

Vijay Gupta

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171
papers

3,221
citations

26
h-index

53
g-index

204
ext. papers

4,006
ext. citations

4.9
avg, IF

5.82
L-index

#	Paper	IF	Citations
171	On a stochastic sensor selection algorithm with applications in sensor scheduling and sensor coverage. <i>Automatica</i> , 2006 , 42, 251-260	5.7	322
170	State Estimation in Electric Power Grids: Meeting New Challenges Presented by the Requirements of the Future Grid. <i>IEEE Signal Processing Magazine</i> , 2012 , 29, 33-43	9.4	255
169	Toward a Science of CyberPhysical System Integration. <i>Proceedings of the IEEE</i> , 2012 , 100, 29-44	14.3	203
168	Optimal LQG control across packet-dropping links. <i>Systems and Control Letters</i> , 2007 , 56, 439-446	2.4	189
167	Risk-Sensitive Control Under Markov Modulated Denial-of-Service (DoS) Attack Strategies. <i>IEEE Transactions on Automatic Control</i> , 2015 , 60, 3299-3304	5.9	126
166	. <i>IEEE Transactions on Automatic Control</i> , 2009 , 54, 1807-1819	5.9	126
165	Stochastic Dynamic Pricing for EV Charging Stations With Renewable Integration and Energy Storage. <i>IEEE Transactions on Smart Grid</i> , 2018 , 9, 1494-1505	10.7	112
164	Distributed Energy Management for Networked Microgrids Using Online ADMM With Regret. <i>IEEE Transactions on Smart Grid</i> , 2018 , 9, 847-856	10.7	104
163	Data-injection attacks in stochastic control systems: Detectability and performance tradeoffs. <i>Automatica</i> , 2017 , 82, 251-260	5.7	95
162	On relationships among passivity, positive realness, and dissipativity in linear systems. <i>Automatica</i> , 2014 , 50, 1003-1016	5.7	89
161	Control of cyberphysical systems using passivity and dissipativity based methods. <i>European Journal of Control</i> , 2013 , 19, 379-388	2.5	66
160	A Cross-Domain Approach to Analyzing the Short-Run Impact of COVID-19 on the US Electricity Sector. <i>Joule</i> , 2020 , 4, 2322-2337	27.8	66
159	Security in stochastic control systems: Fundamental limitations and performance bounds 2015 ,		64
158	. <i>IEEE Transactions on Automatic Control</i> , 2009 , 54, 1463-1476	5.9	62
157	State estimation over packet dropping networks using multiple description coding. <i>Automatica</i> , 2006 , 42, 1441-1452	5.7	60
156	On Kalman Filtering with Compromised Sensors: Attack Stealthiness and Performance Bounds. <i>IEEE Transactions on Automatic Control</i> , 2017 , 62, 6641-6648	5.9	58
155	A sub-optimal algorithm to synthesize control laws for a network of dynamic agents. <i>International Journal of Control</i> , 2005 , 78, 1302-1313	1.5	56

154	. <i>IEEE Transactions on Smart Grid</i> , 2015 , 1-10	10.7	52
153	Stochastic Stability of Event-Triggered Anytime Control. <i>IEEE Transactions on Automatic Control</i> , 2014 , 59, 3373-3379	5.9	50
152	Sensor Scheduling using Smart Sensors 2007 ,		42
151	. <i>IEEE Transactions on Smart Grid</i> , 2016 , 7, 2624-2632	10.7	39
150	On Kalman filtering in the presence of a compromised sensor: Fundamental performance bounds 2014 ,		38
149	Passivity and Dissipativity Analysis of a System and Its Approximation. <i>IEEE Transactions on Automatic Control</i> , 2017 , 62, 620-635	5.9	36
148	On Passivity of a Class of Discrete-Time Switched Nonlinear Systems. <i>IEEE Transactions on Automatic Control</i> , 2014 , 59, 692-702	5.9	36
147	On the Trade-Off Between Communication and Control Cost in Event-Triggered Dead-Beat Control. <i>IEEE Transactions on Automatic Control</i> , 2017 , 62, 2973-2980	5.9	35
146	. <i>IEEE Transactions on Automatic Control</i> , 2010 , 55, 175-179	5.9	33
145	Sequence-Based Anytime Control. <i>IEEE Transactions on Automatic Control</i> , 2013 , 58, 377-390	5.9	25
144	Networked State Estimation Over a Shared Communication Medium. <i>IEEE Transactions on Automatic Control</i> , 2017 , 62, 1729-1741	5.9	24
143	Scheduling algorithms for PHEV charging in shared parking lots 2012 ,		24
142	Electric grid state estimators for distribution systems with microgrids 2012 ,		24
141	On disturbance propagation in leader-follower systems with limited leader information. <i>Automatica</i> , 2014 , 50, 591-598	5.7	23
140	On distributed charging control of electric vehicles with power network capacity constraints 2014 ,		21
139	Risk-sensitive control under a class of denial-of-service attack models 2011 ,		21
138	On the robustness of distributed algorithms 2006 ,		21
137	Minimal Interconnection Topology in Distributed Control Design. <i>SIAM Journal on Control and Optimization</i> , 2009 , 48, 397-413	1.9	20

