

# Naomi Ehrich Leonard

## List of Publications by Year in descending order

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128  
papers

6,558  
citations

109321

35  
h-index

88630

70  
g-index

130  
all docs

130  
docs citations

130  
times ranked

3658  
citing authors

#	ARTICLE	IF	CITATIONS
1	Nonlinear Opinion Dynamics With Tunable Sensitivity. IEEE Transactions on Automatic Control, 2023, 68, 1415-1430.	5.7	26
2	Influence Spread in the Heterogeneous Multiplex Linear Threshold Model. IEEE Transactions on Control of Network Systems, 2022, 9, 1080-1091.	3.7	4
3	Tuning Cooperative Behavior in Games With Nonlinear Opinion Dynamics. , 2022, 6, 2030-2035.		9
4	Switching Transformations for Decentralized Control of Opinion Patterns in Signed Networks: Application to Dynamic Task Allocation. , 2022, 6, 3463-3468.		3
5	Corrections to "Satisficing in Multiarmed Bandit Problems" [Aug 17 3788-3803]. IEEE Transactions on Automatic Control, 2021, 66, 476-478.	5.7	0
6	Adaptive Susceptibility and Heterogeneity in Contagion Models on Networks. IEEE Transactions on Automatic Control, 2021, 66, 581-594.	5.7	10
7	Control of Networks of Underwater Vehicles. , 2021, , 351-356.		1
8	Distributed cooperative decision making in multi-agent multi-armed bandits. Automatica, 2021, 125, 109445.	5.0	30
9	Analysis and control of agreement and disagreement opinion cascades. Swarm Intelligence, 2021, 15, 47-82.	2.2	12
10	Ecological and behavioral mechanisms of density-dependent habitat expansion in a recovering African ungulate population. Ecological Monographs, 2021, 91, e01476.	5.4	19
11	Heterogeneous Explore-Exploit Strategies on Multi-Star Networks. , 2021, 5, 1603-1608.		7
12	Distributed Bandits: Probabilistic Communication on d-regular Graphs. , 2021, , .		0
13	The nonlinear feedback dynamics of asymmetric political polarization. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	33
14	Control of Agreement and Disagreement Cascades with Distributed Inputs. , 2021, , .		2
15	Cluster Synchronization of Diffusively Coupled Nonlinear Systems: A Contraction-Based Approach. Journal of Nonlinear Science, 2020, 30, 2235-2257.	2.1	9
16	Active Control and Sustained Oscillations in actSIS Epidemic Dynamics. IFAC-PapersOnLine, 2020, 53, 807-812.	0.9	3
17	A Dynamic Observation Strategy for Multi-agent Multi-armed Bandit Problem. , 2020, , .		9
18	Animal-borne wireless network: Remote imaging of community ecology. Journal of Field Robotics, 2019, 36, 1141-1165.	6.0	8

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19	Social decision-making driven by artistic exploreâ€œexploit tension. <i>Interdisciplinary Science Reviews</i> , 2019, 44, 55-81.	1.4	4
20	Mixed mode oscillations and phase locking in coupled FitzHugh-Nagumo model neurons. <i>Chaos</i> , 2019, 29, 033105.	2.5	31
21	Heterogeneous Stochastic Interactions for Multiple Agents in a Multi-armed Bandit Problem. , 2019, , .		11
22	A Continuous Threshold Model of Cascade Dynamics. , 2019, , .		8
23	Multiagent Decision-Making Dynamics Inspired by Honeybees. <i>IEEE Transactions on Control of Network Systems</i> , 2018, 5, 793-806.	3.7	57
24	Minimum-Time Trajectories for Steered Agent With Constraints on Speed, Lateral Acceleration, and Turning Rate. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME</i> , 2018, 140, .	1.6	1
25	Social Imitation in Cooperative Multiarmed Bandits: Partition-Based Algorithms with Strictly Local Information. , 2018, , .		9
26	Feedback Controlled Bifurcation of Evolutionary Dynamics with Generalized Fitness. , 2018, , .		2
27	Regulation of harvester ant foraging as a closed-loop excitable system. <i>PLoS Computational Biology</i> , 2018, 14, e1006200.	3.2	35
28	Bistability and Resurgent Epidemics in Reinfection Models. , 2018, 2, 290-295.		15
29	Optimal evasive strategies for multiple interacting agents with motion constraints. <i>Automatica</i> , 2018, 94, 26-34.	5.0	26
30	A martingale analysis of first passage times of time-dependent Wiener diffusion models. <i>Journal of Mathematical Psychology</i> , 2017, 77, 94-110.	1.8	19
31	On distributed linear filtering with noisy communication. , 2017, , .		3
32	Bio-inspired decision-making and control: From honeybees and neurons to network design. , 2017, , .		5
33	An agent-based framework for bio-inspired, value-sensitive decision-making * *This research has been supported in part by NSF grant CMMI-1635056, ONR grant N00014-14-1-0635, and UNAM-DGAPA grant PAPIIT RA105816. <i>IFAC-PapersOnLine</i> , 2017, 50, 8238-8243.	0.9	3
34	On the linear threshold model for diffusion of innovations in multiplex social networks. , 2017, , .		5
35	On robustness and leadership in Markov switching consensus networks. , 2017, , .		1
36	Optimal leader selection for controllability and robustness in multi-agent networks. , 2016, , .		18

