# Giorgio Valmorbida

List of Publications by Year
in descending order



| 68 | 632 | 840776 11 | 713466 21 |
|---|---|---|---|
| papers | citations | h-index | g-index |

| 68 | 68 | 68 | 427 |
|---|---|---|---|
| all docs | docs citations | times ranked | citing authors |

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Region of attraction estimation using invariant sets and rational Lyapunov functions. Automatica, 2017, 75, 37-45. | 5.0 | 63 |
| 2 | State feedback design for input-saturating quadratic systems. Automatica, 2010, 46, 1196-1202. | 5.0 | 62 |
| 3 | Design of Polynomial Control Laws for Polynomial Systems Subject to Actuator Saturation. IEEE Transactions on Automatic Control, 2013, 58, 1758-1770. | 5.7 | 52 |
| 4 | Stability Analysis for a Class of Partial Differential Equations via Semidefinite Programming. IEEE Transactions on Automatic Control, 2016, 61, 1649-1654. | 5.7 | 44 |
| 5 | Dissipation inequalities for the analysis of a class of PDEs. Automatica, 2016, 66, 163-171. | 5.0 | 37 |
| 6 | Finite-gain <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si5.gif" display="inline" overflow="scroll"><mml:msub><mml:mrow><mml:mi mathvariant="script">L</mml:mi></mml:mrow><mml:mrow><mml:mi>p</mml:mi></mml:mrow></mml:msub></mml:math> stability for hybrid dynamical systems. Automatica, 2013, 49, 2384-2396. | 5.0 | 34 |
| 7 | Regional Analysis of Slope-Restricted Lurie Systems. IEEE Transactions on Automatic Control, 2019, 64, 1201-1208. | 5.7 | 27 |
| 8 | Region of attraction analysis via invariant sets. , 2014, , . | | 19 |
| 9 | Set-invariance characterizations of discrete-time descriptor systems with application to active mode detection. Automatica, 2019, 107, 255-263. | 5.0 | 18 |
| 10 | Safety verification for distributed parameter systems using barrier functionals. Systems and Control Letters, 2017, 108, 33-39. | 2.3 | 17 |
| 11 | Semi-definite programming and functional inequalities for distributed parameter systems. , 2014, , . | | 16 |
| 12 | Input-output analysis of distributed parameter systems using convex optimization. , 2014, , . | | 16 |
| 13 | Anti-windup design for saturating quadratic systems. Systems and Control Letters, 2013, 62, 367-376. | 2.3 | 15 |
| 14 | A framework for inputâ€“output analysis of wall-bounded shear flows. Journal of Fluid Mechanics, 2019, 873, 742-785. | 3.4 | 13 |
| 15 | State feedback design for input-saturating nonlinear quadratic systems. , 2009, , . | | 10 |
| 16 | Nonlinear regulation for linear fat plants: The constant reference/disturbance case. , 2013, , . | | 10 |
| 17 | Region of attraction estimates for polynomial systems. , 2009, , . | | 9 |
| 18 | Stability analysis of piecewise affine discrete-time systems. , 2019, , . | | 9 |

| # | Article | IF | Citations |
|---|---|---|---|
| 19 | Design and flight experiments of a Tube-Based Model Predictive Controller for the AR.Drone 2.0 quadrotor. IFAC-PapersOnLine, 2019, 52, 112-117. | 0.9 | 9 |
| 20 | Global Stability and FiniteL2m-Gain of Saturated Uncertain Systems via Piecewise Polynomial Lyapunov Functions. IEEE Transactions on Automatic Control, 2013, 58, 242-246. | 5.7 | 8 |
| 21 | Nonlinear output regulation for over-actuated linear systems. , 2013, , . | | 8 |
| 22 | Positivity conditions of Lyapunov functions for systems with slope restricted nonlinearities. , 2016, , . | | 8 |
| 23 | Generalized Absolute Stability Using Lyapunov Functions With Relaxed Positivity Conditions. , 2018, 2, 207-212. | | 8 |
| 24 | Anti-windup for NDI quadratic systems. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2010, 43, 1175-1180. | 0.4 | 7 |
| 25 | Regional Stability of Discrete-Time Linear Systems Subject to Asymmetric Input Saturation. , 2019, , . | | 7 |
| 26 | An LMI Approach for Stability Analysis and Output-Feedback Stabilization of Discrete-Time Lurâ€™e Systems Using Zames-Falb Multipliers. , 2022, 6, 710-715. | | 7 |
| 27 | Design of Saturating State Feedback With Sign-Indefinite Quadratic Forms. IEEE Transactions on Automatic Control, 2022, 67, 3507-3520. | 5.7 | 7 |
| 28 | Barrier functionals for output functional estimation of PDEs. , 2015, , . | | 6 |
| 29 | Convex solutions to integral inequalities in two-dimensional domains. , 2015, , . | | 6 |
| 30 | Nonlinear Static State Feedback for Saturated Linear Plants via a Polynomial Approach. IEEE Transactions on Automatic Control, 2017, 62, 469-474. | 5.7 | 6 |
| 31 | Equivalent Circuits for Electrochemical Supercapacitor Models * *This work was supported in part by funding from the EPSRC.. IFAC-PapersOnLine, 2017, 50, 2671-2676. | 0.9 | 6 |
| 32 | A Neural Approach for Fast Simulation of Flight Mechanics. , 0, , . | | 5 |
| 33 | Stability and performance analysis for linear systems with actuator and sensor saturations subject to unmodeled dynamics. , 2008, , . | | 5 |
| 34 | A semi-definite programming approach to stability analysis of linear partial differential equations. , 2017, , . | | 5 |
| 35 | Invariant Sets for Discrete-Time Constrained Linear Systems using a Sliding Mode Approach. , 2018, , . | | 5 |
| 36 | A convex approach to hydrodynamic analysis. , 2015, , . | | 4 |