136	Tradeoffs in Stochastic Event-Triggered Control. <i>IEEE Transactions on Automatic Control</i> , 2019 , 64, 2567-2574	3.5	19
135	Provably Safe Cruise Control of Vehicular Platoons 2017 , 1, 262-267		18
134	. <i>IEEE Transactions on Automatic Control</i> , 2017 , 62, 5289-5295	5.9	16
133	Average consensus over small world networks: A probabilistic framework 2008 ,		15
132	An event-triggered protocol for distributed optimal coordination of double-integrator multi-agent systems. <i>Neurocomputing</i> , 2018 , 319, 34-41	5.4	15
131	Determining Passivity Using Linearization for Systems With Feedthrough Terms. <i>IEEE Transactions on Automatic Control</i> , 2015 , 60, 2536-2541	5.9	13
130	A Consumer Behavior Based Approach to Multi-Stage EV Charging Station Placement 2015 ,		12
129	Sufficient conditions for stabilizability over Gaussian relay and cascade channels 2010 ,		12
128	Wideband dielectric resonator-loaded suspended microstrip patch antennas. <i>Microwave and Optical Technology Letters</i> , 2003 , 37, 300-302	1.2	11
127	Feedback Stabilization of Bernoulli Jump Nonlinear Systems: A Passivity-Based Approach. <i>IEEE Transactions on Automatic Control</i> , 2015 , 60, 2254-2259	5.9	10
126	On privacy vs. cooperation in multi-agent systems. <i>International Journal of Control</i> , 2018 , 91, 1693-1707	1.5	10
125	On Feedback Passivity of Discrete-Time Nonlinear Networked Control Systems With Packet Drops. <i>IEEE Transactions on Automatic Control</i> , 2015 , 60, 2434-2439	5.9	10
124	Protecting privacy of topology in consensus networks 2015 ,		10
123	2019 , 3, 440-445		10
122	Reliability Contracts Between Renewable and Natural Gas Power Producers. <i>IEEE Transactions on Control of Network Systems</i> , 2019 , 6, 1075-1085	4	9
121	On Reliable Stabilization via Rectangular Dilated LMIs and Dissipativity-Based Certifications. <i>IEEE Transactions on Automatic Control</i> , 2013 , 58, 792-796	5.9	9
120	On an anytime algorithm for control 2009 ,		9
119	An incentive-based approach to distributed estimation with strategic sensors 2016 ,		9

118	Distributed Control over Failing Channels 325-342		9
117	Feedback passivation of nonlinear switched systems using linear approximations 2017 ,		8
116	Feedback Passivation of Discrete-Time Systems Under Communication Constraints. <i>IEEE Transactions on Automatic Control</i> , 2016 , 61, 3521-3526	5.9	8
115	A resilient design for cyber physical systems under attack 2017 ,		8
114	Input-to-state stability of hybrid systems with receding horizon control in the presence of packet dropouts. <i>Automatica</i> , 2012 , 48, 1920-1923	5.7	8
113	A networked control systems perspective for wide-area monitoring control of smart power grids 2013 ,		8
112	Risk-sensitive control under a Markov modulated Denial-of-Service attack model 2011 ,		8
111	Power-delay analysis of consensus algorithms on wireless networks with interference. <i>International Journal of Systems, Control and Communications</i> , 2010 , 2, 256	0.5	8
110	Designing optimal watermark signal for a stealthy attacker 2016 ,		8
109	On Passivity of Fractional Order Systems. <i>SIAM Journal on Control and Optimization</i> , 2019 , 57, 1378-1389	1.9	7
108	A Stochastic Sensor Selection Scheme for Sequential Hypothesis Testing With Multiple Sensors. <i>IEEE Transactions on Signal Processing</i> , 2015 , 63, 3687-3699	4.8	7
107	A Contract Design Approach for Phantom Demand Response. <i>IEEE Transactions on Automatic Control</i> , 2019 , 64, 1974-1988	5.9	7
106	Stabilizability Across a Gaussian Product Channel: Necessary and Sufficient Conditions. <i>IEEE Transactions on Automatic Control</i> , 2014 , 59, 2530-2535	5.9	7
105	Convergence Speed of the Consensus Algorithm With Interference and Sparse Long-Range Connectivity. <i>IEEE Journal on Selected Topics in Signal Processing</i> , 2011 , 5, 855-865	7.5	7
104	On Sensor Coverage by Mobile Sensors 2006 ,		7
103	A Real Options Market-Based Approach to Increase Penetration of Renewables. <i>IEEE Transactions on Smart Grid</i> , 2020 , 11, 1691-1701	10.7	7
102	Sequential Synthesis of Distributed Controllers for Cascade Interconnected Systems 2019 ,		7
101	Distributed Synthesis of Local Controllers for Networked Systems With Arbitrary Interconnection Topologies. <i>IEEE Transactions on Automatic Control</i> , 2021 , 66, 683-698	5.9	7