#	ARTICLE	IF	CITATIONS
37	Distributed cooperative decision-making in multiarmed bandits: Frequentist and Bayesian algorithms. , 2016, , .		32
38	On distributed cooperative decision-making in multiarmed bandits. , 2016, , .		24
39	Information Centrality and Ordering of Nodes for Accuracy in Noisy Decision-Making Networks. IEEE Transactions on Automatic Control, 2016, 61, 1040-1045.	5.7	25
40	Investigating group behavior in dance: an evolutionary dynamics approach. , 2016, , .		9
41	Cooperative Vehicle Environmental Monitoring. , 2016, , 441-458.		11
42	Using Network Dynamical Influence to Drive Consensus. Scientific Reports, 2016, 6, 26318.	3.3	12
43	Synchronization bound for networks of nonlinear oscillators. , 2016, , .		5
44	The content and availability of information affects the evolution of social-information gathering strategies. Theoretical Ecology, 2016, 9, 455-476.	1.0	4
45	Joint Centrality Distinguishes Optimal Leaders in Noisy Networks. IEEE Transactions on Control of Network Systems, 2016, 3, 366-378.	3.7	52
46	A New Notion of Effective Resistance for Directed Graphsâ€”Part II: Computing Resistances. IEEE Transactions on Automatic Control, 2016, 61, 1737-1752.	5.7	14
47	Parameter Estimation in Softmax Decision-Making Models With Linear Objective Functions. IEEE Transactions on Automation Science and Engineering, 2016, 13, 54-67.	5.2	42
48	A New Notion of Effective Resistance for Directed Graphsâ€”Part I: Definition and Properties. IEEE Transactions on Automatic Control, 2016, 61, 1727-1736.	5.7	39
49	Control Theory: A Mathematical Perspective on Cyber-Physical Systems. Oberwolfach Reports, 2015, 12, 597-659.	0.0	0
50	Nonuniform Line Coverage From Noisy Scalar Measurements. IEEE Transactions on Automatic Control, 2015, 60, 1975-1980.	5.7	18
51	Coordinated Speed Oscillations in Schooling Killifish Enrich Social Communication. Journal of Nonlinear Science, 2015, 25, 1077-1109.	2.1	14
52	A comparative study of drift diffusion and linear ballistic accumulator models in a reward maximization perceptual choice task. Frontiers in Neuroscience, 2014, 8, 148.	2.8	9
53	Algorithmic models of human decision making in Gaussian multi-armed bandit problems. , 2014, , .		1
54	Dynamics of pursuit and evasion in a heterogeneous herd. , 2014, , .		14