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| 37 | Introducing INTSOSTOOLS: A SOSTOOLS plug-in for integral inequalities. , 2015, , . | | 4 |
| 38 | Robust invariant sets and active mode detection for discrete-time uncertain descriptor systems. , 2017, , . | | 4 |
| 39 | A polynomial approach to nonlinear state feedback stabilization of saturated linear systems. , 2014, , . | | 3 |
| 40 | Piecewise polynomial policy iterations for synthesis of optimal control laws in input-saturated systems. , 2015, , . | | 3 |
| 41 | Regional <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si7.gif" display="inline" overflow="scroll"><mml:msub><mml:mrow><mml:mi mathvariant="script">L</mml:mi></mml:mrow><mml:mrow><mml:mn>2</mml:mn><mml:mi>m</mml:mi></mml:mrow></mml:msub> gain analysis for linear saturating systems. Automatica, 2017, 76, 164-168. | 5.0 | 3 |
| 42 | Stability Analysis of Linear Partial Differential Equations With Generalized Energy Functions. IEEE Transactions on Automatic Control, 2020, 65, 1924-1939. | 5.7 | 3 |
| 43 | Piecewise polynomial Lyapunov functions for stability and nonlinear ℒ<inf>2m</inf>-gain computation of saturated uncertain systems. , 2011, , . | | 2 |
| 44 | Synthesis of polynomial static state feedback laws and analysis for discrete-time polynomial systems with saturating inputs. , 2012, , . | | 2 |
| 45 | On Finite Gain Lp Stability for Hybrid Systems*. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 418-423. | 0.4 | 2 |
| 46 | Online policy iterations for optimal control of input-saturated systems. , 2016, , . | | 2 |
| 47 | State-Feedback Design for Nonlinear Saturating Systems. IEEE Transactions on Automatic Control, 2022, 67, 3157-3164. | 5.7 | 2 |
| 48 | On Quantization in Discrete-Time Control Systems: Stability Analysis of Ternary Controllers. , 2020, , . | | 2 |
| 49 | CondiÃ§Ãµes LMI do teorema do ganho pequeno escalonado para anÃ¡lise de estabilidade de sistemas incertos com atraso. Controle and Automacao, 2007, 18, 447-458. | 0.2 | 1 |
| 50 | Relaxed stabilizability conditions for hybrid linear systems on periodic time domains. , 2015, , . | | 1 |
| 51 | Linear filter design for continuous-time polynomial systems with â„’<sub>2</sub>-gain guaranteed bound. , 2015, , . | | 1 |
| 52 | Lyapunov analysis of nonlinear systems with rational vector field and Jacobian. , 2016, , . | | 1 |
| 53 | Invariant Set Design for Constrained Discrete-Time Linear Systems with Bounded Matched Disturbance. IFAC-PapersOnLine, 2018, 51, 55-60. | 0.9 | 1 |
| 54 | Periodic Orbits in Planar Linear Systems With Input Saturation. , 2018, 2, 435-440. | | 1 |

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| 55 | Self-scheduled H control of autonomous vehicle in collision avoidance maneuvers. IFAC-PapersOnLine, 2021, 54, 148-153. | 0.9 | 1 |
| 56 | An LMI-based iterative algorithm for state and output feedback stabilization of discrete-time Lurâ€™e systems. , 2020, , . | | 1 |
| 57 | Stabilization of Discrete-Time Piecewise Affine Systems in Implicit Representation. , 2021, , . | | 1 |
| 58 | Stabilization of Sampled-Data Lure Systems with Slope-Restricted Nonlinearities. , 2021, , . | | 1 |
| 59 | Control design of uncertain discreteâ€time Lur'e systems with sector and slope bounded nonlinearities. International Journal of Robust and Nonlinear Control, 2022, 32, 7001-7015. | 3.7 | 1 |
| 60 | Stability Analysis of a Class of Discontinuous Discrete-Time Systems. , 2023, 7, 454-459. | | 1 |
| 61 | Scaled Small Gain Conditions for Robust Stability of Time-Delay Systems: An LMI Approach. , 2006, , . | | 0 |
| 62 | Stability and performance analysis for input and output-constrained linear systems subject to multiplicative neglected dynamics. , 2009, , . | | 0 |
| 63 | Bounds for Input- and State-to-Output Properties of Uncertain Linear Systemsâ —a —Work supported by the Engineering and Physical Sciences Research Council projects EP/J012041/1. Giorgio Valmorbida is also a Fulford Junior Research fellow at Somerville College. James Anderson acknowledges funding from St Johnâ€™s College, Oxford. Dhruva Raman is supported by the EPSRC funded Systems Biology DTC at the University of Oxford. IFAC-PapersOnLine, 2015, 48, 1-6. | 0.9 | 0 |
| 64 | Limit cycles in LiÃ©nard systems with saturation. IFAC-PapersOnLine, 2018, 51, 127-131. | 0.9 | 0 |
| 65 | Analyse de stabilitÃ© pour un systÃ¨me soumis Ã des saturations et avec des dynamiques nÃ©gligÃ©e. Journal Europeen Des Systemes Automatises, 2009, 43, 217-239. | 0.4 | 0 |
| 66 | Stability of Sampled-Data Control for Lurie Systems with Slope-Restricted Nonlinearities. , 0, , . | | 0 |
| 67 | A geometric stabilization of planar switched systems. IFAC-PapersOnLine, 2020, 53, 6446-6451. | 0.9 | 0 |
| 68 | Analysis of Linear Partial Differential Equations Using Convex Optimization. Advances in Delays and Dynamics, 2022, , 231-255. | 0.4 | 0 |