100	Anytime Control Using Input Sequences With Markovian Processor Availability. <i>IEEE Transactions on Automatic Control</i> , 2015 , 60, 515-521	5.9	6
99	On a Control Algorithm for Time-Varying Processor Availability. <i>IEEE Transactions on Automatic Control</i> , 2013 , 58, 743-748	5.9	6
98	Strategic behavior and market power of aggregators in energy demand networks 2017 ,		6
97	Distributed charging control of electric vehicles using regret minimization 2014 ,		6
96	On the trade-off between control performance and communication cost for event-triggered control over lossy networks 2013 ,		6
95	Incentivizing truth-telling in MPC-based load frequency control 2016 ,		6
94	Localization of disturbances in transportation systems 2015 ,		5
93	On a rate control protocol for networked estimation. <i>Automatica</i> , 2013 , 49, 1310-1317	5.7	5
92	Networked control of smart grids with distributed generation 2013 ,		5
91	On Estimation Across Analog Erasure Links With and Without Acknowledgements. <i>IEEE Transactions on Automatic Control</i> , 2010 , 55, 2896-2901	5.9	5
90	2011 ,		5
89	On the Effect of Stochastic Delay on Estimation. <i>IEEE Transactions on Automatic Control</i> , 2011 , 56, 2145-2150	3.150	5
88	On the optimality of sequential test with multiple sensors 2012 ,		5
87	Desynchronization of thermally-coupled first-order systems using economic model predictive control 2012 ,		5
86	Distributed Mixed Voltage Angle and Frequency Droop Control of Microgrid Interconnections With Loss of Distribution-PMU Measurements. <i>IEEE Open Access Journal of Power and Energy</i> , 2021 , 8, 45-56	3.8	5
85	Conic-Sector-Based Analysis and Control Synthesis for Linear Parameter Varying Systems 2018 , 2, 224-229		4
84	Markov Pricing Equilibrium in a prosumer-aggregator dynamic game 2016 ,		4
83	Optimal contract design for incentive-based demand response 2016 ,		4

82	Using natural gas reserves to mitigate intermittence of renewables in the day ahead market 2017 ,		4
81	A reputation-based contract for repeated crowdsensing with costly verification 2017 ,		4
80	Noisy feedback schemes and rate-error tradeoffs from stochastic approximation 2009 ,		4
79	Cooperative communication with feedback via stochastic approximation 2009 ,		4
78	Dynamic Pricing and Energy Management Strategy for EV Charging Stations under Uncertainties 2016 ,		4
77	Periodic coordinated attacks against cyber-physical systems: Detectability and performance bounds 2016 ,		4
76	A Bayesian Approach to Binary Classification of Mid-Infrared Spectral Data With Noisy Sensors. <i>IEEE Sensors Journal</i> , 2020 , 20, 6964-6970	4	3
75	Distributed Estimation. <i>Academic Press Library in Signal Processing</i> , 2014 , 4, 675-706		3
74	An on-line sensor selection algorithm for sprt with multiple sensors 2014 ,		3
73	Minimizing risk of load shedding and renewable energy curtailment in a microgrid with energy storage 2017 ,		3
72	Minimum variance unbiased estimation in the presence of an adversary 2017 ,		3
71	Passivity degradation in discrete control implementations: An approximate bisimulation approach 2015 ,		3
70	Passivity of Linear Parameter Varying systems with intermittent non-passive behavior 2015 ,		3
69	On anytime control of nonlinear processes through calculation of control sequences 2010 ,		3
68	On LQR control with asynchronous clocks 2011 ,		3
67	Disturbance propagation in strings of vehicles with limited leader information 2012 ,		3
66	On a Control Lyapunov Function based Anytime Algorithm for Control of Nonlinear Processes. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2010 , 43, 85-90		3
65	Observing a linear process over analog erasure channels using multiple sensors: Necessary and sufficient conditions for mean-square stability 2007 ,		3

