Roland P MalhamÃ©

List of Publications by Year
in descending order

123 papers	3,644 citations	331670 21 h-index	155660 55 g-index
123 all docs	123 docs citations	123 times ranked	1355 citing authors

#	Article	IF	Citations
1	Large population stochastic dynamic games: closed-loop McKean-Vlasov systems and the Nash certainty equivalence principle. Communications in Information and Systems, 2006, 6, 221-252.	0.5	821
2	Large-Population Cost-Coupled LQG Problems With Nonuniform Agents: Individual-Mass Behavior and Decentralized ε-Nash Equilibria. IEEE Transactions on Automatic Control, 2007, 52, 1560-1571.	5.7	773
3	Electric load model synthesis by diffusion approximation of a high-order hybrid-state stochastic system. IEEE Transactions on Automatic Control, 1985, 30, 854-860.	5.7	252
4	Social Optima in Mean Field LQG Control: Centralized and Decentralized Strategies. IEEE Transactions on Automatic Control, 2012, 57, 1736-1751.	5.7	176
5	Nash, Social and Centralized Solutions to Consensus Problems via Mean Field Control Theory. IEEE Transactions on Automatic Control, 2013, 58, 639-653.	5.7	73
6	Uplink Power Adjustment in Wireless Communication Systems: A Stochastic Control Analysis. IEEE Transactions on Automatic Control, 2004, 49, 1693-1708.	5.7	67
7	An Invariance Principle in Large Population Stochastic Dynamic Games. Journal of Systems Science and Complexity, 2007, 20, 162-172.	2.8	66
8	The NCE (Mean Field) Principle With Locality Dependent Cost Interactions. IEEE Transactions on Automatic Control, 2010, 55, 2799-2805.	5.7	66
9	A class of models for load management application and evaluation revisited. IEEE Transactions on Power Systems, 1992, 7, 1435-1443.	6.5	65
10	Nash Equilibria for Large-Population Linear Stochastic Systems of Weakly Coupled Agents. , 2005, , 215-252.		61
11	A column generation method for optimal load management via control of electric water heaters. IEEE Transactions on Power Systems, 1995, 10, 1389-1400.	6.5	56
12	Nash Certainty Equivalence in Large Population Stochastic Dynamic Games: Connections with the Physics of Interacting Particle Systems. , 2006, , .		56
13	A physically-based computer model of aggregate electric water heating loads. IEEE Transactions on Power Systems, 1994, 9, 1209-1217.	6.5	51
14	Mean Field Games. , 2017, , 1-28.		51
15	Mean Field LQG Control in Leader-Follower Stochastic Multi-Agent Systems: Likelihood Ratio Based Adaptation. IEEE Transactions on Automatic Control, 2012, 57, 2801-2816.	5.7	49
16	A stochastic control model for optimal timing of climate policies. Automatica, 2008, 44, 1545-1558.	5.0	42
17	An integral control formulation of mean field game based large scale coordination of loads in smart grids. Automatica, 2019, 100, 312-322.	5.0	42
18	Supervisory Control of Distributed Systems: Conflict Resolution. Discrete Event Dynamic Systems: Theory and Applications, 2000, 10, 131-186.	1.5	40

