

# Graziano Chesi

## List of Publications by Citations

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139  
papers

3,082  
citations

29  
h-index

52  
g-index

158  
ext. papers

3,676  
ext. citations

4.1  
avg, IF

6.1  
L-index

#	Paper	IF	Citations
139	LMI Techniques for Optimization Over Polynomials in Control: A Survey. <i>IEEE Transactions on Automatic Control</i> , <b>2010</b> , 55, 2500-2510	5.9	241
138	Polynomially parameter-dependent Lyapunov functions for robust stability of polytopic systems: an LMI approach. <i>IEEE Transactions on Automatic Control</i> , <b>2005</b> , 50, 365-370	5.9	173
137	Homogeneous Lyapunov functions for systems with structured uncertainties. <i>Automatica</i> , <b>2003</b> , 39, 1023-1035	5.7	140
136	Distributed $H_{\infty}$ Filtering for Polynomial Nonlinear Stochastic Systems in Sensor Networks. <i>IEEE Transactions on Industrial Electronics</i> , <b>2011</b> , 58, 1971-1979	8.9	132
135	Homogeneous Polynomial Forms for Robustness Analysis of Uncertain Systems. <i>Lecture Notes in Control and Information Sciences</i> , <b>2009</b> ,	0.5	118
134	Solving quadratic distance problems: an LMI-based approach. <i>IEEE Transactions on Automatic Control</i> , <b>2003</b> , 48, 200-212	5.9	112
133	A Nonconservative LMI Condition for Stability of Switched Systems With Guaranteed Dwell Time. <i>IEEE Transactions on Automatic Control</i> , <b>2012</b> , 57, 1297-1302	5.9	105
132	Keeping features in the field of view in eye-in-hand visual servoing: a switching approach <b>2004</b> , 20, 908-913		104
131	Robust stability of time-varying polytopic systems via parameter-dependent homogeneous Lyapunov functions. <i>Automatica</i> , <b>2007</b> , 43, 309-316	5.7	101
130	Estimating the domain of attraction for non-polynomial systems via LMI optimizations. <i>Automatica</i> , <b>2009</b> , 45, 1536-1541	5.7	98
129	Estimating the domain of attraction for uncertain polynomial systems. <i>Automatica</i> , <b>2004</b> , 40, 1981-1986	5.7	85
128	Stability analysis of uncertain genetic sum regulatory networks. <i>Automatica</i> , <b>2008</b> , 44, 2298-2305	5.7	84
127	LMI-based computation of optimal quadratic Lyapunov functions for odd polynomial systems. <i>International Journal of Robust and Nonlinear Control</i> , <b>2005</b> , 15, 35-49	3.6	79
126	Visual Servoing Path Planning via Homogeneous Forms and LMI Optimizations. <i>IEEE Transactions on Robotics</i> , <b>2009</b> , 25, 281-291	6.5	68
125	Computing output feedback controllers to enlarge the domain of attraction in polynomial systems. <i>IEEE Transactions on Automatic Control</i> , <b>2004</b> , 49, 1846-1850	5.9	68
124	Global Path-Planning for Constrained and Optimal Visual Servoing <b>2007</b> , 23, 1050-1060		64
123	Necessary and Sufficient LMI Conditions for Stability and Performance Analysis of 2-D Mixed Continuous-Discrete-Time Systems. <i>IEEE Transactions on Automatic Control</i> , <b>2014</b> , 59, 996-1007	5.9	63