64	Stabilization of Linear Systems Across a Time-Varying AWGN Fading Channel. <i>IEEE Transactions on Automatic Control</i> , 2020 , 65, 4902-4907	5.9	3
63	Passivity-based analysis of sampled and quantized control implementations. <i>Automatica</i> , 2020 , 119, 109664	9.4	3
62	Mixed Voltage Angle and Frequency Droop Control for Transient Stability of Interconnected Microgrids with Loss of PMU Measurements 2020 ,		3
61	2019 ,		3
60	2019 ,		3
59	A Reputation-Based Contract for Repeated Crowdsensing With Costly Verification. <i>IEEE Transactions on Signal Processing</i> , 2019 , 67, 6092-6104	4.8	3
58	Distributed constrained optimization for multi-agent systems over a directed graph with piecewise stepsize. <i>Journal of the Franklin Institute</i> , 2020 , 357, 4855-4868	4	3
57	Network-Constrained Stackelberg Game for Pricing Demand Flexibility in Power Distribution Systems. <i>IEEE Transactions on Smart Grid</i> , 2021 , 12, 4049-4058	10.7	3
56	Coordinated Control of Robotic Fish Using an Underwater Wireless Network 2011 , 323-339		3
55	A switched dynamical system framework for analysis of massively parallel asynchronous numerical algorithms 2015 ,		2
54	. <i>IEEE Transactions on Automatic Control</i> , 2015 , 60, 2494-2499	5.9	2
53	Privacy and security of cyberphysical systems. <i>International Journal of Robust and Nonlinear Control</i> , 2020 , 30, 4165-4167	3.6	2
52	Distributed control policies for localization of large disturbances in urban traffic networks 2017 ,		2
51	. <i>IEEE Transactions on Automatic Control</i> , 2017 , 62, 3532-3539	5.9	2
50	The effect of delayed side information on fundamental limitations of disturbance attenuation 2015 ,		2
49	Improving control performance across AWGN channels using a relay node \square <i>International Journal of Systems Science</i> , 2014 , 45, 1579-1588	2.3	2
48	On the reliable decentralised stabilisation of n MIMO systems. <i>International Journal of Control</i> , 2014 , 87, 1565-1572	1.5	2
47	Reliable decentralized stabilization via extended linear matrix inequalities and constrained dissipativity. <i>International Journal of Robust and Nonlinear Control</i> , 2014 , 24, 2179-2193	3.6	2

46	A further remark on the problem of reliable stabilization using rectangular dilated LMIs. <i>IMA Journal of Mathematical Control and Information</i> , 2013 , 30, 571-575	1.1	2
45	Optimal tracking control across erasure communication links in the presence of preview. <i>International Journal of Robust and Nonlinear Control</i> , 2009 , 19, 1837-1850	3.6	2
44	Robust/reliable stabilization of multi-channel systems via dilated LMIs and dissipativity-based certifications 2011 ,		2
43	Sequential hypothesis testing with off-line randomized sensor selection strategy 2012 ,		2
42	On a control algorithm for time-varying processor availability 2010 ,		2
41	On the Role of Cooperation in Private Multi-agent Systems 2020 , 157-176		2
40	Analysis of Two-Dimensional Feedback Systems Over Networks Using Dissipativity. <i>IEEE Transactions on Automatic Control</i> , 2020 , 65, 3241-3255	5.9	2
39	2020 ,		2
38	Threshold optimization of event-triggered multi-loop control systems 2016 ,		2
37	Differential Privacy for Network Identification. <i>IEEE Transactions on Control of Network Systems</i> , 2020 , 7, 266-277	4	2
36	An Insurance Contract Design to Boost Storage Participation in the Electricity Market. <i>IEEE Transactions on Sustainable Energy</i> , 2021 , 12, 543-552	8.2	2
35	Distributed Resource Allocation over Time-varying Balanced Digraphs with Discrete-time Communication. <i>IEEE Transactions on Control of Network Systems</i> , 2021 , 1-1	4	2
34	Bilateral Contracts Between NGPPs and Renewable Plants Can Increase Penetration of Renewables 2018 ,		2
33	Safety During Transient Response in Direct Current Microgrids Using Control Barrier Functions 2022 , 6, 337-342		2
32	Stabilizability Conditions for Linear Time Invariant Systems Across a Gaussian MAC Channel. <i>IEEE Transactions on Automatic Control</i> , 2019 , 64, 2310-2323	5.9	1
31	Characterization of feedback Nash equilibria for multi-channel systems via a set of non-fragile stabilizing state-feedback solutions and dissipativity inequalities. <i>Mathematics of Control, Signals, and Systems</i> , 2013 , 25, 311-326	1.3	1
30	Collaborative processing in distributed control for resource constrained systems. <i>IET Control Theory and Applications</i> , 2017 , 11, 1796-1806	2.5	1
29	Generalized passivity in discrete-time switched nonlinear systems 2012 ,		1