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19	Behaviour modelling of wideband RF transmitters using Hammerstein–Wiener models. IET Circuits, Devices and Systems, 2010, 4, 282.	1.4	36
20	A jump-driven Markovian electric load model. Advances in Applied Probability, 1990, 22, 564-586.	0.7	34
21	Stochastic optimal control under Poisson-distributed observations. IEEE Transactions on Automatic Control, 2000, 45, 3-13.	5.7	31
22	On the Statistical Properties of a Cyclic Diffusion Process Arising in the Modeling of Thermostat-Controlled Electric Power System Loads. SIAM Journal on Applied Mathematics, 1988, 48, 465-480.	1.8	29
23	A manufacturing system with general stationary failure process: stability and IPA of hedging control policies. IEEE Transactions on Automatic Control, 1997, 42, 155-170.	5.7	29
24	A renewal theoretic analysis of a class of manufacturing systems. IEEE Transactions on Automatic Control, 1991, 36, 580-587.	5.7	27
25	Mean field based control of power system dispersed energy storage devices for peak load relief. , 2013, , .		27
26	A spectral algorithm for extracting power system modes from time recordings. IEEE Transactions on Power Systems, 1992, 7, 665-683.	6.5	25
27	A production rate control policy for stochastic repair and remanufacturing systems. International Journal of Production Economics, 2009, 121, 39-48.	8.9	23
28	Mean Field Analysis of Controlled Cucker-Smale Type Flocking: Linear Analysis and Perturbation Equations. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2011, 44, 4471-4476.	0.4	22
29	A Hybrid Bellman Equation for Bimodal Systems. , 2007, , 656-659.		22
30	Ergodicity of hedging control policies in single-part multiple-state manufacturing systems. IEEE Transactions on Automatic Control, 1993, 38, 340-343.	5.7	19
31	A Hybrid Bellman Equation for systems with regional dynamics. , 2007, , .		19
32	A Dynamic Game Model of Collective Choice in Multiagent Systems. IEEE Transactions on Automatic Control, 2018, 63, 768-782.	5.7	18
33	Dynamic Collective Choice: Social Optima. IEEE Transactions on Automatic Control, 2018, 63, 3487-3494.	5.7	16
34	Collective Target Tracking Mean Field Control for Markovian Jump-Driven Models of Electric Water Heating Loads. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2014, 47, 1867-1872.	0.4	15
35	Prevision and planning for residential agents in a transactive energy environment. Smart Energy, 2021, 2, 100019.	5.7	15
36	Unreliable Transfer Lines: Decomposition/Aggregation and Optimization. Annals of Operations Research, 2004, 125, 167-190.	4.1	14

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37	Decomposition/Aggregation-Based Dynamic Programming Optimization of PartiallyHomogeneous UnreliableTransfer Lines. IEEE Transactions on Automatic Control, 2004, 49, 68-81.	5.7	14
38	Joint assignment of buffer sizes and inspection points in unreliable transfer lines with scrapping of defective parts. Production and Manufacturing Research, 2013, 1, 79-101.	1.5	14
39	Consensus Algorithms and the Decomposition-Separation Theorem. IEEE Transactions on Automatic Control, 2016, 61, 2357-2369.	5.7	14
40	A Solution to the Consensus Problem via Stochastic Mean Field Control. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2010, 43, 323-328.	0.4	13
41	Mean Field Games. , 2018, , 345-372.		13
42	MEAN FIELD (NCE) FORMULATION OF ESTIMATION BASED LEADERâ€"FOLLOWER COLLECTIVE DYNAMICS. International Journal of Robotics and Automation, 2011, 26, .	0.1	12
43	Theorems about ergodicity and class-ergodicity of chains with applications in known consensus models. , 2012, , .		11
44	Ã‰minence Grise Coalitions: On the Shaping of Public Opinion. IEEE Transactions on Control of Network Systems, 2017, 4, 133-145.	3.7	11
45	Convergence characteristics of a maximum likelihood load model identification scheme. Automatica, 1992, 28, 885-896.	5.0	10
46	A Mean Field Game Synthesis of Initial Mean Consensus Problems: A Continuum Approach for Non-Gaussian Behavior$ $. IEEE Transactions on Automatic Control, 2014, 59, 449-455.	5.7	10
47	A dynamic game model of collective choice in multi-agent systems. , 2015, , .		10
48	A flexibility product for electric water heater aggregators on electricity markets. Applied Energy, 2020, 280, 115168.	10.1	10
49	Microcomputer based power network control center simulator for education. IEEE Transactions on Power Systems, 1990, 5, 474-481.	6.5	9
50	Adaptive Machine Learning for Automated Modeling of Residential Prosumer Agents. Energies, 2020, 13, 2250.	3.1	9
51	The Nash certainty equivalence principle and McKean-Vlasov systems: An invariance principle and entry adaptation. , 2007, , .		8
52	A micro-macro traffic model based on Mean-Field Games. , 2015, , .		8
53	Collective Stochastic Discrete Choice Problems: A Min-LQG Dynamic Game Formulation. IEEE Transactions on Automatic Control, 2020, 65, 3302-3316.	5.7	8
54	Pade approximants for the transient optimization of hedging control policies in manufacturing. IEEE Transactions on Automatic Control, 1997, 42, 440-457.	5.7	7

