector. JSME International Journal Series C-Mechanical Systems Machine Elements and Manufacturing, 2004, 47, 882-888.	0.3	4
68	Dynamic target identification and classification based on resonance topography grouping. , 2014, , .		4
69	Gain-scheduled EGR control algorithm for light-duty diesel engines with static-gain parameter modeling. International Journal of Automotive Technology, 2017, 18, 579-587.	1.4	4
70	Hybrid Local Route Generation Combining Perception and a Precise Map for Autonomous Cars. IEEE Access, 2019, 7, 120128-120140.	4.2	4
71	Underwater channel estimation exploiting multipath feature morphology. Journal of the Acoustical Society of America, 2021, 149, 983-996.	1.1	4
72	Design of a networked traction control system using a real-time operating system. Proceedings of the Institution of Mechanical Engineers, Part D: Journal of Automobile Engineering, 2008, 222, 1395-1408.	1.9	3

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73	Tracking the underwater acoustic channel using two-dimensional frequency sampling. , 2015, , .		3
74	Quantifying weathering profiles of environmental contaminants from marine and coastal oil spills using signal processing techniques. , 2018, , .		3
75	Deceleration Planning Algorithm Based on Classified Multi-Layer Perceptron Models for Smart Regenerative Braking of EV in Diverse Deceleration Conditions. Sensors, 2019, 19, 4020.	3.8	3
76	Support-Constrained Mixed-Norm Optimization Techniques for Estimating Multipath Activity in Shallow Water Acoustic Channels. IEEE Journal of Oceanic Engineering, 2020, 45, 683-698.	3.8	3
77	Limited Visibility Aware Motion Planning for Autonomous Valet Parking Using Reachable Set Estimation. Sensors, 2021, 21, 1520.	3.8	3
78	Interference Suppression for Memoryless Nonlinear Multiuser Systems Using Constellation Structure. IEEE Transactions on Signal Processing, 2008, 56, 5589-5604.	5.3	2
79	Erratum for &#x201C;Interacting Multiple Model Filter-Based Sensor Fusion of GPS With In-Vehicle Sensors for Real-Time Vehicle Positioning&#x201D; [Mar 12 329-343]. IEEE Transactions on Intelligent Transportation Systems, 2012, 13, 973-973.	8.0	2
80	Mass air flow control of common-rail diesel engines using an artificial neural network. Proceedings of the Institution of Mechanical Engineers, Part D: Journal of Automobile Engineering, 2013, 227, 299-310.	1.9	2
81	Sonar target detection and classification against non-stationary interference using dynamic time-frequency localization. , 2013, , .		2
82	Iterative Learning Control Algorithm for Feedforward Controller of EGR and VGT Systems in a CRDI Diesel Engine. International Journal of Automotive Technology, 2018, 19, 433-442.	1.4	2
83	Signal Processing Methods to Interpret Polychlorinated Biphenyls in Airborne Samples. IEEE Access, 2020, 8, 147738-147755.	4.2	2
84	In-cylinder pressure-based convolutional neural network for real-time estimation of low-pressure cooled exhaust gas recirculation in turbocharged gasoline direct injection engines. International Journal of Engine Research, 2021, 22, 815-826.	2.3	2
85	Disentangling high energy chorus elements against structured background interference in the Van Allen radiation belts using braid manifolds. , 2020, , .		2
86	Interpreting the Underwater Acoustic Channel Impulse Response and Doppler Spread Using Braid Representations. , 2021, , .		2
87	Geometric Feature Representation in Active Sonar Signal Processing. , 2022, , .		2
88	Design of a network-based traction control system considering temporal behaviors. , 2006, , .		1
89	Optimal smoothing based mapping process of road surface marking in urban canyon environment. , 2017, , .		1
90	Multi-beam uncoordinated random access MAC for underwater communication networks. , 2018, , .		1

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91	Shallow water channel estimation with energy efficient transmitted signal design. Journal of the Acoustical Society of America, 2019, 145, 2955-2970.	1.1	1
92	Sonar Signaling Employing Braid-encoded Features on Sparse Gabor Dictionaries. , 2019, , .		1
93	A MUD-Enhanced Multi-Beam Approach for Increasing Throughput of Dense Wireless Networks. IEEE Sensors Journal, 2021, 21, 5454-5466.	4.7	1
94	Harnessing Gabor Wavelet Feature Localization with Diverse Machine Learning Techniques for Sonar Target Classification. , 2020, , .		1
95	Spatiotemporal Tracking of SARS-CoV-2 Variants using informative subtype markers and association graphs. , 2020, , .		1
96	An application of sliding horizon control to an electro-hydraulic automotive seat simulator. Journal of Mechanical Science and Technology, 2002, 16, 283-291.	0.4	0
97	Water Transport Experiment of the PEFC based on a Generic Experimental Method. , 2006, , .		0
98	Signal variability and data compression considerations for petroleum forensics in two-dimensional gas chromatography. , 2017, , .		0
99	Temporal local route modeling using the recognized lane for autonomous driving comfort. , 2018, , .		0
100	Adaptation Strategy for Exhaust Gas Recirculation and Common Rail Pressure to Improve Transient Torque Response in Diesel Engines. International Journal of Automotive Technology, 2018, 19, 585-595.	1.4	0
101	Autonomous Detection and Disambiguation of Martian Ion Trails Using Geometric Signal Processing Techniques. , 2019, , .		0
102	Diesel Engine Model with Multi-Model Correction of Intake Manifold Pressure. International Journal of Automotive Technology, 2019, 20, 779-787.	1.4	0
103	Guest Editorial Underwater Acoustic Propagation Physics and Signal Processing Techniques for Shallow Water Acoustic Communications. IEEE Journal of Oceanic Engineering, 2019, 44, 818-819.	3.8	0
104	Employing and Interpreting a Machine Learning Target-Cognizant Technique for Analysis of Unknown Signals in Multiple Reaction Monitoring. IEEE Access, 2021, 9, 24727-24737.	4.2	0
105	Seminal article about model-based space-time array processing. Journal of the Acoustical Society of America, 2021, 149, R9-R10.	1.1	0
106	Chorus Element Properties: Statistics From Automated Chorus Detection. , 2021, , .		0
107	Peak-cognizant Signal Processing of Raw Instrument Signals to Quantify Environmental Weathering of Contaminants from the Deepwater Horizon Spill. , 2020, , .		0
108	Tracking Multipath Structures in Shallow Water Acoustic Channels using Nonlinear Feature Representations. , 2020, , .		0

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109	Feature Engineering and Interpretation of Active Sonar Data Using Geometric Wavelets and Support Vector Machines. , 2021, , .		0