

# Mario Sznaier

## List of Publications by Year in descending order

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132  
papers

2,279  
citations

304743

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133  
docs citations

133  
times ranked

1299  
citing authors

#	ARTICLE	IF	CITATIONS
1	Decomposed structured subsets for semidefinite and sum-of-squares optimization. Automatica, 2022, 137, 110125.	5.0	2
2	A convex optimization approach to synthesizing state feedback data-driven controllers for switched linear systems. Automatica, 2022, 139, 110190.	5.0	5
3	A Semi-Algebraic Optimization Approach to Data-Driven Control of Continuous-Time Nonlinear Systems. , 2021, 5, 487-492.		28
4	On Identification of Nonlinear ARX Models with Sparsity in Regressors and Basis Functions. IFAC-PapersOnLine, 2021, 54, 720-725.	0.9	2
5	Peak Estimation Recovery and Safety Analysis. , 2021, 5, 1982-1987.		11
6	Control Oriented Learning in the Era of Big Data. , 2021, 5, 1855-1867.		11
7	Nonlinear Data-Driven Control via State-Dependent Representations. , 2021, , .		9
8	Peak Estimation for Uncertain and Switched Systems. , 2021, , .		6
9	Continuous-time model identification: application on a behavioural (miLife) study. International Journal of Control, 2020, , 1-12.	1.9	1
10	A Loewner Matrix Based Convex Optimization Approach to Finding Low Rank Mixed Time/Frequency Domain Interpolants. , 2020, , .		3
11	MIMO System Identification by Randomized Active-Set Methods. , 2020, , .		1
12	An Algebraic Approach to Efficient Identification of a Class of Wiener Systems. IFAC-PapersOnLine, 2020, 53, 1138-1143.	0.9	0
13	Data-Driven Quadratic Stabilization of Continuous LTI Systems. IFAC-PapersOnLine, 2020, 53, 3965-3970.	0.9	6
14	Key Frame Proposal Network for Efficient Pose Estimation in Videos. Lecture Notes in Computer Science, 2020, , 609-625.	1.3	17
15	Decomposed Structured Subsets for Semidefinite Optimization. IFAC-PapersOnLine, 2020, 53, 7374-7379.	0.9	1
16	Signal Estimation and System Identification With Nonlinear Dynamic Sensors. , 2019, , .		0
17	Efficient Identification of Error-in-Variables Switched Systems via a Sum-of-Squares Polynomial Based Subspace Clustering Method. , 2019, , .		1
18	An Atomic Norm Minimization Framework for Identification of Parameter Varying Nonlinear ARX Models. IFAC-PapersOnLine, 2019, 52, 1-6.	0.9	0