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55	Optimal white water and broke recirculation policies in paper mills via jump linear quadratic control. IEEE Transactions on Control Systems Technology, 2002, 10, 578-588.	5.2	7
56	Stochastic Control of Network Systems II: NETCAD Optimal Control & the HJB Equation. , 2006, , .		7
57	Stochastic Control of Network Systems I: NETCAD State Space Structure & Dynamics. , 2006, , .		7
58	Social dynamics in mean field LQG control: Egoistic and altruistic agents. , 2010, , .		7
59	Synthesis of Cucker-Smale type flocking via Mean Field stochastic control theory: Nash equilibria. , 2010, , .		7
60	Approximate performance analysis of CONWIP disciplines inÂunreliable nonÂhomogeneous transfer lines. Annals of Operations Research, 2011, 182, 213-233.	4.1	7
61	On consensus with a general discrete time convex combination based algorithm for multi-agent systems. , 2011, , .		7
62	Linear Consensus Algorithms Based on Balanced Asymmetric Chains. IEEE Transactions on Automatic Control, 2015, 60, 2808-2812.	5.7	7
63	Computationally tractable stochastic power control laws in wireless communications. IEEE Transactions on Automatic Control, 2005, 50, 263-268.	5.7	6
64	A locality generalization of the NCE (Mean Field) principle: Agent specific cost interactions. , 2008, , .		6
65	Social optima in mean field LQG control: Centralized and decentralized strategies. , 2009, , .		6
66	Control of Admission and Routing in Loss Networks: Hybrid Dynamic Programming Equations. IEEE Transactions on Automatic Control, 2010, 55, 350-366.	5.7	6
67	Consensus algorithms and the decomposition-separation theorem. , 2013, , .		6
68	A Quantilized Mean Field Game Approach To Energy Pricing With Application To Fleets Of Plug-In Electric Vehicles. , 2019, , .		6
69	Identification of hot water end-use process of electric water heaters from energy measurements. Electric Power Systems Research, 2020, 189, 106625.	3.6	6
70	A Tractable Class of Maximal Hedging Policies in Multi-Part Manufacturing Systems. Discrete Event Dynamic Systems: Theory and Applications, 1998, 8, 299-331.	1.5	5
71	A solution to the initial mean consensus problem via a continuum based Mean Field control approach. , 2011, , .		5
72	Distributed estimation and control for large population stochastic multi-agent systems with coupling in the measurements. , 2013, , .		5

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73	A class of collective target tracking problems in energy systems: Cooperative versus non-cooperative mean field control solutions. , 2014, , .		5
74	Optimal Control of a Multistate Failure-Prone Manufacturing System under a Conditional Value-at-Risk Cost Criterion. Journal of Optimization Theory and Applications, 2015, 167, 716-732.	1.5	5
75	Mean field social control with decentralized strategies and optimality characterization. , 2016, , .		5
76	Smart Distributed Energy Storage Controller (smartDESC). Energy, 2020, 210, 118500.	8.8	5
77	Control of Ï‰-automata under state fairness assumptions. Systems and Control Letters, 1998, 33, 265-274.	2.3	4
78	Degenerate Stochastic Control Problems with ExponentialCosts and Weakly Coupled Dynamics: Viscosity Solutions and a Maximum Principle. SIAM Journal on Control and Optimization, 2005, 44, 367-387.	2.1	4
79	Hammerstein-Wiener Model for Wideband RF Transmitters Using Base-Band Data. , 2007, , .		4
80	Ergodicity and class-ergodicity of balanced asymmetric stochastic chains. , 2013, , .		4
81	A stochastic hybrid state model for optimizing hedging policies in manufacturing systems with randomly occurring defects. Discrete Event Dynamic Systems: Theory and Applications, 2014, 24, 69-98.	1.5	4
82	Mean field game based control of dispersed energy storage devices with constrained inputs. , 2016, , .		4
83	A dynamic collective choice model with an advertiser. , 2016, , .		4
84	A Dynamic Collective Choice Model with an Advertiser. Dynamic Games and Applications, 2018, 8, 490-506.	1.9	4
85	Dynamic marketing policies with rating-sensitive consumers: A mean-field games approach. European Journal of Operational Research, 2022, 299, 1079-1093.	5.7	4
86	Distributed control of loss network systems: Independent subnetwork behaviour in infinite networks. , 2007, , .		3
87	Optimality of adaption based Mean Field control laws in leader-follower stochastic collective dynamics. , 2010, , .		3
88	Consensus and disagreement in collective homing problems: A mean field games formulation. , 2014, , .		3
89	Collective target tracking mean field control for electric space heaters. , 2014, , .		3
90	A dynamic ride-sourcing game with many drivers. , 2017, , .		3