28	Stochastic passivity of discrete-time Markovian jump nonlinear systems 2013 ,		1
27	On consensus over stochastically switching directed topologies 2009 ,		1
26	On disturbance propagation in vehicle platoon control systems 2012 ,		1
25	Stabilization Using Multiple Sensors over Analog Erasure Channels 2007 ,		1
24	ON A STOCHASTIC ALGORITHM FOR SENSOR SCHEDULING. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2005 , 38, 278-283		1
23	Weak Control Approach to Consumer-Preferred Energy Management. <i>IFAC-PapersOnLine</i> , 2020 , 53, 17083-17088		1
22	Feedback Passivation of Linear Systems With Fixed-Structure Controllers 2020 , 4, 498-503		1
21	2020 ,		1
20	Optimal stationary state estimation over multiple Markovian packet drop channels. <i>Automatica</i> , 2021 , 128, 109561	5.7	1
19	Optical Spectroscopy Sequential Wavelength Selection Using a Higher Leverage Approach 2021 , 5, 1-4		1
18	On Stability and Convergence of Distributed Filters. <i>IEEE Signal Processing Letters</i> , 2021 , 28, 494-498	3.2	1
17	Strategic Battery Storage Management of Aggregators in Energy Demand Networks 2018 ,		1
16	Spatial modeling of mid-infrared spectral data with thermal compensation using integrated nested Laplace approximation. <i>Applied Optics</i> , 2021 , 60, 8609-8615	1.7	1
15	Robustness against Adversarial Attacks in Neural Networks using Incremental Dissipativity 2022 , 1-1		0
14	Stealthy hacking and secrecy of controlled state estimation systems with random dropouts. <i>IEEE Transactions on Automatic Control</i> , 2021 , 1-1	5.9	0
13	Targeted demand response for mitigating price volatility and enhancing grid reliability in synthetic Texas electricity markets.. <i>IScience</i> , 2022 , 25, 103723	6.1	0
12	Towards a framework of enforcing resilient operation of cyber-physical systems with unknown dynamics. <i>IET Cyber-Physical Systems: Theory and Applications</i> , 2021 , 6, 125-138	2.5	0
11	Detection of Attacks in Cyber-Physical Systems: Theory and Applications. <i>Lecture Notes in Control and Information Sciences</i> , 2021 , 79-98	0.5	0

10	Reply to Comments on Input-to-state stability of hybrid systems with receding horizon control in the presence of packet dropouts [Automatica 48 (2012) 1920-1923] Automatica, 2014 , 50, 2429	5.7
9	Economic Impact and Market Power of Strategic Aggregators in Energy Demand Networks 2020 , 153-180	
8	Reinforcement Learning based Distributed Control of Dissipative Networked Systems. <i>IEEE Transactions on Control of Network Systems</i> , 2021 , 1-1	4
7	On the Complexity of Sequential Incentive Design. <i>IEEE Transactions on Automatic Control</i> , 2021 , 1-1	5.9
6	Effect of Network Geometry and Interference on Consensus in Wireless Networks. <i>Springer Optimization and Its Applications</i> , 2010 , 125-143	0.4
5	Estimation and Control over Networks 2014 , 1-7	
4	An Incentive Scheme for Sensor Fusion With Strategic Sensors. <i>IEEE Transactions on Signal Processing</i> , 2019 , 67, 6342-6351	4.8
3	Dissipativity-Based Verification for Autonomous Systems in Adversarial Environments. <i>Studies in Systems, Decision and Control</i> , 2021 , 273-291	0.8
2	Data-Driven Contract Design for Multi-Agent Systems with Collusion Detection. <i>IEEE Signal Processing Letters</i> , 2022 , 1-1	3.2
1	Pricing Demand-Side Flexibility with Noisy Consumers: Mean-Variance Trade-Offs. <i>IEEE Transactions on Power Systems</i> , 2022 , 1-1	7