#	ARTICLE	IF	CITATIONS
19	Hankel Matrix Rank as Indicator of Ghost in Bearing-Only Tracking. IEEE Transactions on Aerospace and Electronic Systems, 2018, 54, 2713-2723.	4.7	3
20	Convex Optimization Approaches to Information Structured Decentralized Control. IEEE Transactions on Automatic Control, 2018, 63, 3393-3403.	5.7	17
21	A Randomized Algorithm for Parsimonious Model Identification. IEEE Transactions on Automatic Control, 2018, 63, 532-539.	5.7	17
22	A Moments Based Approach to Designing MIMO Data Driven Controllers for Switched Systems. , 2018, , .		28
23	SoS-RSC: A Sum-of-Squares Polynomial Approach to Robustifying Subspace Clustering Algorithms. , 2018, , .		5
24	Unsupervised Fault Detection of Refrigeration Containers using a Mahalanobis Inverse Moment Matrix Polynomial. IFAC-PapersOnLine, 2018, 51, 249-254.	0.9	2
25	Data Driven Robust Superstable Control of Switched Systems. IFAC-PapersOnLine, 2018, 51, 402-408.	0.9	8
26	Unsupervised Fault Detection of Reefer Containers: A Moments-Based SDP Approach. , 2018, , .		1
27	DYAN: A Dynamical Atoms-Based Network for Video Prediction. Lecture Notes in Computer Science, 2018, , 175-191.	1.3	14
28	Symmetric positive stabilization of linear time-invariant systems. , 2017, , .		0
29	System Identification Algorithm for Non-Uniformly Sampled Data * *This study was partially supported by National Institutes of Health (NIH) grant P50 DA039838 and National Science Foundation (NSF) Grants CNS-1329422 and ECCS-1201973 and the Berkeley Education Alliance for Research in Singapore (BEARS) for the Singapore-Berkeley Building Efficiency and Sustainability in the Tropics (SinBerBEST) Program. The work described is the sole responsibility of the authors and does not necessarily	0.9	2
30	Suboptimal $H_2$ Control of Switched Linear Models: a Superstability Approach * *This work was supported in part by NSF grants IIS-1318145, ECCS-1404163, CMMI-1638234 CNS-1329422 and ECCS-1201973; AFOSR grant FA9550-15-1-0392; and the Alert DHS Center of Excellence under Award Number 2013-ST-061-ED0001.. IFAC-PapersOnLine, 2017, 50, 14380-14385.	0.9	0
31	Dynamics Enhanced Multi-camera Motion Segmentation from Unsynchronized Videos. , 2017, , .		1
32	moM: Mean of Moments Feature for Person Re-identification. , 2017, , .		8
33	A super-atomic norm minimization approach to identifying sparse dynamical graphical models. , 2016, , .		2
34	Solving Temporal Puzzles. , 2016, , .		2
35	Efficient Temporal Sequence Comparison and Classification Using Gram Matrix Embeddings on a Riemannian Manifold. , 2016, , .		53
36	An efficient approach to the radar ghost elimination problem. , 2016, , .		3

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37	Subspace Clustering with Priors via Sparse Quadratically Constrained Quadratic Programming. , 2016, , .		10
38	Unsupervised fault detection using semidefinite programming. , 2015, , .		2
39	Robust Superstabilizing Controller Design from Open-Loop Experimental Input/Output Data**This work was supported in part by NSF grants IIS-1318145and ECCS-1404163; AFOSR grant FA9550-12-1-0271, and the Alert DHS Center of Excellence under Award Number 2008-ST-061-ED0001.. IFAC-PapersOnLine, 2015, 48, 1337-1342.	0.9	6
40	Identification of a class of generalized autoregressive conditional heteroskedasticity (GARCH) models with applications to covariance propagation. , 2015, , .		1
41	Efficient identification of Wiener systems using a combination of atomic norm minimization and interval matrix properties. , 2015, , .		2
42	Identification of LPV systems with LFT parametric dependence via convex optimization. , 2015, , .		1
43	The Interplay Between Big Data and Sparsity in Systems Identification: Some Lessons from Machine Learning**This work was supported in part by NSF grants IIS-1318145and ECCS-1404163; AFOSR grant FA9550-12-1-0271, and the Alert DHS Center of Excellence under Award Number 2008-ST-061-ED0001.. IFAC-PapersOnLine, 2015, 48, 1285-1292.	0.9	1
44	Set membership identification of switched linear systems with known number of subsystems. Automatica, 2015, 51, 180-191.	5.0	52
45	Sparse static output feedback controller design via convex optimization. , 2014, , .		12
46	Parsimonious model identification via atomic norm minimization. , 2014, , .		11
47	An obstacle avoidance and motion planning Command Governor based scheme: The Qball-X4 quadrotor case of study. , 2014, , .		6
48	Convex Certificates for Model (In)validation of Switched Affine Systems With Unknown Switches. IEEE Transactions on Automatic Control, 2014, 59, 2921-2932.	5.7	31
49	Probabilistic Optimal Estimation With Uniformly Distributed Noise. IEEE Transactions on Automatic Control, 2014, 59, 2113-2127.	5.7	10
50	Fast Structured Nuclear Norm Minimization With Applications to Set Membership Systems Identification. IEEE Transactions on Automatic Control, 2014, 59, 2837-2842.	5.7	18
51	A computer vision approach to rare cell in vivo fluorescence flow cytometry. Cytometry Part A: the Journal of the International Society for Analytical Cytology, 2013, 83, 1113-1123.	1.5	23
52	The Way They Move: Tracking Multiple Targets with Similar Appearance. , 2013, , .		222
53	Hankel based maximum margin classifiers: A connection between machine learning and Wiener systems identification. , 2013, , .		5
54	&#x2113;<inf>&#x221E;</inf> worst-case optimal estimators for switched ARX systems. , 2013, , .		1