122	Domain of Attraction. <i>Lecture Notes in Control and Information Sciences</i> , <b>2011</b> ,	0.5	62
121	Rational Lyapunov functions for estimating and controlling the robust domain of attraction. <i>Automatica</i> , <b>2013</b> , 49, 1051-1057	5.7	54
120	Visual servoing for large camera displacements. <i>Journal of the American College of Radiology</i> , <b>2004</b> , 20, 724-735	3.5	54
119	Estimating the domain of attraction via union of continuous families of Lyapunov estimates. <i>Systems and Control Letters</i> , <b>2007</b> , 56, 326-333	2.4	53
118	On the Gap Between Positive Polynomials and SOS of Polynomials. <i>IEEE Transactions on Automatic Control</i> , <b>2007</b> , 52, 1066-1072	5.9	47
117	Robustness analysis of genetic regulatory networks affected by model uncertainty. <i>Automatica</i> , <b>2011</b> , 47, 1131-1138	5.7	42
116	Robust Stability Analysis and Synthesis for Uncertain Discrete-Time Networked Control Systems Over Fading Channels. <i>IEEE Transactions on Automatic Control</i> , <b>2017</b> , 62, 1966-1971	5.9	38
115	Estimating the fundamental matrix via constrained least-squares: a convex approach. <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , <b>2002</b> , 24, 397-401	13.3	33
114	Robust stability and performance analysis of 2D mixed continuous-discrete-time systems with uncertainty. <i>Automatica</i> , <b>2016</b> , 67, 233-243	5.7	32
113	On the non-conservatism of a novel LMI relaxation for robust analysis of polytopic systems. <i>Automatica</i> , <b>2008</b> , 44, 2973-2976	5.7	31
112	Robust Consensus for a Class of Uncertain Multi-Agent Dynamical Systems. <i>IEEE Transactions on Industrial Informatics</i> , <b>2013</b> , 9, 306-312	11.9	29
111	Robust analysis of LFR systems through homogeneous polynomial Lyapunov functions. <i>IEEE Transactions on Automatic Control</i> , <b>2004</b> , 49, 1211-1216	5.9	29
110	Characterizing the solution set of polynomial systems in terms of homogeneous forms: an LMI approach. <i>International Journal of Robust and Nonlinear Control</i> , <b>2003</b> , 13, 1239-1257	3.6	23
109	$\mathcal{H}_{\infty}$ and $\mathcal{H}_2$ Norms of 2-D Mixed Continuous-Discrete-Time Systems via Rationally-Dependent Complex Lyapunov Functions. <i>IEEE Transactions on Automatic Control</i> , <b>2015</b> , 60, 2614-2625	5.9	22
108	LMI conditions for time-varying uncertain systems can be non-conservative. <i>Automatica</i> , <b>2011</b> , 47, 621-634	5.7	22
107	Homogeneous Rational Lyapunov Functions for Performance Analysis of Switched Systems With Arbitrary Switching and Dwell Time Constraints. <i>IEEE Transactions on Automatic Control</i> , <b>2017</b> , 62, 5124-5137	5.9	21
106	Establishing stability and instability of matrix hypercubes. <i>Systems and Control Letters</i> , <b>2005</b> , 54, 381-388	2.4	21
105	Robust stability of uncertain linear systems with input and output quantization and packet loss. <i>Automatica</i> , <b>2018</b> , 87, 267-273	5.7	21

