

Mireille E Broucke

List of Publications by Year in descending order

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Version: 2024-02-01

60
papers

1,378
citations

623734

14
h-index

434195

31
g-index

60
all docs

60
docs citations

60
times ranked

753
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|--|-----|-----------|
| 1 | Stabilisation of infinitesimally rigid formations of multi-robot networks. International Journal of Control, 2009, 82, 423-439. | 1.9 | 473 |
| 2 | Pursuit formations of unicycles. Automatica, 2006, 42, 3-12. | 5.0 | 177 |
| 3 | A hierarchical cyclic pursuit scheme for vehicle networks. Automatica, 2005, 41, 1045-1053. | 5.0 | 99 |
| 4 | Necessary and sufficient conditions for reachability on a simplex. Automatica, 2006, 42, 1913-1918. | 5.0 | 63 |
| 5 | Stabilization of infinitesimally rigid formations of multi-robot networks. , 2008, , . | | 59 |
| 6 | Curve Shortening and the Rendezvous Problem for Mobile Autonomous Robots. IEEE Transactions on Automatic Control, 2007, 52, 1154-1159. | 5.7 | 46 |
| 7 | Time Optimal Swing-Up of the Planar Pendulum. IEEE Transactions on Automatic Control, 2008, 53, 1876-1886. | 5.7 | 44 |
| 8 | Experiments in multirobot coordination. Robotics and Autonomous Systems, 2006, 54, 265-275. | 5.1 | 42 |
| 9 | Continuous selections of trajectories of hybrid systems. Systems and Control Letters, 2002, 47, 149-157. | 2.3 | 29 |
| 10 | Reach Control on Simplices by Piecewise Affine Feedback. SIAM Journal on Control and Optimization, 2014, 52, 3261-3286. | 2.1 | 27 |
| 11 | Monotonic Reach Control on Polytopes. IEEE Transactions on Automatic Control, 2013, 58, 2704-2709. | 5.7 | 25 |
| 12 | Stability and controllability of planar, conewise linear systems. Systems and Control Letters, 2007, 56, 150-158. | 2.3 | 23 |
| 13 | Time-varying affine feedback for reach control on simplices. Automatica, 2013, 49, 1365-1369. | 5.0 | 17 |
| 14 | Efficient Solution of Optimal Control Problems Using Hybrid Systems. SIAM Journal on Control and Optimization, 2005, 43, 1923-1952. | 2.1 | 14 |
| 15 | On a reachability problem for affine hypersurface systems on polytopes. Automatica, 2011, 47, 769-775. | 5.0 | 14 |
| 16 | Patterned linear systems. Automatica, 2012, 48, 263-272. | 5.0 | 14 |
| 17 | On the least restrictive control for collision avoidance of two unicycles. International Journal of Robust and Nonlinear Control, 2006, 16, 553-574. | 3.7 | 13 |
| 18 | Reachability of a Set of Facets for Linear Affine Systems With n-1 Inputs. IEEE Transactions on Automatic Control, 2007, 52, 359-364. | 5.7 | 12 |

| # | ARTICLE | IF | CITATIONS |
|----|---|------|-----------|
| 19 | Flow functions, control flow functions, and the reach control problem. Automatica, 2015, 55, 108-115. | 5.0 | 10 |
| 20 | Geometric control of patterned linear systems. , 2010, , . | | 9 |
| 21 | Safe and robust robot maneuvers based on reach control. , 2016, , . | | 9 |
| 22 | Symmetry Invariance of Multiagent Formations in Self-Pursuit. IEEE Transactions on Automatic Control, 2008, 53, 2022-2032. | 5.7 | 8 |
| 23 | Patterned linear systems: Rings, chains, and trees. , 2010, , . | | 8 |
| 24 | Design of reach controllers on simplices. , 2013, , . | | 8 |
| 25 | Control of a gantry crane: A reach control approach. , 2014, , . | | 8 |
| 26 | An Automated Parallel Parking Strategy Using Reach Control Theory * **This research is supported by The Natural Sciences and Engineering Research Council of Canada.. IFAC-PapersOnLine, 2017, 50, 9089-9094. | 0.9 | 8 |
| 27 | Chattering in the Reach Control Problem. Automatica, 2018, 89, 201-211. | 5.0 | 8 |
| 28 | Adaptive Internal Model Theory of the Oculomotor System and the Cerebellum. IEEE Transactions on Automatic Control, 2021, 66, 5444-5450. | 5.7 | 8 |
| 29 | Viability Kernels for Nonlinear Control Systems Using Bang Controls. IEEE Transactions on Automatic Control, 2010, 55, 1280-1284. | 5.7 | 7 |
| 30 | Reach control on simplices by piecewise affine feedback. , 2011, , . | | 7 |
| 31 | A Modular Framework for Motion Planning Using Safe-by-Design Motion Primitives. IEEE Transactions on Robotics, 2019, 35, 1233-1252. | 10.3 | 7 |
| 32 | Monotonic reach control on polytopes. , 2011, , . | | 6 |
| 33 | Generalized flow conditions for reach control on polytopes. , 2012, , . | | 6 |
| 34 | An obstruction to solvability of the reach control problem using affine feedback. Automatica, 2016, 71, 229-236. | 5.0 | 6 |
| 35 | Continuous Interpolation of Solutions of Lipschitz Inclusions. Journal of Mathematical Analysis and Applications, 2001, 258, 565-572. | 1.0 | 5 |
| 36 | On the necessity of the invariance conditions for reach control on polytopes. Systems and Control Letters, 2016, 90, 16-19. | 2.3 | 5 |