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55	Finding Causal Interactions in Video Sequences. , 2013, , .		13
56	An efficient atomic norm minimization approach to identification of low order models. , 2013, , .		11
57	A convex optimization approach to model (in)validation of switched ARX systems with unknown switches. , 2012, , .		9
58	Cross-view activity recognition using Hankelets. , 2012, , .		25
59	An algorithm for fast constrained nuclear norm minimization and applications to systems identification. , 2012, , .		15
60	Fast algorithms for structured robust principal component analysis. , 2012, , .		23
61	A Sparsification Approach to Set Membership Identification of Switched Affine Systems. IEEE Transactions on Automatic Control, 2012, 57, 634-648.	5.7	95
62	A Convex Optimization Approach to Synthesizing Bounded Complexity $\ell^{\infty}$ Filters. IEEE Transactions on Automatic Control, 2012, 57, 216-221.	5.7	21
63	Identification and model (in)validation of switched ARX systems: A moment-based approach. , 2011, , 347-379.		1
64	Dynamic subspace-based coordinated multicamera tracking. , 2011, , .		42
65	A rank minimization approach to trajectory (in)validation. , 2011, , .		7
66	Activity recognition using dynamic subspace angles. , 2011, , .		55
67	Low order dynamics embedding for high dimensional time series. , 2011, , .		11
68	Convex relaxations for robust identification of Wiener systems and applications. , 2011, , .		7
69	Bounded complexity $\ell^{\infty}$ filters for switched systems. , 2011, , .		2
70	Call for Papers: Special Issue on "System Identification for Biological Systems". International Journal of Robust and Nonlinear Control, 2010, 20, 842-842.	3.7	0
71	Dynamics-based extraction of information sparsely encoded in high dimensional data streams. , 2010, , .		4
72	A moments-based approach to estimation and data interpolation for a class of Wiener systems. , 2010, , .		5

#	ARTICLE	IF	CITATIONS
73	Model (in) validation of switched ARX systems with unknown switches and its application to activity monitoring. , 2010, , .		14
74	A convex optimization approach to synthesizing bounded complexity filters. , 2009, , .		9
75	Using dynamics to recover Euclidian 3-dimensional structure from 2-dimensional perspective projections. , 2009, , .		4
76	Computational complexity analysis of set membership identification of Hammerstein and Wiener systems. Automatica, 2009, 45, 701-705.	5.0	31
77	Risk Adjusted Set Membership Identification of Wiener Systems. IEEE Transactions on Automatic Control, 2009, 54, 1147-1152.	5.7	11
78	Sequential sparsification for change detection. , 2008, , .		14
79	Fast track matching and event detection. , 2008, , .		10
80	A pessimistic approach to frequency domain model (in)validation. , 2007, , .		3
81	A Rank Minimization Approach to Video Inpainting. , 2007, , .		47
82	A risk adjusted approach to robust simultaneous fault detection and isolation. Automatica, 2007, 43, 499-504.	5.0	14
83	System theoretic methods in computer vision and image processing. , 2007, , .		1
84	Risk Adjusted Identification of Wiener Systems. , 2006, , .		6
85	Set-Membership Identification of Parametric Systems. , 2006, , .		0
86	Robust Identification of 2-D Periodic Systems with Applications to Texture Synthesis and Classification. , 2006, , .		10
87	An algorithm for sampling subsets of $H_{\infty}$ with applications to risk-adjusted performance analysis and model (in)validation. IEEE Transactions on Automatic Control, 2005, 50, 410-416.	5.7	18
88	Probabilistically Constrained Linear Programs and Risk-Adjusted Controller Design. SIAM Journal on Optimization, 2005, 15, 938-951.	2.0	57
89	Convex Necessary and Sufficient Conditions for Frequency Domain Model (In)Validation Under SLTV Structured Uncertainty. IEEE Transactions on Automatic Control, 2004, 49, 1683-1692.	5.7	6
90	Segmentation for Robust Tracking in the Presence of Severe Occlusion. IEEE Transactions on Image Processing, 2004, 13, 166-178.	9.8	48