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55	Surveillance in an abruptly changing world via multiarmed bandits. , 2014, , .		19
56	Control of Networks of Underwater Vehicles. , 2014, , 1-8.		1
57	Multi-agent system dynamics: Bifurcation and behavior of animal groups. Annual Reviews in Control, 2014, 38, 171-183.	7.9	31
58	Collective Decision-Making in Ideal Networks: The Speed-Accuracy Tradeoff. IEEE Transactions on Control of Network Systems, 2014, 1, 121-132.	3.7	42
59	Adaptive network dynamics and evolution of leadership in collective migration. Physica D: Nonlinear Phenomena, 2014, 267, 81-93.	2.8	26
60	Modeling Human Decision Making in Generalized Gaussian Multiarmed Bandits. Proceedings of the IEEE, 2014, 102, 544-571.	21.3	63
61	Satisficing in Gaussian bandit problems. , 2014, , .		3
62	In the Dance Studio: An Art and Engineering Exploration of Human Flocking. , 2014, , 27-49.		6
63	Nonuniform coverage control on the line. IEEE Transactions on Automatic Control, 2013, 58, 2743-2755.	5.7	51
64	On optimal foraging and multi-armed bandits. , 2013, , .		23
65	On the speed-accuracy tradeoff in collective decision making. , 2013, , .		0
66	Pursuit, herding and evasion: A three-agent model of caribou predation. , 2013, , .		54
67	Information centrality and optimal leader selection in noisy networks. , 2013, , .		55
68	Cooperative learning in multi-agent systems from intermittent measurements. , 2013, , .		6
69	Multi-Agent System Dynamics: Bifurcation and Behavior of Animal Groups. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2013, 46, 307-317.	0.4	20
70	Starling Flock Networks Manage Uncertainty in Consensus at Low Cost. PLoS Computational Biology, 2013, 9, e1002894.	3.2	98
71	A Mechanism for Value-Sensitive Decision-Making. PLoS ONE, 2013, 8, e73216.	2.5	102
72	In the dance studio: Analysis of human flocking. , 2012, , .		16

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73	Distributed nonuniform coverage with limited scalar measurements. , 2012, , .		2
74	Node certainty in collective decision making. , 2012, , .		2
75	Towards optimization of a human-inspired heuristic for solving explore-exploit problems. , 2012, , .		5
76	Decision versus compromise for animal groups in motion. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 227-232.	7.1	82
77	Hopf Bifurcations and Limit Cycles in Evolutionary Network Dynamics. SIAM Journal on Applied Dynamical Systems, 2012, 11, 1754-1784.	1.6	44
78	Can Post-Error Dynamics Explain Sequential Reaction Time Patterns?. Frontiers in Psychology, 2012, 3, 213.	2.1	32
79	Real-Time Feedback-Controlled Robotic Fish for Behavioral Experiments With Fish Schools. Proceedings of the IEEE, 2012, 100, 150-163.	21.3	98
80	Towards Human-Robot Teams: Model-Based Analysis of Human Decision Making in Two-Alternative Choice Tasks With Social Feedback. Proceedings of the IEEE, 2012, 100, 751-775.	21.3	31
81	Interaction Dynamics: The Interface of Humans and Smart Machines [Scanning the Issue]. Proceedings of the IEEE, 2012, 100, 567-570.	21.3	16
82	Uninformed Individuals Promote Democratic Consensus in Animal Groups. Science, 2011, 334, 1578-1580.	12.6	354
83	Nonuniform coverage control on the line. , 2011, , .		4
84	Limit cycles in replicator-mutator network dynamics. , 2011, , .		14
85	Symmetric coverage of dynamic mapping error for mobile sensor networks. , 2011, , .		4
86	Rearranging trees for robust consensus. , 2011, , .		17
87	Convergence in human decision-making dynamics. Systems and Control Letters, 2010, 59, 87-97.	2.3	21
88	Coordinated control of an underwater glider fleet in an adaptive ocean sampling field experiment in Monterey Bay. Journal of Field Robotics, 2010, 27, 718-740.	6.0	258
89	Robustness of noisy consensus dynamics with directed communication. , 2010, , .		124
90	Nonuniform coverage and cartograms. , 2010, , .		5