104	Sufficient and Necessary LMI Conditions for Robust Stability of Rationally Time-Varying Uncertain Systems. <i>IEEE Transactions on Automatic Control</i> , <b>2013</b> , 58, 1546-1551	5.9	20
103	Camera displacement via constrained minimization of the algebraic error. <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , <b>2009</b> , 31, 370-5	13.3	20
102	A simple technique for improving camera displacement estimation in eye-in-hand visual servoing. <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , <b>2004</b> , 26, 1239-42	13.3	19
101	Robust Static Output Feedback Controllers via Robust Stabilizability Functions. <i>IEEE Transactions on Automatic Control</i> , <b>2014</b> , 59, 1618-1623	5.9	18
100	On the synthesis of linear filters for polynomial systems. <i>Systems and Control Letters</i> , <b>2012</b> , 61, 31-36	2.4	16
99	Exact robust stability analysis of uncertain systems with a scalar parameter via LMIs. <i>Automatica</i> , <b>2013</b> , 49, 1083-1086	5.7	16
98	Establishing tightness in robust H <sub>∞</sub> analysis via homogeneous parameter-dependent Lyapunov functions. <i>Automatica</i> , <b>2007</b> , 43, 1992-1995	5.7	16
97	LMI-Based Fixed Order Output Feedback Synthesis for Two-Dimensional Mixed Continuous-Discrete-Time Systems. <i>IEEE Transactions on Automatic Control</i> , <b>2018</b> , 63, 960-972	5.9	15
96	On the Complexity of SOS Programming and Applications in Control Systems. <i>Asian Journal of Control</i> , <b>2018</b> , 20, 2005-2013	1.7	15
95	212D Visual Servoing with Respect to Planar Contours having Complex and Unknown Shapes. <i>International Journal of Robotics Research</i> , <b>2003</b> , 22, 841-853	5.7	14
94	An LMI approach to constrained optimization with homogeneous forms. <i>Systems and Control Letters</i> , <b>2001</b> , 42, 11-19	2.4	14
93	Projective reconstruction of ellipses from multiple images. <i>Pattern Recognition</i> , <b>2010</b> , 43, 545-556	7.7	13
92	Analysis and Synthesis of Nonlinear Systems With Uncertain Initial Conditions. <i>IEEE Transactions on Automatic Control</i> , <b>2008</b> , 53, 1262-1267	5.9	13
91	Straight Line Path-Planning in Visual Servoing. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME</i> , <b>2007</b> , 129, 541-543	1.6	13
90	A convex approach to a class of minimum norm problems <b>1999</b> , 359-372		13
89	On the Design of Output Feedback Controllers for LTI Systems Over Fading Channels. <i>IEEE Transactions on Automatic Control</i> , <b>2018</b> , 63, 1503-1508	5.9	12
88	On the Minimum Stable Commutation Time for Switching Nonlinear Systems. <i>IEEE Transactions on Automatic Control</i> , <b>2009</b> , 54, 1284-1289	5.9	12
87	Instability Analysis of Uncertain Systems via Determinants and LMIs. <i>IEEE Transactions on Automatic Control</i> , <b>2015</b> , 60, 2458-2463	5.9	11

86	Establishing robust stability of discrete-time systems with time-varying uncertainty: The Gram-SOS approach. <i>Automatica</i> , <b>2014</b> , 50, 2813-2821	5.7	11
85	Robust Synchronization via Homogeneous Parameter-Dependent Polynomial Contraction Matrix. <i>IEEE Transactions on Circuits and Systems I: Regular Papers</i> , <b>2014</b> , 61, 2931-2940	3.9	11
84	Conferring Robustness to Path-Planning for Image-Based Control. <i>IEEE Transactions on Control Systems Technology</i> , <b>2012</b> , 20, 950-959	4.8	11
83	Robust Stability of Time-Varying Uncertain Systems With Rational Dependence on the Uncertainty. <i>IEEE Transactions on Automatic Control</i> , <b>2010</b> , 55, 2353-2357	5.9	11
82	Convex Synthesis of Robust Controllers for Linear Systems With Polytopic Time-Varying Uncertainty. <i>IEEE Transactions on Automatic Control</i> , <b>2017</b> , 62, 337-349	5.9	10
81	On the robust stability of time-varying uncertain genetic regulatory networks. <i>International Journal of Robust and Nonlinear Control</i> , <b>2011</b> , 21, 1778-1790	3.6	10
80	Time-invariant uncertain systems: A necessary and sufficient condition for stability and instability via homogeneous parameter-dependent quadratic Lyapunov functions. <i>Automatica</i> , <b>2010</b> , 46, 471-474	5.7	10
79	Image noise induced errors in camera positioning. <i>IEEE Transactions on Pattern Analysis and Machine Intelligence</i> , <b>2007</b> , 29, 1476-80	13.3	10
78	Guaranteed estimates of the domain of attraction for a class of hybrid systems. <i>International Journal of Robust and Nonlinear Control</i> , <b>2015</b> , 25, 3270-3285	3.6	9
77	Worst-Case Mahler Measure in Polytopic Uncertain Systems. <i>IEEE Transactions on Automatic Control</i> , <b>2012</b> , 57, 3208-3213	5.9	9
76	Visual Servoing Path Planning for Cameras Obeying the Unified Model. <i>Advanced Robotics</i> , <b>2012</b> , 26, 843-860	1.7	9
75	On the estimation of the domain of attraction for discrete-time switched and hybrid nonlinear systems. <i>International Journal of Systems Science</i> , <b>2015</b> , 46, 2781-2787	2.3	8
74	Robust consensus for uncertain multi-agent systems with discrete-time dynamics. <i>International Journal of Robust and Nonlinear Control</i> , <b>2014</b> , 24, 1858-1872	3.6	8
73	On the Steady States of Uncertain Genetic Regulatory Networks. <i>IEEE Transactions on Systems, Man and Cybernetics, Part A: Systems and Humans</i> , <b>2012</b> , 42, 1020-1024		8
72	Polynomial relaxation-based conditions for global asymptotic stability of equilibrium points of genetic regulatory networks. <i>International Journal of Systems Science</i> , <b>2010</b> , 41, 65-72	2.3	8
71	Fast multiple-view L2 triangulation with occlusion handling. <i>Computer Vision and Image Understanding</i> , <b>2011</b> , 115, 211-223	4.3	8
70	Establishing Convexity of Polynomial Lyapunov Functions and Their Sublevel Sets. <i>IEEE Transactions on Automatic Control</i> , <b>2008</b> , 53, 2431-2436	5.9	8
69	Parameter and Controller Dependent Lyapunov Functions for Robust D-Stability and Robust Performance Controller Design. <i>IEEE Transactions on Automatic Control</i> , <b>2017</b> , 62, 4798-4803	5.9	7