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91	Open-loop worst-case identification of nonSchur plants. Automatica, 2003, 39, 1019-1025.	5.0	8
92	On the design of robust controllers for arbitrary uncertainty structures. IEEE Transactions on Automatic Control, 2003, 48, 2061-2065.	5.7	7
93	H/sub 2/ control with time-domain constraints: theory and an application. IEEE Transactions on Automatic Control, 2003, 48, 355-368.	5.7	12
94	An LMI approach to control-oriented identification and model (In)validation of LPV systems. IEEE Transactions on Automatic Control, 2003, 48, 1619-1624.	5.7	49
95	A convex approach to robust performance analysis. Automatica, 2002, 38, 957-966.	5.0	22
96	Robust identification with mixed parametric/nonparametric models and time/frequency-domain experiments: theory and an application. IEEE Transactions on Control Systems Technology, 2001, 9, 608-617.	5.2	24
97	An improved Voronoi-diagram-based neural net for pattern classification. IEEE Transactions on Neural Networks, 2001, 12, 1227-1234.	4.2	9
98	A linear matrix inequality approach to synthesizing low-order suboptimal mixed $\hat{a}$ , "1/Hp controllers. Automatica, 2000, 36, 957-963.	5.0	17
99	Is set modeling of white noise a good tool for robust H2 analysis?. Automatica, 2000, 36, 261-267.	5.0	5
100	Receding Horizon Control Lyapunov Function Approach to Suboptimal Regulation of Nonlinear Systems. Journal of Guidance, Control, and Dynamics, 2000, 23, 399-405.	2.8	26
101	An exact solution to continuous-time mixed H/sub 2//H/sub /spl infin/#x221E;/ control problems. IEEE Transactions on Automatic Control, 2000, 45, 2095-2101.	5.7	26
102	Author's reply: "œA comment on " optimal control of SISO continuous-time systems"œ. Automatica, 2000, 36, 1927-1928.	5.0	0
103	A convex optimization approach to fixed-order controller design for disturbance rejection in SISO systems. IEEE Transactions on Automatic Control, 2000, 45, 784-789.	5.7	30
104	A parametric extension of mixed time/frequency robust identification. IEEE Transactions on Automatic Control, 1999, 44, 364-369.	5.7	34
105	Mixed Time/Frequency-Domain Based Robust Identification. Automatica, 1998, 34, 1375-1389.	5.0	49
106	An exact solution to general four-block discrete-time mixed $\hat{a}$ , /sub 2// $\hat{a}$ , /sub $\hat{z}$ / problems via convex optimization. IEEE Transactions on Automatic Control, 1998, 43, 1475-1480.	5.7	27
107	Mixed l/sub 1//H/sub $\hat{z}$ / control of MIMO systems via convex optimization. IEEE Transactions on Automatic Control, 1998, 43, 1229-1241.	5.7	24
108	Robust controller design for a parallel resonant converter using /spl mu/-synthesis. IEEE Transactions on Power Electronics, 1997, 12, 837-853.	7.9	29