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91	Coupling a Power Dispatch Model with a Wardrop or Mean-Field-Game Equilibrium Model. Dynamic Games and Applications, 2021, 11, 217-241.	1.9	3
92	A Novel Mean Field Game-Based Strategy for Charging Electric Vehicles in Solar Powered Parking Lots. Energies, 2021, 14, 8517.	3.1	3
93	Large-scale dynamical interconnections of stochastic singular systems. Circuits, Systems, and Signal Processing, 1991, 10, 115-133.	2.0	2
94	STOCHASTIC POWER CONTROL FOR WIRELESS SYSTEMS: CENTRALIZED DYNAMIC SOLUTIONS AND ASPECTS OF DECENTRALIZED CONTROL. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2002, 35, 413-418.	0.4	2
95	Polynomial-Based Pre-distortion for Wideband RF Transmitters Using Single Frequency Signal. , 2007, , .		2
96	Distributed control for radial loss network systems via the ash Certainty Equivalence (mean field) principle. , 2008, , .		2
97	Derivation of Consensus Algorithm Dynamics from Mean Field Stochastic Control NCE Equations. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2009, 42, 13-18.	0.4	2
98	On the Limiting Behavior of Linear or Convex Combination Based Updates of Multi-Agent Systems. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2011, 44, 8819-8823.	0.4	2
99	Optimality of a hedging-point control policy for a failure-prone manufacturing system under a probabilistic cost criterion. , 2011, , .		2
100	Decentralized estimation in a class of measurements induced mean field control problems. , 2013, , .		2
101	A class of interference induced games: Asymptotic Nash equilibria and parameterized cooperative solutions. Automatica, 2016, 69, 181-194.	5.0	2
102	Limit Game Models for Climate Change Negotiations. Annals of the International Society of Dynamic Games, 2017, , 27-47.	0.3	2
103	A mean field route choice game model. , 2018, , .		2
104	Leader-Follower Cucker-Smale Type Flocking Synthesized via Mean Field Stochastic Control Theory. Advances in Intelligent and Soft Computing, 2010, , 283-298.	0.2	2
105	An Inverse Nash Mean Field Game-based Strategy for the Decentralized Control of Thermostatic Loads. , 2021, , .		2
106	A Recommender System for Predictive Control of Heating Systems in Economic Demand Response Programs. IEEE Open Journal of Industry Applications, 2022, 3, 79-89.	6.5	2
107	A jump-driven Markovian electric load model. Advances in Applied Probability, 1990, 22, 564-586.	0.7	1
108	Stochastic Hybrid Netcad Systems for Modeling Call Admission and Routing Control in Networks. , 2006, , 166-171.		1

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109	STOCHASTIC HYBRID NETCAD SYSTEMS FOR MODELING CALL ADMISSION AND ROUTING CONTROL IN NETWORKS. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2006, 39, 166-171.	0.4	1
110	Introduction to the special issue on stochastic modelling, control, and robust optimization at the crossroads of engineering, environmental economics, and finance. Automatica, 2008, 44, 1457-1459.	5.0	1
111	A geometric approach towards linear consensus algorithms. , 2014, , .		1
112	Distributed estimation of multi-agent systems with coupling in the measurements: Bulk algorithm and approximate Kalman-type filtering. , 2014, , .		1
113	Pricing for QoS Provisioning Across Multiple Internet Service Provider Domains. , 2007, , 236-246.		1
114	Linear Quadratic Regulators for Wireless Data Transmission Scheduling. , 2006, , .		0
115	Kolmogorov equations based approximate analysis and sizing of constant work in process unreliable manufacturing system loops. , 2008, , .		0
116	An improved dynamic programming algorithm for nonhomogeneous transfer line Kanban optimization. , 2008, , .		0
117	Large population games in radial loss networks: Computationally tractable equilibria for distributed network admission control. , 2009, , .		0
118	A stochastic hybrid state model for optimizing hedging policies in manufacturing systems with randomly occurring defects. , 2010, , .		0
119	An evolution mean field equation system of initial mean consensus behaviour: A stability analysis. , 2011, , .		0
120	Optimal control of a Markovian failure-prone manufacturing system under a risk-averse cost criterion. , 2013, , .		0
121	Eminence grise coalitions in opinion dynamics. , 2014, , .		0
122	Interference Induced Games in Networked Control Systems and a Class of Dual Control Solutions * *The work of the first two authors was supported by Canadaâ€™s NSERC grant 6820-2011.. IFAC-PapersOnLine, 2017, 50, 14332-14337.	0.9	0
123	A Spatial Partitioning Based Crowd Evacuation Model. , 2021, , .		0