68	Synchronization Conditions for Multiagent Systems With Intrinsic Nonlinear Dynamics. <i>IEEE Transactions on Circuits and Systems II: Express Briefs</i> , <b>2013</b> , 60, 227-231	3.5	7
67	Computing Equilibrium Points of Genetic Regulatory Networks. <i>Lecture Notes in Computer Science</i> , <b>2009</b> , 268-282	0.9	7
66	Epipole-based visual servoing for mobile robots. <i>Advanced Robotics</i> , <b>2006</b> , 20, 255-280	1.7	6
65	Consensus of Heterogeneous Multi-Agent Systems With Diffusive Couplings via Passivity Indices <b>2019</b> , 3, 434-439		6
64	On the estimation of the equilibrium points of uncertain nonlinear systems. <i>International Journal of Robust and Nonlinear Control</i> , <b>2013</b> , 23, 137-148	3.6	5
63	Designing image trajectories in the presence of uncertain data for robust visual servoing path-planning <b>2009</b> ,		5
62	Stability Test for Complex Matrices Over the Complex Unit Circumference via LMIs and Applications in 2D Systems. <i>IEEE Transactions on Circuits and Systems I: Regular Papers</i> , <b>2019</b> , 66, 1960-1969	3.9	5
61	Optimized vision-based robot motion planning from multiple demonstrations. <i>Autonomous Robots</i> , <b>2018</b> , 42, 1117-1132	3	4
60	Static output feedback control of switched systems with dwell time constraints or arbitrary switching <b>2017</b> ,		4
59	Robust domain of attraction: Computing and controlling estimates with non-polynomial Lyapunov functions <b>2012</b> ,		4
58	Performance limitation analysis in visual servo systems: Bounding the location error introduced by image points matching <b>2009</b> ,		4
57	Tightness Conditions for Semidefinite Relaxations of Forms Minimization. <i>IEEE Transactions on Circuits and Systems II: Express Briefs</i> , <b>2008</b> , 55, 1299-1303	3.5	4
56	A convex approach to the characterization of the frequency response of ellipsoidal plants. <i>Automatica</i> , <b>2002</b> , 38, 249-259	5.7	4
55	Checking Structural Stability of BDC-Decomposable Systems via Convex Optimisation <b>2020</b> , 4, 205-210		4
54	Input-Feedforward-Passivity-Based Distributed Optimization Over Jointly Connected Balanced Digraphs. <i>IEEE Transactions on Automatic Control</i> , <b>2021</b> , 66, 4117-4131	5.9	4
53	Visual Servoing Path-Planning with Elliptical Projections. <i>Lecture Notes in Electrical Engineering</i> , <b>2018</b> , 30-54	0.2	4
52	Stabilization and Entropy Reduction via SDP-Based Design of Fixed-Order Output Feedback Controllers and Tuning Parameters. <i>IEEE Transactions on Automatic Control</i> , <b>2017</b> , 62, 1094-1108	5.9	3
51	On the Computation of the Peak of the Impulse Response of LTI Systems <b>2019</b> ,		3