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|----|---|-----|-----------|
| 37 | A framework for multi-vehicle navigation using feedback-based motion primitives. , 2017, , . | | 5 |
| 38 | Visuomotor Adaptation is a Disturbance Rejection Problem. , 2020, , . | | 5 |
| 39 | A Viability Problem for Control Affine Systems with Application to Collision Avoidance. , 2006, , . | | 4 |
| 40 | Discrete-time Output Regulation and Visuomotor Adaptation. , 2021, , . | | 4 |
| 41 | Time optimal swing-up of the planar pendulum. , 2007, , . | | 3 |
| 42 | Stability and controllability of planar, conewise linear systems. , 2007, , . | | 3 |
| 43 | Controllability is not sufficient for pole placement in patterned systems. , 2015, , . | | 3 |
| 44 | A viability approach to the Output Reach Control Problem. , 2016, , . | | 3 |
| 45 | Pattern preserving pole placement and stabilization for linear systems. , 2016, , . | | 3 |
| 46 | Characterization of a topological obstruction to reach control by continuous state feedback. Mathematics of Control, Signals, and Systems, 2017, 29, 1. | 2.3 | 3 |
| 47 | A topological obstruction in a control problem. Systems and Control Letters, 2017, 108, 71-79. | 2.3 | 3 |
| 48 | Model of the oculomotor system based on adaptive internal models. IFAC-PapersOnLine, 2020, 53, 16430-16437. | 0.9 | 3 |
| 49 | Adaptive Internal Models in the Optokinetic System. , 2021, , . | | 3 |
| 50 | On the Use of Regulator Theory in Neuroscience with Implications for Robotics. , 2021, , . | | 2 |
| 51 | Stability of Discrete-Time Switched Systems With Multiple Equilibria Using a Common Quadratic Lyapunov Function. , 2022, 6, 2497-2502. | | 2 |
| 52 | A method to construct viability kernels for nonlinear control systems. , 2009, , . | | 1 |
| 53 | Reach control problem with disturbance rejection. , 2014, , . | | 1 |
| 54 | Pattern identification in distributed systems. , 2016, , . | | 1 |

| # | ARTICLE | IF | CITATIONS |
|----|---|-----|-----------|
| 55 | Control of a class of patterned systems. International Journal of Control, 2018, 91, 1489-1507. | 1.9 | 1 |
| 56 | Adaptive Cruise Control Design Using Reach Control. , 2018, , . | | 1 |
| 57 | Reach control on simplices by continuous state feedback. , 2009, , . | | 0 |
| 58 | Stabilizing Patterned Distributed Systems by State and Measurement Feedback * *This work is supported by the Natural Sciences and Engineering Research Council of Canada (NSERC). IFAC-PapersOnLine, 2017, 50, 14278-14283. | 0.9 | 0 |
| 59 | On the Use of Regulator Theory in Neuroscience with Implications for Robotics. , 2021, , . | | 0 |
| 60 | Gait Control of a Fully Actuated Walking Robot. IFAC-PapersOnLine, 2020, 53, 9577-9583. | 0.9 | 0 |