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109	L <sup>∞</sup> Optimal control of SISO continuous-time systems. Automatica, 1997, 33, 85-90.	5.0	14
110	Robust performance with fixed and worst-case signals for uncertain time-varying systems. Automatica, 1997, 33, 2183-2189.	5.0	26
111	Rational L <sub>2</sub> /suboptimal controllers for SISO continuous-time systems. IEEE Transactions on Automatic Control, 1996, 41, 1358-1363.	5.7	10
112	Small signal analysis of the LCC-type parallel resonant converter. IEEE Transactions on Aerospace and Electronic Systems, 1996, 32, 702-713.	4.7	15
113	Robust unconstrained predictive control design with guaranteed nominal performance. AIChE Journal, 1996, 42, 1293-1303.	3.6	11
114	H <sub>2</sub> /H <sup>∞</sup> filtering theory and an aerospace application. International Journal of Robust and Nonlinear Control, 1996, 6, 347-366.	3.7	54
115	Mixed L <sup>∞</sup> /H <sub>2</sub> suboptimal controllers for SISO continuous-time systems. IEEE Transactions on Automatic Control, 1995, 40, 1831-1840.	5.7	16
116	Robust controller design for a non-colocated spring-mass system via mixed $H_2/H^\infty$ optimization. International Journal of Robust and Nonlinear Control, 1995, 5, 53-65.	3.7	6
117	Robust control of constrained systems via convex optimization. International Journal of Robust and Nonlinear Control, 1995, 5, 441-460.	3.7	3
118	Mixed H <sub>2</sub> /H <sub>∞</sub> - infinity control of multimodel plants. Journal of Guidance, Control, and Dynamics, 1995, 18, 525-531.	2.8	17
119	Further results on rational approximations of $H_2/H^\infty$ optimal controllers. IEEE Transactions on Automatic Control, 1995, 40, 552-557.	5.7	9
120	Persistent disturbance rejection via static-state feedback. IEEE Transactions on Automatic Control, 1995, 40, 1127-1131.	5.7	69
121	Mixed controllers for SISO discrete time systems. Systems and Control Letters, 1994, 23, 179-186.	2.3	26
122	Rational $H_2/H^\infty$ suboptimal compensators for continuous-time systems. IEEE Transactions on Automatic Control, 1994, 39, 1487-1492.	5.7	45
123	An exact solution to general SISO mixed $H_2/H^\infty$ problems via convex optimization. IEEE Transactions on Automatic Control, 1994, 39, 2511-2517.	5.7	53
124	Feedback control of quantized constrained systems with applications to neuromorphic controllers design. IEEE Transactions on Automatic Control, 1994, 39, 1497-1502.	5.7	16
125	Heuristically enhanced feedback control of constrained systems: The minimum time case. Automatica, 1993, 29, 439-444.	5.0	4
126	Set-Induced Norm Based Robust Control Techniques. Control and Dynamic Systems, 1993, 55, 305-353.	0.1	2

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127	Norm based robust control of state-constrained discrete-time linear systems. IEEE Transactions on Automatic Control, 1992, 37, 1057-1062.	5.7	9
128	An analog "neural net"-based suboptimal controller for constrained discrete-time linear systems. Automatica, 1992, 28, 139-144.	5.0	8
129	Correspondence Comments on "Robust optimal parametric LQ control with a guaranteed cost bound and applications". International Journal of Control, 1991, 54, 1309-1312.	1.9	0
130	Heuristically enhanced feedback control of constrained discrete-time linear systems. Automatica, 1990, 26, 521-532.	5.0	93
131	Control of constrained discrete time linear systems using quantized controls. Automatica, 1989, 25, 623-628.	5.0	23
132	An adaptive controller for a one-legged mobile robot. IEEE Transactions on Automation Science and Engineering, 1989, 5, 253-259.	2.3	19