50	Robust stochastic stability of genetic regulatory networks with time delays and parametric uncertainties. <i>Asian Journal of Control</i> , <b>2011</b> , 13, 635-644	1.7	3
49	Optimal Object Configurations to Minimize the Positioning Error in Visual Servoing. <i>IEEE Transactions on Robotics</i> , <b>2010</b> , 26, 584-589	6.5	3
48	On the estimation and control of the domain of attraction through rational Lyapunov functions <b>2012</b> ,		3
47	Complete characterization of the spherical spectral set. <i>IEEE Transactions on Automatic Control</i> , <b>2002</b> , 47, 1875-1879	5.9	3
46	Stabilization of Linear Systems Across a Time-Varying AWGN Fading Channel. <i>IEEE Transactions on Automatic Control</i> , <b>2020</b> , 65, 4902-4907	5.9	3
45	Structured Feedback Synthesis for Stability and Performance of Switched Systems. <i>IEEE Transactions on Automatic Control</i> , <b>2020</b> , 65, 4695-4709	5.9	3
44	Exact LMI Conditions for Stability and L2 Gain Analysis of 2D Mixed Continuous-Discrete-Time Systems via Quadratically-Frequency-Dependent Lyapunov Functions. <i>IEEE Transactions on Automatic Control</i> , <b>2021</b> , 1-1	5.9	3
43	On the Synthesis of Static Output Feedback Controllers for Guaranteed RMS Gain of Switched Systems with Arbitrary Switching <b>2018</b> ,		3
42	Quantifying the unstable in linearized nonlinear systems. <i>Automatica</i> , <b>2015</b> , 60, 210-218	5.7	2
41	On the synthesis of output feedback controllers for increasing the domain of attraction of piecewise polynomial systems <b>2015</b> ,		2
40	On the robust stability of 2D mixed continuous-discrete-time systems with uncertainty <b>2014</b> ,		2
39	Static feedback design for 2D mixed continuous-discrete-time systems via LMIs <b>2015</b> ,		2
38	Homogeneous polynomial Lyapunov functions for robust local synchronisation with time-varying uncertainties. <i>IET Control Theory and Applications</i> , <b>2014</b> , 8, 855-862	2.5	2
37	Robust discrete-time consensus of multi-agent systems with uncertain interaction <b>2012</b> ,		2
36	Measuring the instability in continuous-time linear systems with polytopic uncertainty <b>2013</b> ,		2
35	Configuration and Robustness in Visual Servo. <i>Journal of Robotics and Mechatronics</i> , <b>2004</b> , 16, 178-185	0.7	2
34	Convergent upper bounds of peak response of LTI and polytopic LTV systems through LMIs. <i>Automatica</i> , <b>2020</b> , 122, 109260	5.7	2
33	On the H-two norm of switched systems via homogeneous rational Lyapunov functions <b>2016</b> ,		2

