

# Roland P MalhamÃ©

## List of Publications by Year in descending order

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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	Dynamic marketing policies with rating-sensitive consumers: A mean-field games approach. European Journal of Operational Research, 2022, 299, 1079-1093.	5.7	4
2	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
3	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
4	Prevision and planning for residential agents in a transactive energy environment. Smart Energy, 2021, 2, 100019.	5.7	15
5	A Novel Mean Field Game-Based Strategy for Charging Electric Vehicles in Solar Powered Parking Lots. Energies, 2021, 14, 8517.	3.1	3
6	A Spatial Partitioning Based Crowd Evacuation Model. , 2021, , .		0
7	An Inverse Nash Mean Field Game-based Strategy for the Decentralized Control of Thermostatic Loads. , 2021, , .		2
8	Smart Distributed Energy Storage Controller (smartDESC). Energy, 2020, 210, 118500.	8.8	5
9	Identification of hot water end-use process of electric water heaters from energy measurements. Electric Power Systems Research, 2020, 189, 106625.	3.6	6
10	A flexibility product for electric water heater aggregators on electricity markets. Applied Energy, 2020, 280, 115168.	10.1	10
11	Adaptive Machine Learning for Automated Modeling of Residential Prosumer Agents. Energies, 2020, 13, 2250.	3.1	9
12	Collective Stochastic Discrete Choice Problems: A Min-LQG Dynamic Game Formulation. IEEE Transactions on Automatic Control, 2020, 65, 3302-3316.	5.7	8
13	A Quantized Mean Field Game Approach To Energy Pricing With Application To Fleets Of Plug-In Electric Vehicles. , 2019, , .		6
14	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
15	Dynamic Collective Choice: Social Optima. IEEE Transactions on Automatic Control, 2018, 63, 3487-3494.	5.7	16
16	A Dynamic Collective Choice Model with an Advertiser. Dynamic Games and Applications, 2018, 8, 490-506.	1.9	4
17	A Dynamic Game Model of Collective Choice in Multiagent Systems. IEEE Transactions on Automatic Control, 2018, 63, 768-782.	5.7	18
18	A mean field route choice game model. , 2018, , .		2

#	ARTICLE	IF	CITATIONS
19	Mean Field Games. , 2018, , 345-372.		13
20	Ã%ominence Grise Coalitions: On the Shaping of Public Opinion. IEEE Transactions on Control of Network Systems, 2017, 4, 133-145.	3.7	11
21	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
22	Limit Game Models for Climate Change Negotiations. Annals of the International Society of Dynamic Games, 2017, , 27-47.	0.3	2
23	A dynamic ride-sourcing game with many drivers. , 2017, , .		3
24	Mean Field Games. , 2017, , 1-28.		51
25	Mean field social control with decentralized strategies and optimality characterization. , 2016, , .		5
26	Mean field game based control of dispersed energy storage devices with constrained inputs. , 2016, , .		4
27	A dynamic collective choice model with an advertiser. , 2016, , .		4
28	A class of interference induced games: Asymptotic Nash equilibria and parameterized cooperative solutions. Automatica, 2016, 69, 181-194.	5.0	2
29	Consensus Algorithms and the Decomposition-Separation Theorem. IEEE Transactions on Automatic Control, 2016, 61, 2357-2369.	5.7	14
30	A dynamic game model of collective choice in multi-agent systems. , 2015, , .		10
31	A micro-macro traffic model based on Mean-Field Games. , 2015, , .		8
32	Linear Consensus Algorithms Based on Balanced Asymmetric Chains. IEEE Transactions on Automatic Control, 2015, 60, 2808-2812.	5.7	7
33	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
34	Consensus and disagreement in collective homing problems: A mean field games formulation. , 2014, , .		3
35	A class of collective target tracking problems in energy systems: Cooperative versus non-cooperative mean field control solutions. , 2014, , .		5
36	Collective target tracking mean field control for electric space heaters. , 2014, , .		3