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91	Steady-state distributions for human decisions in two-alternative choice tasks. , 2010, , .		5
92	The role of social feedback in steady-state performance of human decision making for two-alternative choice tasks. , 2010, , .		2
93	Coupled stochastic differential equations and collective decision making in the Two-Alternative Forced-Choice task. , 2010, , .		9
94	Cooperative Filters and Control for Cooperative Exploration. IEEE Transactions on Automatic Control, 2010, 55, 650-663.	5.7	219
95	On the trajectories and coordination of steered particles with time-periodic speed profiles. , 2009, , .		2
96	Formation shape and orientation control using projected collinear tensegrity structures. , 2009, , .		13
97	Dynamics of Decision Making in Animal Group Motion. Journal of Nonlinear Science, 2009, 19, 399-435.	2.1	53
98	Autonomous rigid body attitude synchronization. Automatica, 2009, 45, 572-577.	5.0	251
99	Routing strategies for underwater gliders. Deep-Sea Research Part II: Topical Studies in Oceanography, 2009, 56, 173-187.	1.4	48
100	Stabilization of symmetric formations to motion around convex loops. Systems and Control Letters, 2008, 57, 209-215.	2.3	57
101	Nonlinear gliding stability and control for vehicles with hydrodynamic forcing. Automatica, 2008, 44, 1240-1250.	5.0	72
102	Stable Synchronization of Mechanical System Networks. SIAM Journal on Control and Optimization, 2008, 47, 661-683.	2.1	71
103	Cooperative Kalman filters for cooperative exploration. , 2008, , .		5
104	Cooperative Control for Ocean Sampling: The Glider Coordinated Control System. IEEE Transactions on Control Systems Technology, 2008, 16, 735-744.	5.2	201
105	Stabilization of Planar Collective Motion With Limited Communication. IEEE Transactions on Automatic Control, 2008, 53, 706-719.	5.7	373
106	Effective sensing regions and connectivity of agents undergoing periodic relative motions. , 2008, , .		2
107	Integrating human and robot decision-making dynamics with feedback: Models and convergence analysis. , 2008, , .		28
108	Stabilization of Three-Dimensional Collective Motion. Communications in Information and Systems, 2008, 8, 473-500.	0.5	26

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109	Spatial models of bistability in biological collectives. , 2007, , .		11
110	Control of coordinated patterns for ocean sampling. International Journal of Control, 2007, 80, 1186-1199.	1.9	172
111	Alternating spatial patterns for coordinated group motion. , 2007, , .		7
112	Stabilization of collective motion in three dimensions: A consensus approach. , 2007, , .		28
113	Collective Motion, Sensor Networks, and Ocean Sampling. Proceedings of the IEEE, 2007, 95, 48-74.	21.3	730
114	Oscillator Models and Collective Motion. IEEE Control Systems, 2007, 27, 89-105.	0.8	185
115	Stabilization of Planar Collective Motion: All-to-All Communication. IEEE Transactions on Automatic Control, 2007, 52, 811-824.	5.7	421
116	Stabilization laws for collective motion in three dimensions. , 2007, , .		3
117	Coordinated patterns of unit speed particles on a closed curve. Systems and Control Letters, 2007, 56, 397-407.	2.3	113
118	Heterogeneous animal group models and their group-level alignment dynamics: An equation-free approach. Journal of Theoretical Biology, 2007, 246, 100-112.	1.7	13
119	Symmetry and Reduction for Coordinated Rigid Bodies. European Journal of Control, 2006, 12, 176-194.	2.6	23
120	Multi-AUV Control and Adaptive Sampling in Monterey Bay. IEEE Journal of Oceanic Engineering, 2006, 31, 935-948.	3.8	364
121	A Collaborative Portal for Ocean Observatories. , 2006, , .		7
122	Controlled Lagrangian Systems with Gyroscopic Forcing and Dissipation. European Journal of Control, 2004, 10, 478-496.	2.6	54
123	The Equivalence of Controlled Lagrangian and Controlled Hamiltonian Systems. ESAIM - Control, Optimisation and Calculus of Variations, 2002, 8, 393-422.	1.3	116
124	Controlled Lagrangians and the stabilization of Euler-Poincaré mechanical systems. International Journal of Robust and Nonlinear Control, 2001, 11, 191-214.	3.7	54
125	Dynamics of the Kirchhoff equations I: Coincident centers of gravity and buoyancy. Physica D: Nonlinear Phenomena, 1998, 118, 311-342.	2.8	53
126	Mechanics and nonlinear control: making underwater vehicles ride and glide. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 1998, 31, 1-6.	0.4	6



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127	Stability of a bottom-heavy underwater vehicle. <i>Automatica</i> , 1997, 33, 331-346.	5.0	172
128	Stability and drift of underwater vehicle dynamics: Mechanical systems with rigid motion symmetry. <i>Physica D: Nonlinear Phenomena</i> , 1997, 105, 130-162.	2.8	95