32	Input-Feedforward-Passivity-Based Distributed Optimization Over Directed and Switching Topologies <b>2019</b> ,		2
31	Distributed Resource Allocation over Time-varying Balanced Digraphs with Discrete-time Communication. <i>IEEE Transactions on Control of Network Systems</i> , <b>2021</b> , 1-1	4	2
30	Control With Communications Constraints: Measuring the Instability in Parametric Linear Systems. <i>IEEE Transactions on Control of Network Systems</i> , <b>2017</b> , 4, 312-322	4	1
29	Visual servoing with cylinders: Reaching the desired location following a straight line <b>2017</b> ,		1
28	Inclusion of peripheral correspondences in object and pose estimation for visual servoing path-planning. <i>Proceedings of the Institution of Mechanical Engineers Part I: Journal of Systems and Control Engineering</i> , <b>2018</b> , 232, 336-347	1	1
27	LMI-Based Estimation of Scene Points in Vision Systems with Generalized Cameras. <i>IEEE Transactions on Automatic Control</i> , <b>2014</b> , 59, 2996-3001	5.9	1
26	On the unstable of continuous-time linearized nonlinear systems <b>2014</b> ,		1
25	On the robust H <sub>∞</sub> norm of 2D mixed continuous-discrete-time systems with uncertainty <b>2014</b> ,		1
24	Motion planning from demonstrations and polynomial optimization for visual servoing applications <b>2013</b> ,		1
23	On the Mahler measure of matrix pencils <b>2013</b> ,		1
22	On the design of robust static output feedback controllers via robust stabilizability functions <b>2013</b> ,		1
21	A gram-SOS approach for robust stability analysis of discrete-time systems with time-varying uncertainty <b>2013</b> ,		1
20	On the admissible equilibrium points of nonlinear dynamical systems affected by parametric uncertainty: Characterization via LMIs <b>2010</b> ,		1
19	Assessing robust stability properties of uncertain genetic regulatory networks <b>2010</b> ,		1
18	A new condition and equivalence results for robust stability analysis of rationally time-varying uncertain linear systems <b>2011</b> ,		1
17	Toward non-conservative stability conditions for equilibrium points of genetic networks with SUM regulatory functions <b>2009</b> ,		1
16	Call for Papers: Special Issue on Systems Biology. <i>International Journal of Robust and Nonlinear Control</i> , <b>2010</b> , 20, 723-724	3.6	1
15	Effects of camera calibration errors on static-eye and hand-eye visual servoing. <i>Advanced Robotics</i> , <b>2003</b> , 17, 1023-1039	1.7	1



14	Image Measurement Errors in Visual Servoing: Estimating the Induced Positioning Error. <i>Lecture Notes in Control and Information Sciences</i> , <b>2010</b> , 151-167	0.5	1
13	Robust Detection and Tracking of Multiple Moving Objects with 3D Features by an Uncalibrated Monocular Camera. <i>Lecture Notes in Computer Science</i> , <b>2009</b> , 140-149	0.9	1
12	On the RMS gain of switched systems via homogeneous rational Lyapunov functions <b>2016</b> ,		1
11	On the Peak of the Impulse Response of Polytopic LTV Systems <b>2019</b> ,		1
10	On the H <sub>∞</sub> Norm of 2D Mixed Continuous-Discrete-Time Systems via Rationally-Dependent Complex Lyapunov Functions. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , <b>2014</b> , 47, 5568-5573		
9	Minimizing trigonometric matrix polynomials over semi-algebraic sets. <i>Automatica</i> , <b>2015</b> , 52, 266-271	5.7	
8	Discussion on: Positive Switched 2D Linear Systems Described by the Roesser Models <i>European Journal of Control</i> , <b>2012</b> , 18, 247-248	2.5	
7	On the determination of the solutions and maximum admissible power of the load flow equation via LMIS. <i>Asian Journal of Control</i> , <b>2012</b> , 14, 1262-1272	1.7	
6	Multiview stereo object reconstruction with a one-line search method. <i>Journal of Electronic Imaging</i> , <b>2013</b> , 22, 023019	0.7	
5	Intelligent Modeling and Verification. <i>Journal of Applied Mathematics</i> , <b>2013</b> , 2013, 1-2	1.1	
4	Certain and Uncertain Triangulation in Multiple Camera Vision Systems via LMIs 112-124		
3	Planning Image Trajectories for Visual Servoing via LMI-Based Optimization. <i>Lecture Notes in Electrical Engineering</i> , <b>2011</b> , 159-172	0.2	
2	Certain and Uncertain Triangulation in Multiple Camera Vision Systems via LMIs. <i>Advances in Computational Intelligence and Robotics Book Series</i> , <b>2012</b> , 53-64	0.4	
1	Designing parametric linear quadratic regulators for parametric LTI systems via LMIs. <i>International Journal of Control</i> , <b>2019</b> , 92, 2907-2916	1.5	