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37	Eminence grise coalitions in opinion dynamics. , 2014, , .		0
38	A geometric approach towards linear consensus algorithms. , 2014, , .		1
39	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
40	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
41	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
42	Distributed estimation of multi-agent systems with coupling in the measurements: Bulk algorithm and approximate Kalman-type filtering. , 2014, , .		1
43	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
44	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
45	Consensus algorithms and the decomposition-separation theorem. , 2013, , .		6
46	Mean field based control of power system dispersed energy storage devices for peak load relief. , 2013, , .		27
47	Optimal control of a Markovian failure-prone manufacturing system under a risk-averse cost criterion. , 2013, , .		0
48	Decentralized estimation in a class of measurements induced mean field control problems. , 2013, , .		2
49	Ergodicity and class-ergodicity of balanced asymmetric stochastic chains. , 2013, , .		4
50	Distributed estimation and control for large population stochastic multi-agent systems with coupling in the measurements. , 2013, , .		5
51	Theorems about ergodicity and class-ergodicity of chains with applications in known consensus models. , 2012, , .		11
52	Social Optima in Mean Field LQG Control: Centralized and Decentralized Strategies. IEEE Transactions on Automatic Control, 2012, 57, 1736-1751.	5.7	176
53	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
54	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

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55	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
56	Approximate performance analysis of CONWIP disciplines in unreliable non-homogeneous transfer lines. Annals of Operations Research, 2011, 182, 213-233.	4.1	7
57	On consensus with a general discrete time convex combination based algorithm for multi-agent systems. , 2011, , .		7
58	Optimality of a hedging-point control policy for a failure-prone manufacturing system under a probabilistic cost criterion. , 2011, , .		2
59	An evolution mean field equation system of initial mean consensus behaviour: A stability analysis. , 2011, , .		0
60	A solution to the initial mean consensus problem via a continuum based Mean Field control approach. , 2011, , .		5
61	MEAN FIELD (NCE) FORMULATION OF ESTIMATION BASED LEADER-FOLLOWER COLLECTIVE DYNAMICS. International Journal of Robotics and Automation, 2011, 26, .	0.1	12
62	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
63	Behaviour modelling of wideband RF transmitters using Hammerstein-Wiener models. IET Circuits, Devices and Systems, 2010, 4, 282.	1.4	36
64	Social dynamics in mean field LQG control: Egoistic and altruistic agents. , 2010, , .		7
65	Optimality of adaption based Mean Field control laws in leader-follower stochastic collective dynamics. , 2010, , .		3
66	Synthesis of Cucker-Smale type flocking via Mean Field stochastic control theory: Nash equilibria. , 2010, , .		7
67	A stochastic hybrid state model for optimizing hedging policies in manufacturing systems with randomly occurring defects. , 2010, , .		0
68	Control of Admission and Routing in Loss Networks: Hybrid Dynamic Programming Equations. IEEE Transactions on Automatic Control, 2010, 55, 350-366.	5.7	6
69	The NCE (Mean Field) Principle With Locality Dependent Cost Interactions. IEEE Transactions on Automatic Control, 2010, 55, 2799-2805.	5.7	66
70	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
71	Social optima in mean field LQG control: Centralized and decentralized strategies. , 2009, , .		6
72	A production rate control policy for stochastic repair and remanufacturing systems. International Journal of Production Economics, 2009, 121, 39-48.	8.9	23

#	ARTICLE	IF	CITATIONS
73	Large population games in radial loss networks: Computationally tractable equilibria for distributed network admission control. , 2009, , .		0
74	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
75	A stochastic control model for optimal timing of climate policies. Automatica, 2008, 44, 1545-1558.	5.0	42
76	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
77	Kolmogorov equations based approximate analysis and sizing of constant work in process unreliable manufacturing system loops. , 2008, , .		0
78	An improved dynamic programming algorithm for nonhomogeneous transfer line Kanban optimization. , 2008, , .		0
79	A locality generalization of the NCE (Mean Field) principle: Agent specific cost interactions. , 2008, , .		6
80	Distributed control for radial loss network systems via the ash Certainty Equivalence (mean field) principle. , 2008, , .		2
81	Hammerstein-Wiener Model for Wideband RF Transmitters Using Base-Band Data. , 2007, , .		4
82	A Hybrid Bellman Equation for systems with regional dynamics. , 2007, , .		19
83	The Nash certainty equivalence principle and McKean-Vlasov systems: An invariance principle and entry adaptation. , 2007, , .		8
84	Distributed control of loss network systems: Independent subnetwork behaviour in infinite networks. , 2007, , .		3
85	Large-Population Cost-Coupled LQG Problems With Nonuniform Agents: Individual-Mass Behavior and Decentralized $\epsilon$ -Nash Equilibria. IEEE Transactions on Automatic Control, 2007, 52, 1560-1571.	5.7	773
86	Polynomial-Based Pre-distortion for Wideband RF Transmitters Using Single Frequency Signal. , 2007, , .		2
87	An Invariance Principle in Large Population Stochastic Dynamic Games. Journal of Systems Science and Complexity, 2007, 20, 162-172.	2.8	66
88	A Hybrid Bellman Equation for Bimodal Systems. , 2007, , 656-659.		22
89	Pricing for QoS Provisioning Across Multiple Internet Service Provider Domains. , 2007, , 236-246.		1
90	Stochastic Hybrid Netcad Systems for Modeling Call Admission and Routing Control in Networks. , 2006, , 166-171.		1

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91	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
92	Stochastic Control of Network Systems II: NETCAD Optimal Control & the HJB Equation. , 2006, , .		7
93	Stochastic Control of Network Systems I: NETCAD State Space Structure & Dynamics. , 2006, , .		7
94	Nash Certainty Equivalence in Large Population Stochastic Dynamic Games: Connections with the Physics of Interacting Particle Systems. , 2006, , .		56
95	Linear Quadratic Regulators for Wireless Data Transmission Scheduling. , 2006, , .		0
96	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
97	Degenerate Stochastic Control Problems with Exponential Costs and Weakly Coupled Dynamics: Viscosity Solutions and a Maximum Principle. SIAM Journal on Control and Optimization, 2005, 44, 367-387.	2.1	4
98	Computationally tractable stochastic power control laws in wireless communications. IEEE Transactions on Automatic Control, 2005, 50, 263-268.	5.7	6
99	Nash Equilibria for Large-Population Linear Stochastic Systems of Weakly Coupled Agents. , 2005, , 215-252.		61
100	Uplink Power Adjustment in Wireless Communication Systems: A Stochastic Control Analysis. IEEE Transactions on Automatic Control, 2004, 49, 1693-1708.	5.7	67
101	Unreliable Transfer Lines: Decomposition/Aggregation and Optimization. Annals of Operations Research, 2004, 125, 167-190.	4.1	14
102	Decomposition/Aggregation-Based Dynamic Programming Optimization of Partially Homogeneous Unreliable Transfer Lines. IEEE Transactions on Automatic Control, 2004, 49, 68-81.	5.7	14
103	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
104	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
105	Supervisory Control of Distributed Systems: Conflict Resolution. Discrete Event Dynamic Systems: Theory and Applications, 2000, 10, 131-186.	1.5	40
106	Stochastic optimal control under Poisson-distributed observations. IEEE Transactions on Automatic Control, 2000, 45, 3-13.	5.7	31
107	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
108	Control of $\dot{\gamma}$ -automata under state fairness assumptions. Systems and Control Letters, 1998, 33, 265-274.	2.3	4

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109	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
110	Pade approximants for the transient optimization of hedging control policies in manufacturing. IEEE Transactions on Automatic Control, 1997, 42, 440-457.	5.7	7
111	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
112	A physically-based computer model of aggregate electric water heating loads. IEEE Transactions on Power Systems, 1994, 9, 1209-1217.	6.5	51
113	Ergodicity of hedging control policies in single-part multiple-state manufacturing systems. IEEE Transactions on Automatic Control, 1993, 38, 340-343.	5.7	19
114	A class of models for load management application and evaluation revisited. IEEE Transactions on Power Systems, 1992, 7, 1435-1443.	6.5	65
115	A spectral algorithm for extracting power system modes from time recordings. IEEE Transactions on Power Systems, 1992, 7, 665-683.	6.5	25
116	Convergence characteristics of a maximum likelihood load model identification scheme. Automatica, 1992, 28, 885-896.	5.0	10
117	Large-scale dynamical interconnections of stochastic singular systems. Circuits, Systems, and Signal Processing, 1991, 10, 115-133.	2.0	2
118	A renewal theoretic analysis of a class of manufacturing systems. IEEE Transactions on Automatic Control, 1991, 36, 580-587.	5.7	27
119	A jump-driven Markovian electric load model. Advances in Applied Probability, 1990, 22, 564-586.	0.7	1
120	Microcomputer based power network control center simulator for education. IEEE Transactions on Power Systems, 1990, 5, 474-481.	6.5	9
121	A jump-driven Markovian electric load model. Advances in Applied Probability, 1990, 22, 564-586.	0.7	34
122	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
123	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